

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF PUERTO RICO

<p>In re:</p> <p>THE FINANCIAL OVERSIGHT AND MANAGEMENT BOARD FOR PUERTO RICO,</p> <p>as representative of</p> <p>THE COMMONWEALTH OF PUERTO RICO, <i>et al.</i></p> <p>Debtors.<sup>1</sup></p>	<p>PROMESA Title III</p> <p>Case No. 17 BK 3283-LTS (Jointly Administered)</p>
<p>In re:</p> <p>THE FINANCIAL OVERSIGHT AND MANAGEMENT BOARD FOR PUERTO RICO</p> <p>as representative of</p> <p>PUERTO RICO ELECTRIC POWER AUTHORITY,</p> <p>Debtor.</p>	<p>PROMESA Title III</p> <p>Case No. 17 BK 4780-LTS</p>
<p>THE FINANCIAL OVERSIGHT AND MANAGEMENT BOARD FOR PUERTO RICO, as representative of PUERTO RICO ELECTRIC POWER AUTHORITY, and PUERTO RICO FISCAL AGENCY AND FINANCIAL ADVISORY AUTHORITY,</p> <p>Movants,</p> <p>v.</p> <p>OFFICIAL COMMITTEE OF UNSECURED CREDITORS, <i>et al.</i></p> <p>Respondents.</p>	

<sup>1</sup> The Debtors in these Title III Cases, along with each Debtor’s respective Title III case number and the last four (4) digits of each Debtor’s federal tax identification number, as applicable, are the (i) Commonwealth of Puerto Rico (Bankruptcy Case No. 17 BK 3283-LTS) (Last Four Digits of Federal Tax ID: 3481); (ii) Puerto Rico Sales Tax Financing Corporation (“COFINA”) (Bankruptcy Case No. 17 BK 3284-LTS) (Last Four Digits of Federal Tax ID: 8474); (iii) Puerto Rico Highways and Transportation Authority (“HTA”) (Bankruptcy Case No. 17 BK 3567-LTS) (Last Four Digits of Federal Tax ID: 3808); (iv) Employees Retirement System of the Government of the Commonwealth of Puerto Rico (“ERS”) (Bankruptcy Case No. 17 BK 3566-LTS) (Last Four Digits of Federal Tax ID: 9686); and (v) Puerto Rico Electric Power Authority (“PREPA”) (Bankruptcy Case No. 17 BK 4780-LTS) (Last Four Digits of Federal Tax ID: 3747). (Title III case numbers are listed as Bankruptcy Case numbers due to software limitations.)

**AMICI CURIAE BRIEF OF CONGRESSMAN RAÚL GRIJALVA, CHAIRMAN OF THE HOUSE COMMITTEE ON NATURAL RESOURCES, CONGRESSWOMAN NYDIA VELÁZQUEZ, MEMBER OF THE HOUSE COMMITTEE ON NATURAL RESOURCES, AND CONGRESSMAN DARREN SOTO, MEMBER OF THE HOUSE COMMITTEE ON NATURAL RESOURCES, IN OPPOSITION TO JOINT MOTION OF <sup>[L]</sup><sub>[SEP]</sub> PUERTO RICO ELECTRIC POWER <sup>[L]</sup><sub>[SEP]</sub> AUTHORITY AND AAFAP PURSUANT TO <sup>[L]</sup><sub>[SEP]</sub> BANKRUPTCY CODE SECTIONS 362, 502, 922, AND 928, <sup>[L]</sup><sub>[SEP]</sub> AND BANKRUPTCY RULES 3012(A)(1) AND 9019 FOR ORDER APPROVING SETTLEMENTS EMBODIED IN THE RESTRUCTURING SUPPORT AGREEMENT AND TOLLING CERTAIN LIMITATIONS PERIODS (DKT. #1235) AS SUPPLEMENTED IN DKT. #1334 AND #1361**

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**TO THE HONORABLE COURT:**

Rep. Raúl M. Grijalva, Chairman of the House Committee on Natural Resources, Rep. Nydia M. Velázquez, member of the House Committee on Natural Resources, and Rep. Darren Soto, Member of the House Committee on Natural Resources, respectfully file this *amici curiae* brief pursuant to Fed. R. Civ. 29(a)(2) in **opposition** to the Joint Motion of the Movants Pursuant to Bankruptcy Code Sections 362, 502, 922, and 928, and Bankruptcy Rules 3012(A)(1) and 9019 for Order Approving Settlements Embodied in the Restructuring Support Agreement and Tolling Certain Limitations Periods. (DKT. #1235) As Supplemented in DKT. #1334 AND #1361. [Exhibit #1; *hereinafter* “Motion 9019”]

**INTERESTS OF AMICI CURIAE**

*Amici curiae* Hon. Raúl Grijalva is a member of the House of Representatives from Arizona’s 3rd District, *amici curiae* Hon. Nydia Velázquez is a member of the House of Representatives from New York’s 7th District, and *amici curiae* Hon. Darren Soto is a member of the House of Representatives from Florida’s 9th District. Rep. Grijalva has served as the Chairman of the United States House of Representatives Committee on Natural Resources (the “Committee”) since the beginning of the 116th Congress, Rep. Velázquez joined the Committee in April 2018, and Rep. Soto joined the Committee in January 2017. The Committee has jurisdiction over “[i]nsular areas of the United States,” which jurisdiction includes the Commonwealth of Puerto Rico.<sup>2</sup> Rep. Grijalva and Rep. Velázquez participated in the drafting

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<sup>2</sup> See Rule X of the Rules of the House of Representatives (116th Cong).

of and supported the enactment of the Puerto Rico Oversight, Management, and Economic Stability Act (“PROMESA”).

The House Committee on Natural Resources has other responsibilities such as “[e]stablishing renewable energy sources,” and “[e]nsuring a fair return for the American people for energy and mineral development.”<sup>3</sup> Also, it oversees valuable public resources such as oil and gas, ensuring they are developed in a safe and equitable manner.<sup>4</sup> In addition, the House Committee on Natural Resources has an Oversight and Investigations Subcommittee that has jurisdiction over each agency and program overseen by the full Committee.

According to the responsibility of overseeing and investigating, the House Committee on Natural Resources, chaired by Rep. Grijalva, held a public hearing on Puerto Rico Electric Power Authority’s (“PREPA”) reconstruction and privatization status in June, 2019.<sup>5</sup> As such, it is of interest to the House Committee on Natural Resources and thus Rep. Grijalva, Rep. Velazquez, and Rep. Soto, PREPA’s financial future and what are the steps taken by the Financial Oversight and Management Board for Puerto Rico [“Oversight Board” or “FOMB”] for the benefit of PREPA.

Consequently, Rep. Grijalva, Rep. Velázquez, and Rep. Soto submit this *Amici Curiae* to facilitate an understanding of PREPA’s Definitive Restructuring Support Agreement’s (“RSA”) negative impact on PREPA’s estate, and Puerto Rico’s economy.

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<sup>3</sup> About the Natural Resources Committee. Available at: <https://naturalresources.house.gov/about/the-committee> (Last visit: Oct. 20, 2019).

<sup>4</sup> Subcommittee on Energy and Mineral Resources. Available at: <https://naturalresources.house.gov/subcommittees/energy-and-mineral-resources> (last visit: Oct. 20, 2019).

<sup>5</sup> Full Committee Hearing: The Status of the “Rebuilding and Privatization of [PREPA]” Available at: <https://naturalresources.house.gov/hearings/the-status-of-the-rebuilding-and-privatization-of-the-puerto-rico-electric-power-authority-prepa1> (last visit: Oct. 20, 2019).

**PRELIMINARY STATEMENT**

The Definitive Support Agreement (“RSA”) dated as of May 3<sup>rd</sup>, 2019, by and among the Puerto Rico Electric Authority (“PREPA”), the Financial Oversight and Management Board for Puerto Rico (the “Oversight Board”), the Puerto Rico Fiscal Agency and Financial Authority (“AAFAF”), the members of the Ad Hoc Group of PREPA bondholders, Assured Guaranty Corp. and Assured Guaranty Municipal Corp., and Uninsured Bondholders, proposes a transaction that consists of an Exchange of existing PREPA bonds for Securitization Bonds. Motion 9019 at 7. These Securitization Bonds are divided into Tranche A bonds, which will be exchanged at a ratio of 67.5% of principal amount of outstanding bonds subject to exchange, and Tranche B bonds, which will be exchanged at a ratio of 10% of principal amount of outstanding bonds subject to the exchange. Motion 9019 at 7-8. This implies a reduction in the nominal principal value of the existing bonds of 22.5%. Expert Report by Sergio M. Marxuach, *PREPA Debt Restructuring 3.0: It is Even Worse than you Think*, 2 (May 2019) [Exhibit #2, hereinafter “Marxuach”].

The Tranche A Bonds will have a stated maturity of 40 years. However, the obligation to pay the Tranche A bonds will extend beyond the stated final maturity if not paid in full. Marxuach at 2. The Tranche B Bonds will have a stated of 47 years but will not be paid until Tranche A Bonds are paid in full. Motion 9019 at 8. The repayment of the Tranche A and B bonds will be secured by a lien on the future cash flow generated by PREPA through the imposition of a Transition Charge, which will be added to the amount billed to PREPA’s costumers. Motion 9019 at 7. This Transition Charge will start at 2.768 ¢/kWh by Fiscal Year 2021, “and gradually escalates over the next 24 years until it reaches a maximum of 4.552 ¢/kWh. Motion 9019 at 19. Thus, making PREPA’s customers pay PREPA’s legacy debt.

This will increase the cost of living in the island, which will have a major economic impact in the three lowest income group of people –which is composed by around 60% of Puerto Rico’s population. Expert Report by Héctor Cordero, *The Socio-Economic Impacts of the Puerto Rico Electric Power Authority (PREPA) Restructuring Support Agreement (RSA) on the Population of Puerto Rico*, 13, 17-18. [Exhibit #3; hereinafter “Cordero”]. With the first increase, it is estimated that 33% of the poorest group’s income –19.7% of Puerto Rico’s population– will go to pay electricity rates. **Assuming constant income by this group**, this percentage will go up to 42% of their income with the last increase in electricity rates. Cordero at 5.

Within industrial customers, the most affected sectors with the Transition Charge will be the wholesale and retail trade, the government, and manufacturing. Expert Report by Ramón Cao, *An Economic Evaluation of the [RSA] for Outstanding PREPA’s Debt, of PREPA Fiscal Plan and a Modest Proposal*, 15 (Aug. 30, 2019). [Exhibit #4; hereinafter “Cao”]. These sectors are particularly critical for its consequences upon local economy: 1. Increases in the operating costs in the commerce sector are usually translated to customers, reducing the purchasing power of the general population, and increasing incentives for emigration; 2. **In the case of government, it should be remembered that it faces a serious fiscal crisis, that constrains its spending capacity. An increase in operation costs is going to aggravate its present fiscal crisis;** 3. Manufacturing is critical for Puerto Rican economy, which is based on exporting manufactured goods. Increases in operation costs reduce its (already diminished) capacity to compete in world markets. Cao at 15. [emphasis added].

The approval of the RSA will automatically cause a slowdown in the economy, which will exacerbate outmigration trends and further lower demand for electricity. With less demand for electricity, the prospects of PREPA to comply with the operational requirements will be

impaired, which will destroy PREPA's proficiency to provide its essential services. Without taking into consideration all the other fees and charges besides the Transition Charge, the RSA proposes a reduction of 22.5% of PREPA's bond debt. However, this reduction is not enough to allow PREPA to continue operating in a sustainable manner without incurring in another default in the near future.

The RSA offers a high bond recovery rate in an economy with low or negative growth. Tom Sanzillo, *Puerto Rico Electric Power Authority Debt Restructuring: A Weak Deal Plagued by Scandal*, 8-9 (Aug. 2019). [Exhibit #5; hereinafter "IEEFA"]. This will automatically lower demand and electricity consumption amongst its customers, which will result in PREPA failing to generate sufficient revenues to pay for Transition Charge indebtedness. If the Transition Charge is imposed, due to the decrease in demand for electricity, there's an estimated number of \$27.35 million per year in revenue loss for PREPA. Expert Report by José I. Alameda, *Economic Impact of PREPA [RSA] on the Consumers –Residential Electricity– in Puerto Rico*, 30 (Jun. 14, 2019). [Exhibit #6; hereinafter "Alameda"]. Thus, creating an unsustainable debt and PREPA's ongoing structural imbalance. IEEFA at 9.

Unlike the 1974 Trust Agreement, the RSA privileges the repayment of legacy debt above the payment of PREPA's current expenses and the Retirement System. PREPA to U.S. Bank National Association 1974 Trust Agreement §505. [Exhibit #7; hereinafter "Trust Agreement"]. This will likely result in a continuation of the problems that have plagued PREPA in the last decade as the economy has declined –including crowding out of capital investments, cuts to maintenance, and inability to mount a professionally sound re-staffing and reorganization of the authority. IEEFA at 12.



PREPA requires major capital investment for its maintenance, which will require the issuance of more debt. The RSA requires future indebtedness to be funded by another transition charge or other dedicated revenue stream. IEEFA at 15. However, the RSA creates uncertainty around the priority of repayment between the Securitization Bonds and new debt needed for the electrical system to function, if and when PREPA or its successor falls into financial difficulty again. IEEFA at 15. Therefore, the probabilities of future litigation to settle these claims are high. *See* IEEFA at 15, n. 41.

Consequently, the RSA is not in the best interest of the debtor's estate nor the creditors because if electricity consumption decreases, revenues will decrease as well, affecting the debtor's estate and its ability to pay creditors. Leading to another default.

The Oversight Board has expressed that through the RSA, PREPA will provide "Supporting Holders certain **pre-plan of adjustment** consideration and distributions in the form of payments and accrual of certain administrative claims." Motion 9019 at 4. Therefore, as the base for the Plan of Adjustment, the RSA has to comply with section 314(b)(6) of PROMESA which states that the Court shall confirm the plan if it is "feasible and in the best interests of the creditors." 48 U.S.C. § 2714(b)(6).

The primary purpose of debt restructures under Chapter 9 for a municipality, which is analogous to the Title III proceedings of the Commonwealth, is not future profit but rather continued provision of public services. *See In re Mount Carbon Metropolitan Dist.*, 242 B.R. 18, 34 (Bankr. D. Colo. 1999). Thus, in the course of determining feasibility of the plan that a settlement agreement proposes, the Court must evaluate whether it is probable that the debtor can both, "pay pre-petition debt and provide future public services at the level necessary to its

viability as a municipality.” *Id.* at 35. Also, “[t]he probability of future success will depend upon reasonable income and expense projections.” *Id.* [emphasis added].

The RSA is not feasible as it depends on a “transition charge” imposed on customers’ electric rates, which at the same time, relies on consistent energy consumption. At the same time, consistent energy consumption depends on the population of Puerto Rico to not keep decreasing, and proportional household incomes with electricity rates.

With the rate increases that the RSA pursues, PREPA expects to collect 45.5% of such rate increase from the three groups of lowest income –around 60% of the population– while they only make 22.8% of total income in Puerto Rico. This is assuming that there will be consistent electricity consumption, which at the same time, assumes that there will not be hurricanes such as Irma or Maria along the way that interrupts electricity power service, and that Puerto Rico’s population will not continue to decrease. However, outmigration has been massive in the past ten years. Thus, the RSA relies on baseless assumptions of consumption of energy to pay PREPA’s creditors. Consequently, the RSA as the base for the Plan of Adjustment, is not feasible.

In addition, the terms set in the RSA are extremely long, which makes it difficult to achieve the goals set by PREPA. PREPA’s customers will be paying the Transition Fee for at least 40 years to pay Tranche A bonds. Motion 9019 at 19. This is assuming a consistent electricity consumption. However, if the Tranche A bonds have not been paid in full by then, the transition fee will continue being charged to customers until fully paid. Therefore, this is not a feasible proposal because if “[p]rojecting for a few years into the future is difficult, projecting for so many years into the future is extraordinarily difficult.” *In re Mount Carbon Metropolitan Dist.*, 242 B.R. at 37-38.

The 9019 motion should be denied as the RSA was agreed to be pursued on a contingency basis such as constant electricity consumption for PREPA to collect its revenue, which at the same time, depends outmigration to stop increasing, and customers to have sufficient income to pay electricity bills. That is not the reality of Puerto Rico.

Furthermore, the RSA represents unsound financial policy that creates indebtedness for PREPA that cannot be supported by the economy of Puerto Rico, which will result in keeping PREPA in Title III indefinitely. Therefore, the RSA is far from being reasonable, it is not in best interest of PREPA's estate nor the Commonwealth's, and it is not feasible.

The RSA establishes that the Transition Charge, besides being implemented on regular customers' bills, it will be applied to energy generated by renewable energy systems owned by individuals that are connected to PREPA's system ("BTGM Customers"). For the Transition Charge not to be applied to BTGM Customers, they have to permanently disconnect from PREPA's electrical grid. Thus, people that "choose to generate [their] own electric energy [are] excluded from the utility service unless [they] accept to carry the full burden of a debt originally not guaranteed by [their] privately generated electric energy." Expert Report by Agustín Irizarry Rivera Pursuant to PROMESA Title III case, at pg. 10. [Exhibit #8; *hereinafter* "Irizarry"].

As paying for renewable energy is significantly cheaper,<sup>6</sup> the increase in rates that the Transition Charge will provoke BTMG customers to seriously consider permanently disconnecting from the electrical grid –the "grid defection". Irizarry at 18. Also, it can lead more customers to move to renewable energy generation and disconnection from PREPA as well, as besides being cheaper, it is more resilient. Thus, resulting in increasing revenues loss for PREPA.

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<sup>6</sup> See pg. 27-30 of this *Amici Curiae*.

For all the foregoing reasons, Rep. Grijalva, Rep. Velázquez, and Rep. Soto respectfully request this Court to deny the approval of the RSA.

### **STANDARD OF REVIEW**

Federal Rule of Bankruptcy Procedure 9019 allows a Debtor to settle a claim with the approval of the Court after notice and a hearing. For its approval, the Court must determine whether the proposed settlement is “fair and equitable” and whether “the claim the debtor is giving up is outweighed by the advantage to the estate,” by balancing the value of the claim and the value of the proposed settlement. *In re Barnwell County Hosp.*, 491 B.R. 408, 417 (2013); *In re Nationwide Sports Distributors, Inc.*, 227 B.R. 455, 461 (Bankr. E.D. Pen. 1998). Moreover, the Court must not approve the proposed settlement if “it falls below the lowest point in the range of reasonableness.” *In re Barnwell County Hosp.*, 491 B.R. at 418.

The Court cannot simply approve the settlement because the debtor moved; rather, the proponent of a settlement **bears the burden** of demonstrating that it is in the best interest of the debtor’s estate. *In re C.R. Stone Concrete Contractors Inc.*, 346 B.R. 32, 49 (Bankr. D. Mass. 2006) (emphasis added) (“even if it is concluded that the settlement is above the lowest level of reasonableness, in our discretion we may still deny approval, if not in the best interest of the estate”).

In deciding whether the movant has met its burden, the court must exercise independent judgment, by considering any factors relevant to “a full and fair assessment of the wisdom of the compromise.” *Id. See 110 Beaver Street*, 244 B.R. 185, 187 (Bankr. D. Mass. 2000) (striking down proposed settlement as outside the range of reasonableness because of its adverse effect on the debtor); *In re C.R. Stone*, 346 B.R. at 50-51 (court denying approval of settlement as not

being in the best interest of the debtor's estate, because among other things, although claims were complex and provided no sure prospect of recovery for estate, were agreed to be pursued on contingency basis). *In re Barnwell County Hosp.*, 491 B.R. at 418 (approving settlement under Chapter 9 finding that it was in the best interest of the Debtor's estate because "without implementation of the Plan [...] Debtor may have to cease operations and suspend or dramatically reduce the scope of healthcare services it offers").

The Court must consider the following factors "in the best interest of the debtor's estate": 1) the probabilities of success in the litigation being compromised; 2) the difficulties encountered in the matter of collection; 3) the complexity of the litigation involved –including expense, inconvenience, and delay necessarily attending the litigation –and; 4) the paramount interest of the creditors and a proper deference to their reasonable views. *See Protective Comm. Indep. Stockholder of TMT Ferry v. Anderson*, 390 U.S. 414, 424-25 (1968).

## **ARGUMENT**

### **1. The RSA proposes a plan to pay PREPA's bondholders at an unbearable expense of PREPA's customers.**

The RSA was entered on May 3<sup>rd</sup>, 2019. It was negotiated by PREPA, the Puerto Rico Fiscal Agency and Financial Advisory ("AAFAF"), the Oversight Board, and some of PREPA's bondholders. The RSA proposes a transaction that consists of an Exchange of existing PREPA bonds for Securitization Bonds. Motion 9019 at 7. These Securitization Bonds are divided into Tranche A bonds, which will be exchanged at a ratio of 67.5% of principal amount of outstanding bonds subject to exchange, and Tranche B bonds, which will be exchanged at a ratio of 10% of principal amount of outstanding bonds subject to the exchange. Motion 9019 at 7-8.

This implies a reduction in the nominal principal value of the existing bonds of 22.5%. Marxuach at 2.

The Tranche A Bonds will have a stated maturity of 40 years. However, the obligation to pay the Tranche A bonds will extend beyond the stated final maturity if not paid in full. Marxuach at 2. The Tranche B Bonds will have a stated of 47 years, but will not be paid until Tranche A Bonds are paid in full. Motion 9019 at 8. The repayment of the Tranche A and B bonds will be secured by a lien on the future cash flow generated by PREPA through the imposition of a Transition Charge, which will be added to the amount billed to PREPA's costumers.<sup>7</sup> Motion 9019 at 7. Thus, making PREPA's customers pay PREPA's legacy debt.

### **Subsidy Charge**

Besides the Transition Charge, there are other charges for the benefit of the participating bondholders at the expense of PREPA's customers. Marxuach at 10. For instance, there's a "Subsidy Charge" that will be imposed on all customers, except those excepted by legislation. Marxuach at 8. This charge seeks to recover costs incurred by PREPA for subsidies granted to various customer classes, certain uncollected amounts from private clients, and uncollected amounts from government clients. Definitive Restructuring Support Agreement of PREPA Schedule I-A to the Securitization Term Sheet at 5. [Exhibit #9; *hereinafter* "PREPA RSA"].

### **Settlement Charge**

Another charge is the "Settlement Charge" which will be added to PREPA's customers' bills to pay the supporting holders of the RSA before the Plan of Adjustment is confirmed.

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<sup>7</sup> PREPA's customers are the ones connected to the system; use or lease any part of the system; are connected to a microgrid, municipal utility or electric cooperative that is connected to or uses the System; or benefits from any agreement that requires the system to provide the Customer electricity under any condition, including without limitation, an obligation to provide power on a standby, maintenance, emergency, or similar basis. Marxuach at 5. "PREPA's Costumers" shall not include any permanently disconnected from the electric system. Marxuach at 5. Consequently, customers that generate their own electricity will be subject to the Transition Charge, unless they are completely and permanently disconnected from the electric system. Marxuach at 5.

Motion 9019 at 8-9, 20-21. This “Settlement Charge” amounts to 1¢ /kWh. Motion 9019 21. Supporting holders of the RSA will be entitled to monthly cash **Settlement Payments** in the amount of such Supporting Holder’s pro rata share of eligible Bonds subject to the RSA, multiplied by the product of (i) the number of kWh PREPA billed during the previous month, multiplied by (ii) 92% multiplied by (iii) the Settlement Charge”. Motion 9019 at 21.

However, if a Title III Plan for PREPA has not gone effective by March 31st, 2021, this Settlement Charge will increase up to the equal amount of the Transition Charge and paid in cash to the supporting holders of the RSA. Motion 9019 at 21. This “Increased Settlement Charge” will be 2.768 ¢/kWh. Motion 9019 at 21. On and after Mar 31<sup>st</sup>, 2021, supporting holders “will be entitled to monthly cash “Increased Settlement Payments” in the amount of such supporting holder’s pro rata share of eligible Bonds subject to the RSA, multiplied by amounts actually collected under the Increased Settlement Charge. Motion 9019 at 21.

### **Administrative Expenses**

Furthermore, bondholders that support the RSA are entitled to an administrative expense claim for an amount “equivalent to the Tranche A bond interest payments accrued in respect of such bond less the amount of Settlement Payments or Increased Settlement Payments made on account of such bond.” Motion 9019 at 20. Administrative Claims shall also accrue at the Tranche A interest rate on the Waiver and Support Fees described below. Motion 9019 at 20.

### **Waiver and Support Fee**

In addition, one of the supporting bondholders –the Ad Hoc Group– will receive a waiver and support fee in the form of Tranche A bonds equal to 1.930% (\$65,408,186) of par amount of PREPA bonds held by such creditor as of July 1, 2018. Motion 9019 at 22. Assured Guaranty – another supporting bondholder of the RSA– will receive such waiver and fee, in the form of

Tranche A bonds, equal to 1.8850% (\$16,626,912) of the par amount of PREPA bonds held by such creditors as of May 1<sup>st</sup>, 2019. Motion 9019 at 22. Other supporting holders, including any additional signatories of the RSA, may receive additional support and potential waiver fee, in the form of Tranche A bonds, equal to .8360% (\$69,044,804) of the par amount of total outstanding PREPA bonds as of May 1<sup>st</sup>, 2019. Motion 9019 at 23.

### **Other Fees & Expenses**

PREPA shall reimburse “reasonable” fees and expenses: (a) incurred by the Ad Hoc Group members prior to July 23, 2018, up to \$25 million; (b) incurred by the Ad Hoc Group members after July 23, 2018 through the Effective Date; and (c) incurred by Assured on or after August 1, 2018 through the Effective Date; shall be paid on or after the Effective Date. PREPA RSA at 44-45.

### **Transition Charge**

As previously explained, the repayment of the Tranche A and B bonds will be secured by a lien on the future cash flow generated by PREPA through the imposition of a Transition Charge, which will be added to the amount billed to PREPA’s costumers. Motion 9019 at 19. This Transition Charge will start at 2.768 ¢/kWh by Fiscal Year 2021, “and gradually escalates over the next 24 years until it reaches a maximum of 4.552 ¢/kWh. Motion 9019 at 19. In Fiscal Year 2028 the Transition Charge will be 2.957 ¢/kWh. PREPA RSA/ Recovery Plan Term Sheet. In Fiscal Year 2035 the Transition Charge will be 3.760 ¢/kWh. Finally, in Fiscal Year 2044 the Transition Charge will be 4.552 ¢/kWh. However, this Transition Charge of 4.552 ¢/kWh will be billed to PREPA’s customers until Securitization Bonds are paid in full. PREPA RSA/Recovery Plan Term Sheet.

### **Effects on PREPA’s Customers**



As expressed in the RSA, the Subsidy Charge, the Settlement Charge, and the Transition Charge will be added to all customers' electrical bills. Motion 9019 20-21. As the Transition Charge will be paid until the Securitization Bonds are paid in full, ratepayers will pay PREPA's debt indefinitely. This will increase the cost of living in the island, which will have a major economic impact in the three lowest income group of people –which is composed by around 60% of Puerto Rico's population. Cordero at 13, 17-18. Consequently, this will exacerbate outmigration, Cordero at 23, which will lower the demand for electricity. Cao at 24-27.

For instance, by 2024, it is estimated that electricity rates will increase 17.5% among the residential customers. *See* Cao at 13. By 2024 the RSA establishes that the Transition Charge will be 2.957 ¢/kWh. PREPA RSA, Recovery Plan Term Sheet. Therefore, by 2044, which according to the RSA there will be a Transition Charge of 4.552 ¢/kWh, the increase in electricity rates is going to be significant among the residential population. The group which will be more impacted by increased tariff rates are the poor and low-income population.

For example, with the first increase, it is estimated that 33% of the poorest group's income will go to paying electricity rates. Cordero at 5. **Assuming constant income by this group**, this percentage will go up to 42% of their income with the last increase in electricity rates. Cordero at 5. Thus, almost half of their income will go to paying electricity bills. This group constitutes 19.7% of Puerto Rico's population. Cordero at 13. However, this whole group consumes about 13% of total electricity consumption in Puerto Rico. Cordero at 3.

The second poorest group in Puerto Rico will pay about 9% of their income for electricity, and assuming constant income, this percentage can go up to 11% with the last increase in electricity rates. Cordero at 5. This group comprises 19.9% of Puerto Rico's population and consumers 15% of the total electricity consumption in Puerto Rico. Cordero at 3.

Thus, with the imposition of a Transition Charge, almost half of Puerto Rico's population will not be able to afford electricity, which will compel Puerto Rico's residents to migrate in pursue of a cheaper cost of living, as has been happening in the last 17 years. Cordero at 6. Thus, slowing down the economy even more.

Residents customers are not the only ones that are being affected with high electricity tariff rates, and that will be affected with the Transition Charge that the RSA pursues. For example, by 2024 (with a Transition Charge of 2.957 ¢/kWh) electricity tariff rates will increase 16.19% among the commercial customers, and 18.9% among industrial customers.<sup>8</sup> Cao at 11-12. Within industrial customers, the most affected sectors with the Transition Charge will be the wholesale and retail trade, the government, and manufacturing. Cao at 15. It is estimated that with these electric rates increases, the percent in cost of intermediate inputs is going to increase as well. For instance, by 2024, intermediate inputs prices will rise .37% for the manufacturing sector, .98% for the wholesale and retail trade sector, and .66% for the government sector. Cao at 15.

It should be noted that these sectors are particularly critical for its consequences upon local economy: 1. Increases in the operating costs in the commerce sector are usually translated to customers, reducing the purchasing power of the general population, and increasing incentives for emigration; 2. **In the case of government, it should be remembered that it faces a serious fiscal crisis, that constrains its spending capacity. An increase in operation costs is going to aggravate its present fiscal crisis;** 3. Manufacturing is critical for Puerto Rican economy, which is based on exporting manufactured goods. Increases in operation costs reduce its (already diminished) capacity to compete in world markets. Cao at 15. [emphasis added].

The electricity rate increases that will have an effect on the cost of intermediate inputs,

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<sup>88</sup> All of Cao's estimates provided in this *Amici Curiae* does not takes into consideration the increase that PREPA's Fiscal Plan proposes. Thus, adding the Transition Charge to PREPA's Fiscal Plan's rate increase, this percentage goes up. For a detailed analysis of electricity rate increases that will be provoked by the RSA in conjunction with PREPA's Fiscal Plan, see Cao.

will impact the Consumer Price Index as well, which it is expected to rise 2.47% by 2024 if the Transition Charge that the RSA pursues is imposed. Cao at 16-17. This increase in the Consumer Price Index tends to provoke inflation. Cao at 16-17. By 2024, if the Transition Charge is approved, the expected increase in Consumer Price Index as a percentage of local inflation rate will be 80%. Cao at 18. Therefore, impacting Puerto Rico's cost of living significantly.

In addition, with the effects of electricity tariff rate increases in combination with aging and emigration, the level of employment in Puerto Rico will decrease. Cao at 21. As a consequence of the structural contraction that has been happening in the local economy, there has been an increase in unemployment rate in Puerto Rico. Mr. Cao shows that by 2024, when Puerto Rico's economy absorbs all the effects that the RSA's Transition Charge will have, there will be 33,382 less jobs which is equivalent to 3.4% of the total employment in Fiscal Year 2018. Cao at 24.

It has been demonstrated that the RSA will have a negative impact on PREPA's customers and thus, Puerto Rico's economy as a whole, which will result in lower demand for electricity. In turn, this will cause PREPA not to have enough revenues to pay for its operations, and therefore, collapsing.

## **2. The RSA is not in benefit of PREPA's estate.**

The approval of the RSA will automatically cause an increase in the cost of living in Puerto Rico, which, in turn, will cause economic precariousness to the vulnerable people of the island. This instability will cause a slowdown in the economy, which will exacerbate outmigration trends and further lower demand for electricity. With less demand for electricity, the prospects of PREPA to comply with the operational requirements will be impaired, which will destroy PREPA's proficiency to provide its essential services. Without taking into consideration all the

other fees and charges besides the Transition Charge, the RSA proposes a reduction of 22.5% of PREPA's bond debt. However, this reduction is not enough to allow PREPA to continue operating in a sustainable manner without incurring in another default in the near future. Marxuach at 13. PREPA can afford to pay up to 4,668 million in restructured debt without compromising its finances and operations –thus, 51.2% of the PREPA's legacy debt.<sup>9</sup> Cao at 7.

This is due to several factors:

- 1) PREPA operates in an economy that has shown no growth in 13 years;
- 2) its administrators have negligently postponed maintenance on its generation plants and its transmission and distribution lines for decades;
- 3) the demand for electricity is projected to decrease over the next few years;
- 4) PREPA needs a massive injection of capital in order to modernize and optimize its operations; and
- 5) Hurricane María wreaked havoc with PREPA's transmission and distribution system, and while the grid is currently functional, it is still quite fragile and will need substantial repairs in the near future. Marxuach at 13.

Even if it is concluded that a settlement agreement is above the lowest level of reasonableness, a court should deny a 9019 motion if not in the best interest of the debtor's estate. *See In re C.R. Stone Concrete Contractors, Inc.*, 346 B.R. at 49. The RSA proposes a plan to include a Transition Charge in PREPA's customers' bills for a period of **at least**, 47 years. IEEFA at 4. This Transition Charge is predicated on a growing economy. However, the island's economy has been declining for ten years and the outlook remains negative. IIEFA at 7.

The RSA offers a high bond recovery rate in an economy with low or negative growth. IEEFA at 8-9. The RSA states that the transition charge will start at 2.768 cent/kWh increasing to 4.552 cents/kWh. Notwithstanding, Puerto Rico's Gross Domestic Product is expected to decline .9% in Fiscal Year 2021. During that same year, electricity rates will rise by

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<sup>9</sup> This conclusion was made by Ramón Cao based on information obtained from the RSA, the American Public Power Association, *Financial and Operating Ratios of Public Utilities*, (Dec. 2018), and BDO Puerto Rico, P.D.C. *PREPA Independent Auditors' Financial Statements, Required Supplementary Information and Supplemental Schedules for the year ending June 30, 2016*, (Dec. 18<sup>th</sup>, 2018). *See* Cao at 7, n. 11.

approximately 13% as a result of the Transition Charge. IEEFA at 9. However, it is more likely that the Transition Charge will increase beyond this amount. IEEFA at 5. For instance, the RSA establishes that the Transition Charge does not include administrative fees to pay for the servicing of the debt, which will increase electricity consumption rates even more. IEEFA at 5. In addition, the RSA establishes that the Transition Charge may be “adjusted from time to time if required under the Definitive Documents.” IEEFA at 6. Furthermore, it does not include the fees and charges mentioned in the previous section. “The IEEFA estimates that the charge will start at more than 3 cents/kWh, once additional costs are factored in.” IEEFA at 7. Thus, it is certain that the transition charge will be higher, and thus, it will result in inaccessible electricity. This will automatically lower demand and electricity consumption amongst its customers, which will result in PREPA failing to generate sufficient revenues to pay for Transition Charge indebtedness. *See* Alameda at 22, (which shows that the demand for electricity among the residential population in P.R. will decrease due to the Transition Charge, which will result in revenue losses to PREPA). If the Transition Charge is imposed, due to the decrease in demand for electricity, there’s an estimated number of \$27.35 million per year in revenue loss for PREPA. Alameda at 30. What is more detrimental is that PREPA’s expenditures will not reach PREPA’s operational needs; rather, it will go to its bondholders. Alameda at 30.

The RSA will impair PREPA’s ability to balance its budget by imposing a high level of debt repayment on an electrical system in a declining economy. IEEFA at 9. The Transition Charge will rise rates which “provides an incentive for customers who can afford it to self-generate their own power, driving sales down still further.” IEEFA at 10. Thus, creating an unsustainable debt and PREPA’s ongoing structural imbalance. IEEFA at 9. Unlike the 1974 Trust Agreement, the RSA privileges the repayment of legacy debt above the payment of

PREPA's current expenses. Trust Agreement § 505. This will likely result in a continuation of the problems that have plagued PREPA in the last decade as the economy has declined – including crowding out of capital investments, cuts to maintenance, and inability to mount a professionally sound re-staffing and reorganization of the authority. IEEFA at 12.

Imposing a high legacy debt burden on the existing system, before any of the promised cost-saving initiatives have materialized, increases the likelihood that these savings will never take place. Instead, as has recurred over the past decade, there is a great likelihood that the system will be starved of capital investment as potential investors deem the risk too great; the fuel budget will continue to consume over half of the rate dollar; the pension system will continue to be underfunded; customers who can afford to do so will defect from the grid, increasing costs on the less affluent customers who remain; and the axe will fall on the only budget items left over to cut, namely maintenance and the workforce. IEEFA at 12.

PREPA requires major capital investment –estimated at more than \$12 billion with a projection of 58% coming from federal funds– for its maintenance IEEFA at 14. Thus, obtaining the additional 42% would require the issuance of more debt. *See* IEEFA at 14, n. 39. The RSA requires future indebtedness to be funded by another transition charge or other dedicated revenue stream. IEEFA at 15. However, the RSA creates uncertainty around the priority of repayment between the Securitization Bonds and new debt needed for the electrical system to function, if and when PREPA or its successor falls into financial difficulty again. IEEFA at 15. Therefore, the probabilities of future litigation to settle these claims are high. *See* IEEFA at 15, n. 41.

In sum, the RSA:

[...] will exacerbate the same dysfunction that has driven the electrical system into physical and financial ruin during the last decade of economic decline on the island: by prioritizing the repayment of legacy debt, the electrical system will be starved of funds for operational need and greater financial risk will be imposed on those who seek to make new investments in the electrical systems. IEEFA at 21.

Besides causing PREPA's dismemberment, the RSA will hopelessly cause the Commonwealth's economy continuous decline, as high rates for electricity will force businesses

to close intensifying outmigration. Consequently, the RSA is not in the best interest of the debtor's estate nor the creditors because if electricity consumption decreases, revenues will decrease as well, affecting the debtor's estate and its ability to pay creditors. Leading to another default.

**3. The RSA, as the base for the Plan of Adjustment, is not feasible.**

The Oversight Board has expressed that through the RSA, PREPA will provide "Supporting Holders certain **pre-plan of adjustment** consideration and distributions in the form of payments and accrual of certain administrative claims." Motion 9019 at 4. [emphasis added]. Also, the RSA consists of the Oversight Board, as PREPA's representative, "undertaking to obtain **confirmation of a Title III plan of adjustment that treats the Supporting Holders' allowed claims in the manner set forth in the RSA.**" Motion 9019 at 4. [emphasis added]. Therefore, as the base for the Plan of Adjustment, the RSA has to comply with section 314(b)(6) of PROMESA which states that the Court shall confirm the plan if it is "feasible and in the best interests of the creditors." 48 U.S.C. § 2714(b)(6).

For a plan –in this case the RSA as the base for the Plan of Adjustment– to meet the "feasibility" requirement, the proponent must ensure that is not a "visionary scheme." *In re Chicago Investments, LLC*, 470 B.R. 32, 107 (Bankr. D. Mass. 2012). Moreover, "the purpose of the feasibility test is to determine whether there is a reasonable probability that creditors will receive the payments provided for in the plan." *Id.* The plan has to be realistic. *Id.* In determining feasibility, usually, Courts consider the following factors:

1) adequacy of the capital structure; 2) the earning power of the business; 3) **economic conditions**; 4) **the ability of management**; 5) the probability of the continuation of the same management; and 6) any other related matter which determines the prospects of a sufficiently successful operation to enable performance of the provisions of the plan. *Id.* [emphasis added].

The primary purpose of debt restructures under Chapter 9 for a municipality, which is analogous to the Title III proceedings of the Commonwealth, is not future profit but rather continued provision of public services. *See In re Mount Carbon Metropolitan Dist.*, 242 B.R. 18, 34 (Bankr. D. Colo. 1999). Thus, in the course of determining feasibility of the plan that a settlement agreement proposes, the Court must evaluate whether it is probable that the debtor can both, “pay pre-petition debt and provide future public services at the level necessary to its viability as a municipality.” *Id.* at 35. Moreover, a settlement agreement, as the base for a plan, is not feasible if it contains “visionary schemes which promise creditors...more under a proposed plan than [what] the debtor can possibly attain after confirmation.” *Id.* at 35. Furthermore, a settlement agreement that proposes a plan “should offer a reasonable prospect of success and be workable.” *Id.* “Although success need not be certain or guaranteed, **more is required than mere hopes, desires and speculation.**” *Id.* [emphasis added].

Also, “[t]he **probability of future success will depend upon reasonable income and expense projections.**” *Id.* [emphasis added]. In addition, “a feasibility determination based upon whether [the debtor] can issue Exchange Bonds, **as compared as to whether it can pay them,** would be so superficial as to be meaningless.” *Id.* at 36. [emphasis added]. This is because the purpose of Chapter 9 is to assist “a municipality in restructuring debt so that it can provide future services, [and] limiting the feasibility analysis to mere issuance of Exchange Bonds would leave the Chapter 9 plan without context, purpose or efficacy.” *Id.*

Section 314(b)(6) of PROMESA states that a plan will be confirmed if feasible and in the best interest of creditors. 48 U.S.C. 2174(b)(6). The best interests of the creditors are not present if the debtor “promises more that it can deliver.” *In re City of Detroit*, 524 B.R. 147, 219 (Bankr. E.D. Mich. 2014). A “feasibility showing premised upon long-term repayment or negative



amortization may be particularly difficult for the Chapter 9 debtor, which must not only demonstrate a probability that it will be able to pay on pre-petition debt in accordance with the plan, **but must also demonstrate the probability that it can continue to provide public services while it repays debt.**” *Id.* [emphasis added]. If the plan is not feasible, it is not in the best interest of the creditors.

The RSA is not feasible as it depends on a “transition charge” imposed on customers’ electric rates, which at the same time, depends on consistent energy consumption. At the same time, consistent energy consumption depends on the population of Puerto Rico to not keep decreasing, and proportional household incomes with electricity rates. “[D]ue to the significant differences in household income among different groups of people in Puerto Rico, the RSA will impact incomes and electricity consumption, specifically within the lowest-income group, as almost half of its income will be compromised to paying the electrical bills [...]” Cordero at 35.

As explained above, “[t]he probability of future success will depend upon reasonable income and expense projections.” *In re Mount Carbon Metropolitan Dist.*, 242 B.R. at 35. PREPA’s reasonable income depends on electricity consumption. Dr. Cordero shows, that with the rate increases that the RSA pursues, PREPA expects to collect 45.5% of such rate increase from the three groups of lowest income –around 60% of the population– while they only make 22.8% of total income in Puerto Rico.<sup>10</sup> Cordero at 13, 17-18. This is assuming that there will be consistent electricity consumption, which at the same time, assumes that there will not be hurricanes such as Irma or Maria along the way that interrupts electricity power service, and that

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<sup>10</sup> 13% of the rate increase is expected to be collected from households in the lowest income group, while they only make 1.4% of the total income in Puerto Rico. 14.8% of the rate increase is expected to be collected from households in the second lowest income group, while they only make 1.5% of the total income in Puerto Rico. 17.7% of the rate increase is expected to be collected from households in the third lowest income group, while they only make 13.9% of the total income in Puerto Rico. This adds to these three groups making about 22.8% of the total income of Puerto Rico; while 45.5% of the rate increase is to expected to be collected from these groups. Cordero at 18.

Puerto Rico's population will not continue to decrease. However, Dr. Cordero demonstrates that outmigration has been massive in the last ten years. Cordero at 23.

For example, as a result of the combined effects of significant outmigration, decreases in fertility, and slight increases in mortality –due to increased aging– the Population in Puerto Rico is projected to continue to decline from around 3.4 million to about 3 million by the year 2050 according to estimates by the Pew Center. Cordero at 23. However, population losses have been more accelerated than the estimates suggest. Cordero at 23. The effects of Hurricanes Irma and Maria have accelerated Puerto Rico's demographic “death spiral”. Cordero at 24.

If we examine the net migration patterns over the last decade, we see an increase in net out-migration from an average around 25,0000 persons per year between 2005 and 2010, to an average over 50,000 per year between 2011 and 2014. Cordero at 6. All this suggests that the net migration number continues to be in the 80,000 to 90,000 range or higher since 2014. Cordero at 6. PREPA expects to collect revenues to pay legacy debt without taking into consideration this decrease in population. Thus, the RSA relies on baseless assumptions of consumption of energy to pay PREPA's creditors. Consequently, the RSA as the base for the Plan of Adjustment, is not feasible. “Although success need not be certain or guaranteed, more is required than mere hopes, desires and speculation.” *In re Mount Carbon Metropolitan Dist.*, 242 B.R. at 35.

In addition, the terms set in the RSA are extremely long, which makes it difficult to achieve the goals set by PREPA and some of the bondholders that signed the agreement. For instance, under the RSA, PREPA's bondholders will exchange their current bonds for new bonds –Tranche A and Tranche B bonds. Motion 9019 at 19. PREPA's customers will be paying the Transition Fee for at least 40 years to pay Tranche A bonds. Motion 9019 at 19. This is assuming a consistent electricity consumption. However, if the Tranche A bonds have not been paid in full

by then, the transition fee will continue being charged to customers until fully paid.<sup>11</sup> Motion 9019 at 19. Thus, taking into consideration Puerto Rico's stagnated economy, its population's decrease and outmigration, Puerto Rico's tropical weather which makes it vulnerable as to hurricanes and other tropical storms, if the RSA is approved, it is more likely that the Transition Charge to pay the Tranche A bonds will be reflected in electricity for more than 40 years. Thus, indefinitely. Therefore, this is not a feasible proposal, as it contains indefinite terms because if "[p]rojecting for a few years into the future is difficult, projecting for so many years into the future is extraordinarily difficult." *In re Mount Carbon Metropolitan Dist.*, 242 B.R. at 37-38. Therefore, the terms of the RSA are not reliable. *See id.*

The 9019 motion should be denied as the RSA was agreed to be pursued on a contingency basis such as constant electricity consumption for PREPA to collect its revenue, which at the same time, depends on outmigration to stop increasing, and customers to have sufficient income to pay electricity bills. That is not the reality of Puerto Rico. According to the most recent certified Commonwealth Fiscal Plan,<sup>12</sup> Puerto Rico's population and economy are projected to continue declining over the long term. IEEFA at 7. Population loss translates into less electricity sales and deterioration in revenues. Cordero at 34.

The RSA represents unsound financial policy that creates indebtedness for PREPA that cannot be supported by the economy of Puerto Rico. The cost imposed by the RSA will be a major contributor to the high cost of electricity in Puerto Rico at a time when the Island needs affordable electricity to support the recovery of its economy, and it will undermine efforts to create and maintain the electricity system in a state of good repair. IEEFA at 21. It will frustrate efforts to rebuild the grid and impede necessary investments in the organizational infrastructure

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<sup>11</sup> The Tranche A Bonds shall have the following characteristics: 40-years stated final maturity, but Tranche A Bond will extend beyond stated maturity until paid in full. Motion 9019 at 19

<sup>12</sup> Financial Oversight and Management Board for Puerto Rico. 2019 Fiscal Plan for Puerto Rico. May 9<sup>th</sup>, 2019.

that provides electricity to the Island's residents and businesses. IEEFA at 21. Thus, it will keep PREPA indefinitely in Title III, which translates into worsening its estate. Therefore, the RSA is far from being reasonable, it is not in best interest of PREPA's estate nor the Commonwealth's, and it is not feasible.

**4. The RSA contravenes "Puerto Rico Energy and Public Policy Act," Act. No. 17-2019 as it places an obstacle for Puerto Rico to go green by 2050.**

This Transition Charge's sole purpose is to pay old debt, not to invest on the electric grid in order to make it more reliable and resilient. Irizarry at 13. The RSA establishes that the Transition Charge, besides being implemented on regular customers' bills, it will be applied to energy generated by renewable energy systems owned by individuals that are connected to PREPA's system. PREPA RSA, Demand Protection Sheet, at 3; Irizarry at 5. The "Demand Protection Term Sheet" establishes that the Transition Charge will be collected from all current and future customers whom have benefitted, are benefitting or will be benefitted from the use of PREPA's services. Irizarry at 5-6. Although these "benefits from the use of the system" are not defined, the proposed measure means electric energy consumption, rather than energy sales. Irizarry at 6. According to the RSA, "[c]onsumption means, for any given time period, the amount of electricity consumed by a Customer, regardless of the source of such electricity, including thermal, solar, wind geothermal or other renewable or recyclable sources, whether owned by PREPA or any successor [...] or a Customer." Irizarry at 6.

The RSA establishes two types of customers: Behind the meter generation customers ["BTMG Customers"] and Grandfathered BTMG Customers. PREPA RSA, Demand Protection Sheet, at 3. "The cutoff date for eligibility for treatment as Grandfathered BTMG customers will be Sep. 30, 2020." These two types of customers are people who decided to invest in renewable energy generation, under a net metering agreement with PREPA. Irizarry at 6. The vast majority

of these customers select solar photovoltaic systems. Irizarry at 6. The only path for persons who generate their renewable energy to be free from the Transition Charge is for them to “permanently disconnect from the electric system.” Irizarry at 6 (*quoting* Schedule 1-A “Demand Protection Term Sheet”, at 1-A-1, n. 18). Thus, people that “choose to generate [their] own electric energy [are] excluded from the utility service unless [they] accept to carry the full burden of a debt originally not guaranteed by [their] privately generated electric energy.” Irizarry at 10.

The consequence of not exempting BTMG customers from the Transition Charge is eliminating all risks to PREPA or its successor, and bondholders “from the entrance in the market of a variety of alternative technologies to produce electric energy.” Irizarry at 10. However, there are many benefits of being connected to the electric grid for a BTMG customer that uses renewable energy to generate electric energy. For instance, storing “energy into the electric grid for later use under a net metering agreement and to receive standby service<sup>13</sup> from the grid if the renewable energy resource is not available for a prolonged time period or in case of malfunction of the renewable energy system.” Irizarry at 17.

In 2018, small rooftop solar photovoltaic systems –which its energy generation potential is so significant that 65% of residential roofs could provide the total electrical energy, not power, that was needed in Puerto Rico for 2006 –generating electric clean with no emissions energy at a cost of 6 ¢/kWh. Irizarry at 12. As the retail price of installing a grid-tied photovoltaic system in P.R. has reduce significantly, by 2024, small rooftop solar photovoltaic system will generate electric energy at a cost of about 4.33 ¢/kWh. Irizarry at 11-12. The cost of storage of renewable electric energy was calculated at 23 ¢/kWh for 2018, which adding the electric energy

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<sup>13</sup> “Standby services are services provided by a utility to one of their customers with on-site generation, where the utility agrees to provide power in instances where the customer’s generation is unable to completely supply their electricity demand.” Irizarry at 17, n. 35.

generation, it sums to 29 ¢/kWh. Irizarry at 12. Assuming the steady decline in the cost of electric renewable energy generation that has been happening in the last 10 years, it is concluded that by 2024, the round-trip cost of electric energy generation and its storage, adds to 21 ¢/kWh. Irizarry at 13. However, adding the Transition Charge that the RSA pursues, this number goes up to 32.4 ¢/kWh in 2024. Thus, not allowing the residential, industrial nor commercial population in Puerto Rico to benefit from the significant price reductions in renewable energy installment, generation and storage, while being connected to PREPA's electrical grid. *See* Irizarry at 15.

The burden that the RSA places on BTMG customers will force them to seriously consider permanently disconnecting from the electrical grid –the “grid defection”. Irizarry at 18. Also, it can lead more people to move to renewable energy generation and disconnection from PREPA as well, as besides being cheaper, it is more resilient. *See* Irizarry at 15-17 (for an explanation of renewable energy sources being more resilient after hurricanes). It is important to remember that in 2019 –without the Transition Charge that the RSA pursues– the cost per kWh is approximately 22.48 ¢. *See* Alameda at 28. This amount is more than the estimated cost of renewable electric energy generation plus its storage by 2024 –21 ¢/kWh, *see* Irizarry at 13, and less than what fuel-based energy consumption will cost by 2024 if the Transition Charge that the RSA pursues, is added –approximately 25 ¢/kWh. *See* Alameda at 28 in conjunction with Marxuach at 4.

In sum, the RSA presents the risk of people permanently disconnecting from PREPA's or its successor's electrical grid. Thus, worsening PREPA's estate. Also, it will stagnate Puerto Rico's transformation towards renewable energy generation as it will be significantly more expensive to be connected to PREPA's or its successor's electrical grid. Consequently, leaving

Puerto Rico behind onto eliminating reliance on fossil fuels as the primary source of power by 2050, as the “Puerto Rico Energy and Public Policy Act”, Act. No. 17-2019, establishes.<sup>14</sup>

### **CONCLUSION**

The RSA, as the base for the Plan of Adjustment, is not feasible nor reasonable. It was agreed upon the imposition of an unbearable Transition Charge that will be added to the bills of PREPA’s customers, for **at least** 47 years. However, the Transition Charge will be reflected in PREPA’s bills until the Securitization Bonds have been paid in full –as the Transition Charge constitutes a lien on these Bonds. Thus, PREPA’s ratepayers will be paying PREPA’s outstanding debt **indefinitely**. Notwithstanding, when setting the terms of the RSA, the Oversight Board, as the representative of PREPA, AAFAF and several of PREPA’s bondholders, did not take into consideration Puerto Rico’s declining economy, its decrease in population, and the high percentage of people that live under the poverty line and thus, cannot afford a high cost of living. Therefore, if approved, the RSA will provoke a decrease in demand for electricity, which will result in loss revenues for PREPA, which in turn will cause PREPA’s dismantlement. As PREPA is the main provider of power to Puerto Rico, the RSA will worsen Puerto Rico’s financial crisis even more. Furthermore, the RSA contravenes “Puerto Rico Energy and Public Policy Act of 2019”, as it places an obstacle for Puerto Rico to completely transition to renewable energy by 2050.

### **PRAYER FOR RELIEF**

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<sup>14</sup> In response to climate change, Act No. 17-2019 establishes a renewable energy policy of pursuing Puerto Rico going 100% green by 2050. Citing the United Nations Intergovernmental Panel on Climate Change, the Statement of Motives of Act No. 17-2019 explains that if “definite and comprehensive actions are not taken to reduce greenhouse gas emissions, temperatures shall keep rising, thus leading to stronger and more frequent extreme weather such as sea level rises, hurricanes, and droughts.”

For all the foregoing reasons, Rep. Grijalva, Rep. Velázquez, and Rep. Soto respectfully request for this Honorable Court to deny the Joint Motion of the Movants Pursuant to Bankruptcy Code Sections 362, 502, 922, and 928, and Bankruptcy Rules 3012(A)(1) and 9019 for Order Approving Settlements Embodied in the Restructuring Support Agreement and Tolling Certain Limitations Periods. (DKT. #1235) As Supplemented in DKT. #1334 AND #1361.

In San Juan, Puerto Rico, this 30 day of October 2019.

**WE HEREBY CERTIFY** that on this same date I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system, which will send notification of such filing to all participants and Standard Parties. Paper copies have been mailed pursuant to Section II of the *Tenth Amended Notice, Case Management and Administrative Procedures*:

- (i) Chambers of the Honorable Laura Taylor Swain (two copies shall be delivered to the chambers):  
United States District Court for the Southern District of New York  
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- (ii) Office of the United States Trustee for Region 21  
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Estimated Hearing Date: June 12, 2019 at 9:30 a.m. (Atlantic Standard Time)

Estimated Objection Deadline: May 28, 2019 at 4:00 p.m. (Atlantic Standard Time)

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF PUERTO RICO

<p>In re:</p> <p>THE FINANCIAL OVERSIGHT AND MANAGEMENT BOARD FOR PUERTO RICO,</p> <p>as representative of</p> <p>THE COMMONWEALTH OF PUERTO RICO, <i>et al.</i></p> <p>Debtors.<sup>1</sup></p>	<p>PROMESA Title III</p> <p>Case No. 17-BK-3283-LTS</p> <p>(Jointly Administered)</p>
<p>In re:</p> <p>THE FINANCIAL OVERSIGHT AND MANAGEMENT BOARD FOR PUERTO RICO</p> <p>as representative of</p> <p>PUERTO RICO ELECTRIC POWER AUTHORITY,</p> <p>Debtor.</p>	<p>PROMESA Title III</p> <p>Case No. 17-BK-4780-LTS</p> <p><b>This Application relates only to PREPA, and shall be filed in the lead Case No. 17-BK-3283-LTS, and PREPA’s Title III case (Case No. 17- BK-4780-LTS)</b></p>

**JOINT MOTION OF  
PUERTO RICO ELECTRIC POWER  
AUTHORITY AND AAFAF PURSUANT TO  
BANKRUPTCY CODE SECTIONS 362, 502, 922, AND 928,  
AND BANKRUPTCY RULES 3012(A)(1) AND 9019 FOR ORDER  
APPROVING SETTLEMENTS EMBODIED IN THE RESTRUCTURING  
SUPPORT AGREEMENT AND TOLLING CERTAIN LIMITATIONS PERIODS**

<sup>1</sup> The Debtors in these Title III Cases, along with each Debtor’s respective Title III case number and the last four (4) digits of each Debtor’s federal tax identification number, as applicable, are the (i) Commonwealth of Puerto Rico (Bankruptcy Case No. 17 BK 3283-LTS) (Last Four Digits of Federal Tax ID: 3481); (ii) Puerto Rico Sales Tax Financing Corporation (“COFINA”) (Bankruptcy Case No. 17 BK 3284-LTS) (Last Four Digits of Federal Tax ID: 8474); (iii) Puerto Rico Highways and Transportation Authority (“HTA”) (Bankruptcy Case No. 17 BK 3567-LTS) (Last Four Digits of Federal Tax ID: 3808); (iv) Employees Retirement System of the Government of the Commonwealth of Puerto Rico (“ERS”) (Bankruptcy Case No. 17 BK 3566-LTS) (Last Four Digits of Federal Tax ID: 9686); and (v) Puerto Rico Electric Power Authority (“PREPA”) (Bankruptcy Case No. 17 BK 4780-LTS) (Last Four Digits of Federal Tax ID: 3747). (Title III case numbers are listed as Bankruptcy Case numbers due to software limitations.)

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To The Honorable United States District Court Judge Laura Taylor Swain:

The Financial Oversight and Management Board for Puerto Rico (the “Oversight Board” or “FOMB”), in its capacity as representative of the Puerto Rico Electric Power Authority (“PREPA” or the “Debtor”) pursuant to section 315(b) of the *Puerto Rico Oversight, Management, and Economic Stability Act* (“PROMESA”),<sup>1</sup> and the Puerto Rico Fiscal Agency and Financial Authority (“AAFAF,” and together with the Oversight Board and PREPA, “Movants”), as the entity authorized to act on behalf of PREPA pursuant to the authority granted to it under the *Enabling Act of the Fiscal Agency and Financial Advisory Authority*, Act 2-2017, respectfully submit this joint motion (the “Motion”), pursuant to Bankruptcy Code sections 362, 502, 922, and 928 made applicable by PROMESA § 301(a), and Rules 3012(a)(1) and 9019 of the Federal Rules of Bankruptcy Procedure (the “Bankruptcy Rules”), made applicable by PROMESA § 310, for entry of an order substantially in the form attached hereto as **Exhibit A** (the “9019 Order”),<sup>2</sup> approving the settlements embodied in the Definitive Restructuring Support Agreement dated as of May 3, 2019,<sup>3</sup> a copy of which is attached to the 9019 Order as **Schedule 1** (as may be amended, the “RSA” or “Definitive RSA”) by and among (1) PREPA, (2) the Oversight Board, (3) AAFAF (PREPA, the Oversight Board, and AAFAF are sometimes collectively referred to herein as the “Government Parties”), (4) the members of the Ad Hoc Group of PREPA Bondholders (the “Ad Hoc Group”) identified on **Annex A** to the RSA (as such members may change from time to time), (5) any other persons who beneficially own or control Uninsured Bonds (as defined below) that are party to the RSA or execute a joinder to the RSA substantially in the form attached to the RSA

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<sup>1</sup> PROMESA is codified at 48 U.S.C. §§ 2101-2241.

<sup>2</sup> RSA section 1(b)(iv) provides that all Definitive Documents, including the 9019 Order, shall be in form and substance reasonably acceptable to the Required Parties.

<sup>3</sup> Capitalized terms not otherwise defined herein shall have the meanings set forth in the RSA.



as Exhibit A thereof (the “Uninsured Supporting Holders”), and (5) Assured Guaranty Corp. and Assured Guaranty Municipal Corp. (collectively “Assured,” Assured and the Uninsured Supporting Holders are collectively referred to herein as the “Supporting Holders,” and the Supporting Holders collectively with Government Parties, the “RSA Parties”). Such settlements resolve, as and to the extent set forth in the RSA and the 9019 Order, (a) in the circumstances set forth in the RSA and 9019 Order, the claims asserted by the Supporting Holders and objections of the Government Parties thereto, (b) the Bondholder Litigation, including the Monoline Motion, by all Supporting Holders, (c) the Supporting Holders’ ability to exercise rights under the Trust Agreement or other applicable law, and (d) the Supporting Holders’ right to receive any current payments on the Bonds. In support of this Motion, Movants respectfully represent as follows:

#### **Preliminary Statement**

1. **Significance of Settlements.** PREPA is an energy monopoly in Puerto Rico, and its reliability and charges for energy impact every resident and business in Puerto Rico, as well as every business considering investing in Puerto Rico. The transformation of PREPA is one of Puerto Rico’s most critical initiatives. The transformation of PREPA into a dependable and efficient energy provider will be facilitated by resolution of PREPA’s debt. Indeed, clarity as to PREPA’s exit from Title III will reduce complexities in and challenges to the agreements related to the transformation, including investments in PREPA to fund the transformation. Delaying the debt restructuring may thus delay PREPA’s transformation, to the detriment of Puerto Rico, its people, its businesses, and its creditors.

2. This Motion requests approval of settlements pursuant to a restructuring support agreement with a group of uninsured bondholders and a major monoline insurer. The proposed settlements represent a significant milestone in PREPA’s Title III case and the overall restructuring

of PREPA. Pursuant to the RSA, the creditors (absent future defaults) settle their alleged secured claims and rights asserted thereunder, including requests for stay relief in exchange for PREPA agreeing to allow their claims in less than their full face amounts. In addition, the creditors agree to support, and PREPA agrees to propose, a plan under which Supporting Holders will exchange their Bonds for Securitization Bonds that are secured by a fixed and predictable Transition Charge. Given the complex litigation (described further below) attendant to the creditors' claims and other rights, the Government Parties submit the instant agreement is eminently justifiable. Moreover, the Court is not being asked to resolve confirmation issues today. Rather, the Court is only being asked to approve the agreement pursuant to its powers to resolve claims, including proofs of claim, requests for stay relief for lack of adequate protection and other alleged cause, and settlements of related issues.

3. Issues Subject to Settlement. As of its Title III petition date, PREPA had issued and had outstanding approximately \$6 billion of uninsured bonds and \$2.25 billion of bonds guaranteed by certain monoline insurance companies, which bonds are allegedly secured. Proofs of claim have been filed asserting secured claims on behalf of the Uninsured Supporting Holders and Assured. Assured has also requested stay relief [ECF No. 975] to enable it to seek the appointment of a receiver for PREPA. Although not parties to the current motion, certain Uninsured Holders were party to a prior, similar motion. In turn, the Government Parties have objections to the liens and claims of the Supporting Holders, including those asserted in their proofs of claim, oppose the motion for stay relief, and oppose creditors' claims to entitlement to further adequate protection or other current payment under the Bonds (except pursuant to the settlements set forth in the RSA).<sup>4</sup> After extensive negotiations, the Uninsured Supporting

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<sup>4</sup> Such objections and oppositions have not yet been filed with the Court, and instead are being settled as described herein with respect to the Supporting Holders.

Holder, Assured, PREPA, and AAFAF have agreed to a proposed resolution of the Government Parties' claim objections and the rights of the Uninsured Supporting Holders and Assured to request stay relief, adequate protection and current payment, as and to the extent set forth in the RSA.

4. Overview of Settlement. The proposed resolution is embodied in and subject to the terms of the RSA and entry of the 9019 Order and generally consists of (a) under the terms and in the circumstances set forth in the RSA and 9019 Order, allowing the applicable proofs of secured claim in reduced secured amounts pursuant to Bankruptcy Rule 3012(a)(1), (b) PREPA providing the Supporting Holders certain pre-plan of adjustment consideration and distributions in the form of payments and accrual of certain administrative claims, (c) the FOMB, as PREPA's representative, undertaking to obtain confirmation of a Title III plan of adjustment that treats the Supporting Holders' allowed claims in the manner set forth in the RSA, and (d) the Supporting Holders voting for, supporting and not objecting to any plan of adjustment proposed by PREPA that provides the treatment of their claims set forth in the RSA and refraining from taking any actions that impede confirmation of such a plan, unless certain negative events occur.<sup>5</sup>

5. Preservation of Confirmation Objections of All Parties in Interest. Pursuant to the settlement embodied in the RSA and subject to the terms thereof, the FOMB, on behalf of PREPA, has agreed to propose a plan of adjustment treating the allowed claims of the Supporting Holders as specified in the RSA. But, the Court is not being requested to determine at this time whether such treatments are confirmable. The rights of all other parties in interest to object to confirmation of the plan of adjustment on any grounds are preserved.

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<sup>5</sup> In the event that the RSA terminates, the RSA Parties will be restored to their original rights (including regarding the potential claims and proofs of claim and potential objections thereto), as more fully set forth in the RSA.

6. Allowance of Supporting Creditors' Claims in Reduced Amounts Not Applicable to Any Other Creditors. Pursuant to the RSA and Bankruptcy Rule 3012(a)(1), the proofs of claim filed on behalf of the Supporting Holders are being allowed in certain circumstances as secured claims in the amounts pursuant to the RSA and in accordance with the 9019 Order. These claim allowances are part of the overall settlement with the Supporting Holders and are neither applicable to non-settling creditors nor available as precedent to non-settling creditors. All non-settling creditors (bondholders and insurers) remain free to prosecute proofs of claim filed on their behalf to vindicate all rights asserted in such claims. Conversely, PREPA remains free, subject to the limitations in the RSA, to object to the amounts and secured nature of such claims of non-settling creditors on any and all grounds. The RSA limitations do not bar PREPA from bringing claim objections, lien challenges, or lien avoidance actions, among other reasons, if such objections, challenges, or actions are at risk of lapsing, as more fully stated in the Definitive RSA.

7. The RSA Is Available to Currently Non-Settling Uninsured Bondholders. The RSA allows all non-settling Uninsured Bondholders to join the RSA within twenty-one days of its signing, and to obtain the same Administrative Claim and Settlement Payments as the original Supporting Holders. Uninsured Bondholders joining after that date would receive the same treatment under the plan of adjustment contemplated by the RSA, but would receive smaller or no Administrative Claims, and may or may not receive Settlement Payments, depending on whether they join before or after the entry of the 9019 Order or before or after September 1, 2019. PREPA has had discussions with the other monoline insurers about settling their claims and supporting the RSA. Those discussions have not resulted in agreement, but PREPA remains willing to have future discussions with the other monoline insurers within the parameters of the RSA.

8. Oversight Board Consent under PROMESA § 305. To the extent required, the Oversight Board consents under PROMESA § 305 to entry of an order resolving this Motion in substantially the form attached hereto.

9. The RSA is a Fair and Reasonable Settlement of Significant Issues and Claims. The proposed settlement resolves significant disputes in PREPA's Title III case and provides PREPA a path to confirmation of a plan of adjustment consistent with the goals of PROMESA and in furtherance of the overall transformation of the power sector. While the Oversight Board is not required under PROMESA to seek Court approval of certain components of the RSA (such as PREPA's turnover to the Supporting Holders of certain revenues voluntarily under Bankruptcy Code section 922(d)),<sup>6</sup> Movants elected to bring this entire settlement to the Court for approval as part of their agreement with the Supporting Holders to seek Court approval before the settlements embodied in the RSA become effective and to obtain an order binding all parties to the RSA. The Oversight Board and AAFAF respectfully submit that the terms of the RSA and the settlements embedded in it are fair and reasonable in light of the complex issues and risks attendant to costly and uncertain litigation relating to the claimed security interests, asserted rights and remedies of PREPA's Bondholders, and the desire to confirm a plan of adjustment within the requirements of PROMESA. Significant components of the RSA include:

- Support of Substantial Amount of PREPA Bonds. A majority of the holders of Uninsured Bonds as well as major monoline insurer Assured, who collectively hold

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<sup>6</sup> A debtor under PROMESA Title III is not required to seek court approval of settlements pursuant to Bankruptcy Rule 9019, and by filing this Motion, PREPA does not waive any argument as to whether any other settlement or compromise entered into by PREPA is subject to the requirements of Bankruptcy Rule 9019. See *In re City of Stockton*, 486 B.R. 194, 195-200 (Bankr. E.D. Cal. 2013) ("11 U.S.C. § 904 gives a chapter 9 debtor freedom to decide whether to ignore or to follow the Rule 9019 compromise-approval procedure . . ."); PROMESA § 305 (incorporating similar provisions as 11 U.S.C. § 904); see also *In re City of Detroit*, 524 B.R. 147, 198-99 (Bankr. E.D. Mich. 2014) (recognizing that "the City exercised its right under § 904 not to request Court approval of this memorandum of understanding." (citing *In re City of Stockton*, 486 B.R. 194, 199 (Bankr. E.D. Cal. 2013))).

or insure approximately 47% of the \$8.259 billion in principal amount of PREPA Bonds, have agreed to accept significant discounts of their claims and support a Plan that will provide Supporting Holders with the treatment detailed in the RSA.

- Settlement of Litigation and Forbearance. The RSA settles the rights and remedies of Supporting Holders under the Trust Agreement or other applicable law with respect to PREPA-related issues, including appointment of a receiver, stay relief for lack of adequate protection of purported security interests, and current payments on the Bonds. In exchange, the Government Parties are settling the amount of the secured claims held by the Supporting Holders and agree not to bring a Lien Challenge, each except as detailed in the RSA.
- Exchange of Bonds for Securitization Bonds. If the Court subsequently confirms a plan of adjustment containing the treatment of the Supporting Holders' allowed claims in accordance with the RSA, then on the effective date of the Plan, Supporting Holders commit to exchange all their Bonds for new Securitization Bonds secured by a fixed Transition Charge<sup>7</sup> added to customers' bills that is fixed and capped, and will not adjust regardless of whether PREPA generates sufficient revenue for expected debt service—ensuring the Government Parties and the ratepayers of Puerto Rico are not taking the risk of declining power demand due to reduced economic activity on the Island. Under the contemplated exchange:

- i. Supporting Holders would receive Tranche A Bonds in principal amount equal to 67.5% of total Applicable Bond Claims<sup>8</sup> of Supporting Holders,

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<sup>7</sup> The rates for Transition Charge are set forth in the Recovery Term Sheet.

<sup>8</sup> The amount of each Supporting Holder's Applicable Bond Claims is calculated at the total of (x) the principal amount of the bonds held or insured by such holder plus (y) an additional amount equal to interest that would have accrued on such principal amount through May 1, 2019.

and Tranche B Bonds in principal amount equal to 10% of total Applicable Bond Claims of Supporting Holders;

- ii. Tranche A Bonds provide payment of interest and principal only to the extent the Transition Charge collected is sufficient to pay first interest, and then principal;
- iii. No payments on Tranche B Bonds will be made until Tranche A Bonds are paid in full and will cease after the Tranche B Bonds mature, and then interest and principal will be paid only to the extent the Transition Charge collected is sufficient to make such payments; and

Failure to make payments when due on the Securitization Bonds does not cause any increase in the Transition Charge or in interest rates on the Securitization Bonds.

- Settlement Payments. In general, through a combination of pre-plan accruals and payments consisting of (i) the accrual of Administrative Claims commencing May 1, 2019, approximately equivalent to the Tranche A interest that would accrue in respect of the Supporting Holders' Applicable Bond Claims (assuming the 67.5% exchange described herein), (ii) cash Settlement Payments or Increased Settlement Payments,<sup>9</sup> as applicable, (iii) Adequate Protection payments under certain circumstances, the RSA is designed to provide the Supporting Holders the economic return on their Applicable Bond Claims similar to what they would receive if a plan of adjustment were effective as of May 1, 2019. Before confirmation of such a Plan, PREPA has agreed to implement a 1 cent per kilowatt

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<sup>9</sup> Payment of the Settlement Payments, Increased Settlement Payments or Adequate Protection Payments will reduce the Administrative Claim, and, if applicable, the underlying Bond claims of the Supporting Holders.

hour (“kWh”) Settlement Charge (a fixed charge added to PREPA’s current rates) and, make pre-plan payments to the Supporting Holders.

- Required Threshold. As of the date that is two days before the hearing on this Motion, Supporting Holders must hold or insure a minimum of 60% of Uninsured Bonds or 60% of all outstanding Bonds. No later than September 1, 2019, Uninsured Supporting Holders must hold a minimum of 67% of Uninsured Bonds and Supporting Holders must hold or insure a minimum of 67% of all outstanding Bonds.
- Claim Discount and Allowance Pursuant to the RSA Is Permanent. Subject to limited exceptions, so long as the Supporting Holders achieve the Required Threshold, the discounted allowed secured claims of the Supporting Holders as set forth in the RSA and 9019 Order continue in effect regardless of whether PREPA’s objections to the claims of non-settling bondholders (including through a Lien Challenge) are sustained.

10. PREPA’s transformation is fundamental to Puerto Rico’s revitalization and development of a reliable electric grid and sustainable economy. Every Puerto Rico business and resident will benefit from more efficient and reliable power delivery. PREPA’s transformation into an efficient energy provider will be facilitated by a restructuring of its debt. The RSA is a giant first step in that direction.

### **Jurisdiction and Venue**

11. The United States District Court for the District of Puerto Rico (the “Court”) has subject matter jurisdiction over this contested matter pursuant to PROMESA section 306(a).

12. Venue is proper pursuant to PROMESA section 307(a).



13. The statutory predicates for the relief sought herein are PROMESA sections 303, 305 and 306(b), sections 362, 502, 922, and 928 of title 11 of the United States Code (the “Bankruptcy Code”), made applicable to this case pursuant to PROMESA section 301(a), and Bankruptcy Rules 3012(a)(1) and 9019, made applicable to this case by PROMESA section 310.

### **Background**

#### **A. Commencement of the Title III Cases**

14. On June 30, 2016, the Oversight Board was established under PROMESA section 101(b).

15. On September 30, 2016, the Oversight Board designated the Debtor as a “covered entity” under PROMESA section 101(d)(1), making it subject to the requirements of PROMESA.

16. On July 2, 2017, the Oversight Board issued a restructuring certification pursuant to PROMESA sections 104(j) and 206 and filed a voluntary petition for relief for PREPA pursuant to PROMESA section 304(a), commencing a case under title III thereof (the “Debtor’s Title III Case”).

17. By operation of PROMESA and pursuant to section 315(b), the Oversight Board is the representative of PREPA in its Title III case.

18. Pursuant to PROMESA section 315, “[t]he Oversight Board in a case under this title is the representative of the debtor[s]” and “may take any action necessary on behalf of the debtor[s] to prosecute the case[s] of the debtor[s], including filing a petition under section 304 of [PROMESA] . . . or otherwise generally submitting filings in relation to the case[s] with the court.” PROMESA § 315(a), (b).

19. AAFAF acts as fiscal agent, financial advisor, and reporting agent for all Puerto Rico entities and is responsible for collaboration, communication, and cooperation between the

Government of Puerto Rico and the Oversight Board. *See* Act 2-2017 § 5(a). AAFAF acts as PREPA’s fiscal agent.

**B. Background of the Debtor**

20. The Debtor was created in 1941 as a public corporation and governmental instrumentality of Puerto Rico by Act No. 83 of the Legislative Assembly of Puerto Rico, approved May 2, 1941 (as amended from time to time, the “Authority Act”). Pursuant to the Authority Act, the Debtor is charged with the conservation, development, and utilization of the energy resources of Puerto Rico to promote the general welfare of Puerto Rico’s inhabitants and to increase commerce and prosperity. Authority Act § 6. The Debtor generates, transmits, and distributes substantially all the electric power used in Puerto Rico. *See* ECF No. 1, at 7. The Debtor is one of the largest municipal utilities in the United States, ranking first in number of clients and revenues. *See* ECF No. 549 at 10.

21. PREPA has approximately \$11.4 billion of prepetition liabilities, excluding contingent and disputed claims (such as litigation and contract rejection damage claims). *See* Fiscal Plan for the Puerto Rico Electric Power Authority, dated August 1, 2018 (“PREPA Fiscal Plan”), at 18. The lion’s share of PREPA’s liabilities is Bond debt. PREPA has issued and has outstanding approximately \$8.259 billion in principal amount of Power Revenue Bonds (the “Bonds,” and persons who beneficially own or control Bonds, “Bondholders”) under that certain Trust Agreement, dated as of January 1, 1974, between the PREPA and State Street Bank and Trust Company, N.A., as amended, restated, or otherwise modified from time to time (the “Trust Agreement”), which are purportedly secured by security interests in certain revenues and funds established by the Trust Agreement, with the scope of such purported security interest (including in PREPA’s revenues) a matter of dispute. PREPA is also obligated under the Assured Insured

Interest Rate Swaps, which are also issued under the Trust Agreement and purportedly secured by security interests in the Subordinate Obligations Fund created by the Trust Agreement.

22. In connection with the issuance of certain of the Bonds (such Bonds, the “Insured Bonds,” and all Bonds that are not Insured Bonds, the “Uninsured Bonds”), PREPA entered into various insurance agreements with the Trustee corresponding to insurance policies (such insurance policies to which any of such insurers is currently a party, and the insurance agreements related thereto, collectively, the “Bond Insurance Agreements” and, together with the Trust Agreement, the Bonds, the resolutions approving the Bonds, and any other agreements, supplements, amendments, or other documents executed, adopted, or delivered in connection with the issuance or maintenance of the Bonds, the “Bond Documents”) issued by certain monoline insurers (collectively, the “Monolines”), including Assured.

### **C. PREPA’s Fiscal Plan**

23. The Oversight Board certified the most recent PREPA Fiscal Plan on August 1, 2018. At that time PREPA faced myriad uncertainties, including its hurricane recovery efforts, the availability and timing of federal funding, and the transformation process. As a result, the Fiscal Plan as certified by the Oversight Board only covered a short period of 5 years (FY2019-2023), and noted that many of its targets were aspirational and subject to changes in market or other conditions. Fiscal Plan at 2, 4. Notably, the aspirational rate targets for the next five years set forth in the Fiscal Plan as certified by the Oversight Board expressly excluded any charges for payments on legacy debt, *see id.* at 43, but the Oversight Board and Fiscal Plan clearly recognized a resolution of PREPA’s legacy debt—that would inevitably be reflected in PREPA’s rates—had to be attained. *Id.* at 2.

24. The RSA represents the first positive and important step in a consensual restructuring of PREPA's legacy debt, with the Supporting Holders accepting a significant reduction of their claims in exchange for payment from a fixed transition charge and demand protection charge paid by electricity customers. Subject to certain potential adjustments as set forth in the Recovery Plan Term Sheet and Demand Protections Term Sheet, under the RSA, for the first three years the transition charge to pay legacy debt is set at 2.768 c/Kwh and thereafter it steps up pursuant to a fixed schedule to a maximum of 4.552 c/kWh in FY 2043. *See* RSA Recovery Plan Term Sheet. The charge is fixed and ultimately capped, regardless of the energy demand in Puerto Rico or any other factor. The Oversight Board believes the RSA's rate structure facilitates the goals of the PREPA Fiscal Plan by moving PREPA's transformation forward and speeding PREPA's exodus from Title III.

25. The PREPA Fiscal Plan will be further amended to provide for the terms of the RSA, subject to the Court granting this Motion.

#### **D. Litigation Relating to the Bonds among the RSA Parties**

26. Many disputes have arisen relating to the Bonds and the Bond Documents between the Government Parties and PREPA's Bondholders during PREPA's Title III case.

1. *Original Receiver Motion and First Circuit Appeal*

27. On July 18, 2017, the Ad Hoc Group of PREPA Bondholders and certain Monolines filed the *Motion of Ad Hoc Group of PREPA Bondholders, National Public Finance Guarantee Corporation, Assured Guaranty Corp., Assured Guaranty Municipal Corp., and Syncora Guarantee Inc. for Relief From the Automatic Stay to Allow Movants to Enforce Their Statutory Right to Have a Receiver Appointed* [Case No. 17 BK 4780-LTS, ECF No. 74] ("Original Receiver Motion"), seeking to lift the automatic stay to seek the appointment of a receiver in territorial court.

The moving parties argued their collateral extended to all “current and future revenues and the right to have rates and charges set at levels sufficient to guarantee payment of debt service on the Bonds, payments into reserves under the Trust Agreement, and payment of all other financial obligations of PREPA.” Original Receiver Motion at 7.

28. The Government Parties strenuously opposed the Original Receiver Motion and the assertions and legal arguments contained therein. *See* Case No. 17 BK 4780-LTS, ECF Nos 149, 150, 260. On September 14, 2017, the Court denied the Original Receiver Motion, ruling (a) the Court could not grant the relief sought by the moving parties as a result of PROMESA section 305, and (b) stay relief would be inappropriate in any event. *See Opinion and Order Denying Motion of Ad Hoc Group of PREPA Bondholders, et al., for Relief from the Automatic Stay (Docket Entry No. 74)* [Case No 17 BK 4780-LTS, ECF No. 299] (“District Court Receiver Opinion”).

29. The moving parties in the Original Receiver Motion filed an appeal of the District Court Receiver Opinion to the United States Court of Appeals for the First Circuit (“First Circuit”). On August 8, 2018, the First Circuit reversed the District Court Receiver Opinion on narrow grounds, holding that PROMESA section 305 did not bar the Court from entering an order lifting the stay. The First Circuit did not expressly resolve any issues relating to the scope and extent of the Bondholders’ security interests or make any determinations regarding whether the stay should be lifted. Instead, for the reasons provided in the First Circuit’s opinion such as developments regarding Hurricanes Irma and Maria, the First Circuit remanded the case with instructions about what it would look for in the record if the creditors re-urged their stay relief motion. *See Fin. Oversight & Mgmt. Bd. v. Ad Hoc Grp. of PREPA Bondholders (In re Fin. Oversight & Mgmt. Bd. For P.R.)*, 899 F.3d 13, 23 (1st Cir. 2018).

30. After the First Circuit decision certain of the Original Receiver Motion's movants renewed the receiver motion, as discussed below.

2. *PREPA's Postpetition Financing Motion*

31. Given dire financial straits at PREPA following Hurricanes Irma and Maria, on January 27, 2018, the Oversight Board and AAFAF filed an urgent joint motion for PREPA to obtain postpetition financing of \$1.3 billion secured by a first priming lien. *See* Case No. 17 BK 4780-LTS, ECF No. 549 ("PREPA Financing Motion"). The Ad Hoc Bondholders [ECF No. 570] and Assured [ECF No. 585] objected to the PREPA Financing Motion.

32. On February 15, 2018, the Court held a hearing on the PREPA Financing Motion and issued its oral ruling on the PREPA Financing Motion. For reasons explained on the record, the Court determined that it would not grant the PREPA Financing Motion, but rather decided to "hold the motion in abeyance without prejudice to an amendment in the short term limited to a smaller draw-down amount and administrative super-priority and without prejudice to the possible future request for additional funding and/or priming liens." Feb. 15, 2018 Hr'g Tr. at 232:10-14.

33. On February 16, 2018 at 4:17 a.m., the Oversight Board and AAFAF filed an urgent joint application [ECF No. 722] (the "Urgent Joint Application"), seeking entry of a revised proposed order approving a \$300 million credit facility and granting the lender a superpriority administrative expense claim (the "Revised Financing").

34. After reviewing the submissions and determining no further hearing on the Revised Financing was necessary, on February 19, 2018, the Court entered an order approving the Revised Financing [ECF No. 744] (the "PREPA Financing Order"). The Court did not resolve the issues relating to the scope and extent of the Bondholders' security interests, as that was unnecessary.

3. *Special Revenues Complaint*

35. On August 7, 2017, Assured, National, the Ad Hoc Group of PREPA Bondholders, and Syncora (“Plaintiffs”) filed a complaint against the Government Parties (among other defendants) seeking (i) declarations that by failing to apply “Revenues” (as defined in the Trust Agreement) to the payment of the Bonds the Government Parties violated Bankruptcy Code sections 922(d) and 928, as well as several clauses of the United States Constitution, (ii) declarations that the Bondholders’ application of such Revenues was not subject to the automatic stay, (iii) declarations that the Government Parties were not authorized to deduct from or otherwise offset non-operating and certain other expenditures against revenues of the System under the Trust Agreement or under section 928(b) of the Bankruptcy Code (including for expenditures did not fall within the Trust Agreement’s definition of “Current Expenses”), and (iv) an injunction requiring the Government Parties to comply with the Trust Agreement. *See* Case No. 17-AP-232-LTS, ECF No. 1.

36. On October 13, 2017, after the hurricanes struck Puerto Rico, Plaintiffs filed a notice of voluntary dismissal without prejudice. Case No. 17-AP-232-LTS, ECF No. 49. The issues relating to the scope and extent of the Bondholders’ security interests were not resolved.

4. *Renewed Receiver Motion*

37. Following the First Circuit’s ruling on the appeal of the Original Receiver Motion, on October 3, 2018, National, Assured, and Syncora filed the *Motion of National Public Finance Guarantee Corporation, Assured Guaranty Corp., Assured Guaranty Municipal Corp., and Syncora Guarantee Inc. for Relief From the Automatic Stay to Allow Movants to Enforce Their Statutory Right to Have a Receiver Appointed* [Case No. 17 BK 4780-LTS] (the “Renewed Receiver Motion”), seeking to lift the automatic stay to seek the appointment of a receiver in

territorial court. The Ad Hoc Group, a party to the Initial Receiver Motion, did not join the Renewed Receiver Motion. In the Renewed Receiver Motion, National, Assured, and Syncora have asserted, among other things, that the Bondholders' liens encompass all revenues and that their collateral package includes various contractual covenants contained in the Trust Agreement. The briefing and discovery in connection with the Renewed Receiver Motion is ongoing. As part of the proposed settlement under the Definitive RSA, Assured will withdraw from the Renewed Receiver Motion upon approval by the Court of the 9019 Order. National and Syncora, the remaining movants, hold or insure less than 20% of the Bonds.

38. Concurrently with this Motion, the Oversight Board and AAFAF have filed a motion to dismiss the Renewed Receiver Motion pursuant to Fed.R.Civ.P. 12(b)(1) and 12(b)(6). The Government Parties believe the Renewed Receiver Motion cannot be maintained by National and Syncora because once Assured withdraws (i) the Trust Agreement prohibits them, as holders of less than the 20% of the principal outstanding on the Bonds (based on their own allegations), from initiating or maintaining suit on the Bonds, (ii) the Trust Agreement prohibits suit on the Bonds where such action is not maintained for the benefit of all bondholders, and (iii) the requested relief would not redress their alleged injury because, even if the stay were to be lifted, movants held less than the 25% of principal amount of bonds necessary to require the Trustee to seek appointment of a receiver.

#### **E. Negotiation and Entry into the Restructuring Support Agreement**

39. Against this backdrop of litigation, in an attempt to reach consensus with significant creditors on a path out of PROMESA Title III and to support the timely transformation of PREPA and the energy sector, the Oversight Board and AAFAF engaged in negotiations with several constituencies, including the Ad Hoc Group, to reach a deal on a restructuring of PREPA's



outstanding debt. After months of negotiation, on July 30, 2018, the Government Parties announced that they had entered into a preliminary restructuring support agreement with members of the Ad Hoc Group (the “Preliminary RSA”). The Preliminary RSA contemplated the inclusion of a variety of restructuring terms in an eventual Plan, and also contemplated the negotiation and execution of a definitive restructuring support agreement.

40. Following the Preliminary RSA, the Government Parties continued negotiating with the Ad Hoc Group regarding the terms of a definitive restructuring support agreement. Such efforts continued after the filing of the Renewed Receiver Motion. Ultimately, Assured joined the negotiations. These efforts to reach a consensual resolution have now culminated in the execution of the RSA, which provides for the resolution of the claims and entitlements of the Supporting Holders<sup>10</sup> (under the Trust Agreement) and an agreement that they support a Plan providing them with a certain level of treatment for their Bond Claims and providing PREPA with a certain discount for the restructuring of the Bonds. Parties that do not sign the RSA are **not** bound by the RSA.

41. The salient terms of the settlement set forth in the RSA are as follows:<sup>11</sup>

Provision	Summary Description
<b>Settlement</b> RSA § 2	The Order shall constitute a settlement of (i) the Bondholder Litigation including the Monoline Motion as to all Supporting Holders, (ii) the Supporting Holders’ ability to exercise rights under the Trust Agreement or other applicable law as to PREPA-related issues, and (iii) the Supporting Holders’ right to receive any current payments on the Bonds.

<sup>10</sup> The Supporting Holders include both the Ad Hoc Group and Assured. Other monoline insurers were offered the opportunity to become a party to the RSA under similar terms provided therein for Assured.

<sup>11</sup> Any summary of the terms of the RSA herein is qualified in its entirety by reference to the RSA, a copy of which is attached to the proposed 9019 Order as **Schedule 1**. If there are any inconsistencies between summaries in the Motion and the terms of the RSA, the terms of the RSA shall control. A capitalized term used in this summary shall have the meaning given it by the RSA.

Provision	Summary Description
<p><b>Plan Treatment</b>                      Recovery Plan Term Sheet ¶¶ I-VI, X, XIV</p>	<p>When FOMB, as representative of PREPA, proposes a plan incorporating the RSA treatment of the Supporting Holders’ claims, plan will provide for the exchange (and the Supporting Holders commit to exchange or to cause an exchange of all the Supporting Holders’ Bonds, whenever acquired, for Securitization Bonds on the Effective Date of a Plan.</p> <p><b><u>Exchange Ratio</u></b></p> <p>67.5% of total Applicable Bond Claims of Supporting Holders in Tranche A Bonds issued by special purpose government instrumentality (the “<b>Issuer</b>”)</p> <p>10.0% of total Applicable Bond Claims of Supporting Holders in Tranche B Bonds issued by the Issuer</p> <p><b><u>Terms of the Securitization Bonds</u></b></p> <p>Tranche A Bonds shall have the following characteristics:</p> <ul style="list-style-type: none"> <li>○ 40-year stated final maturity, but Tranche A Bonds will extend beyond stated maturity until paid in full</li> <li>○ 5.25% coupon on tax-exempt basis</li> <li>○ Interest accrued for any period is paid only to the extent receipts from the Transition Charge during such period are sufficient and otherwise accrues and compounds; principal is amortized in any period only to the extent of available receipts from the Transition Charge after payment of interest.</li> </ul> <p>Tranche B Bonds (Capital Appreciation Bonds)</p> <ul style="list-style-type: none"> <li>○ 47-year stated final maturity, and any amounts not paid prior to maturity will not be recoverable</li> <li>○ 7.00% accretion rate (if tax-exempt) / 8.75% (if taxable)</li> <li>○ No debt service until Tranche A Bonds are paid in full, and then paid only to the extent receipts from the Transition Charge are available for payment</li> </ul> <p><b><u>Transition Charge</u></b></p>

Provision	Summary Description
	<p>Securitization Bonds will be secured by a non-bypassable “<b>Transition Charge</b>” added to all electric customers bills. See Demand Protections Term Sheet for details.</p> <p>Transition Charge starts at 2.768 cents per kilowatt hour (c/kWh) and gradually escalates over the next 24 years until it reaches a maximum of 4.552 c/kWh, to be adjusted prior to the Effective Date to account for when the Effective Date occurs, certain cash payments to Supporting Holders described below, and as needed to ensure that modeling on collections matches projected actual collections, among other things.</p>
<p><b>Additional RSA Consideration</b>                      RSA §§ 1(a)(xii), 1(a)(c), 1(a)(cii), 2(c)(iv), 2(d), 2(e), 6(c), 9</p>	<p><b><u>Administrative Claims</u></b></p> <p>Each Supporting Holder shall receive an administrative expense claim in PREPA’s Title III case (the “<b>Administrative Claim</b>”) for (i) an amount equivalent of the Tranche A interest that would accrue in respect of its Bonds (assuming the 67.5% exchange) during the period described below, less (ii) the amount of Settlement Payments or Increased Settlement Payments made during this period. Administrative Claims shall also accrue at the Tranche A interest rate on the Waiver and Support Fees described below.</p> <p>The Administrative Claim shall start on the applicable Start Date (see below) and continue to accrue until the earliest of (A) the Stipulated Treatment Termination, (B) an Individual Termination with respect to an individual Supporting Holder, or (C) the Effective Date of a Plan.</p> <p>If a Securitization Termination occurs, then subject to certain exceptions, Settlement Payments (or Increased Settlement Payments or Adequate Protection Payments, as applicable) shall continue to be made to the Supporting Holders and the Administrative Claims shall continue to accrue.</p> <p>If a Stipulated Treatment Termination occurs (other than as a result of denial of Plan confirmation as described below), no Administrative Claim shall have accrued.</p> <p><b><u>Settlement Charge/Settlement Payments</u></b></p>

Provision	Summary Description
	<p>PREPA will implement a “<b>Settlement Charge</b>” of 1 c/kWh (one cent per kilowatt-hour) by July 1, 2019.</p> <p>Supporting Holders will be entitled to monthly cash Settlement Payments in the amount of such Supporting Holder’s pro rata share of eligible Bonds subject to the RSA, multiplied by the product of (i) the number of kilowatt hours PREPA billed during the previous month, multiplied by (ii) 92%, multiplied by (iii) the Settlement Charge (the “<b>Settlement Payments</b>”).</p> <p>The Settlement Payments shall start on the applicable Start Date (see below) and continue through the earliest of (A) a Stipulated Treatment Termination, (B) an AAFAF/PREPA Termination, (C) the Effective Date of a Plan, or (D) dismissal of PREPA’s Title III Case.</p> <p><b><u>Delayed Implementation</u></b></p> <p>If the Plan has not gone effective by March 31, 2021 (the “<b>Delayed Implementation Date</b>”), PREPA will put into effect an “<b>Increased Settlement Charge</b>” equal to the full Transition Charge that would have gone into effect on that date (i.e. 2.768 c/kWh).</p> <p>If PREPA fails to implement the Increased Settlement Charge on the Delayed Implementation Date, Bonds subject to the RSA shall be entitled to cash Adequate Protection Payments in the amount of Increased Settlement Payments.</p> <p>On and after March 31, 2021, in lieu of Settlement Payments, Supporting Holders will be entitled to monthly cash “<b>Increased Settlement Payments</b>” in the amount of such Supporting Holder’s pro rata share of eligible Bonds subject to the RSA, multiplied by amounts actually collected under the Increased Settlement Charge.</p> <p><b><u>Claim &amp; Payment Start Date</u></b></p> <p>Bonds subject to the RSA on or within 21 days after its execution date (“<b>Full Claim Bonds</b>”) shall start to accrue Administrative Claims as of May 1, 2019.</p> <p>Bonds that become subject to the RSA between the 21<sup>st</sup> day after its execution date and the date on which the 9019 Order is entered</p>

Provision	Summary Description
	<p>(“<b>Pre-9019 Order Bonds</b>”) shall start to accrue Administrative Claims as of the date of entry of the 9019 Order.</p> <p>Bonds that become subject to the RSA between entry of the 9019 Order and September 1, 2019 (“<b>September Bonds</b>”) shall start to accrue Administrative Claims as of September 1, 2019.</p> <p>Bonds that become subject to the RSA during a Joinder Period (“<b>Joinder Period Bonds</b>”)<sup>12</sup> shall start to accrue Administrative Claims as of the first day of the month following the end of the Joinder Period in which they became subject to the RSA.</p> <p>Full Claim Bonds, Pre-9019 Order Bonds, September Bonds, and Joinder Period Bonds shall each be entitled to receive Settlement Payments, Increased Settlement Payments, or Adequate Protection Payments.</p> <p>Bonds that become subject to the RSA at any other time (including additional Bonds acquired by Supporting Holders) shall not be entitled to Administrative Claims, Settlement Payments, Increased Settlement Payments or Adequate Protection Payments. But such Supporting Holders will be entitled to receive the Securitization Bonds or the Stipulated Treatment if a plan is subsequently confirmed and goes effective.</p> <p>These rights of Full Claim Bonds, Pre-9019 Order Bonds, September Bonds and Joinder Period Bonds shall travel with such bonds if they are transferred to another Supporting Holder.</p>
<p><b>Waiver and Support Fee</b> RSA § 4</p>	<p>In further consideration of the negotiation, execution, and delivery of the Preliminary RSA by the Ad Hoc Group, and the RSA by the Ad Hoc Group and Assured, and the obligations and covenants contained in the RSA, the Ad Hoc Group and Assured shall be entitled to a “Waiver and Support Fee” in the form of Tranche A Bonds initially equal to 1.935% (\$65,408,186), for the Ad Hoc Group, and 1.885% (\$16,626,912), for Assured, of the par amount of PREPA Bonds held by the Ad Hoc Group, as of July 1, 2018, or Assured, as of May 1, 2019, respectively.</p>

<sup>12</sup> If the Supporting Holders hold less than the Required Threshold, then a 60-day “**Joinder Period**” can be declared, and Uninsured Bonds that become subject to the RSA during the Joinder Period are entitled to Administrative Claims and will receive settlement payments under the RSA.

Provision	Summary Description
	<p>Additional support (and potential waiver) fee in the form of Tranche A Bonds initially equal to 0.8360% of par amount of total outstanding PREPA Bonds (\$69,044,804) as of May 1, 2019, to be provided to Supporting Holders, including additional signatories, in a manner to be mutually agreed upon by the Required Parties.</p>
<p><b>Allowed Claims</b> RSA § 2(c)(i), (ii)</p>	<p>As part of the settlement contained in the RSA, if the Government Parties determine that they can no longer provide the Securitization Bonds, all Supporting Holders shall be entitled to an Allowed Claim in PREPA’s Title III case equal to 73.25% of the principal amount of Bonds held or insured by the Supporting Holder (and accrual of interest on the Bonds until May 1, 2019), plus any applicable Waiver and Support Fees. Assured shall also receive additional consideration as part of its Allowed Claim to the extent that, in connection with any alternative treatment for the Allowed Claim after a Securitization Termination (see below), it is not provided the opportunity to wrap debt securities issued on account of Assured Insured Bonds and otherwise provide insurance and receive consideration with respect thereto to the same extent as set forth in the Assured Treatment (see below).</p> <p>The Allowed Claim shall be treated as if it were an allowed, fully secured claim in the reduced amount of 73.25% of the Applicable Bond Claim, meaning it is secured by collateral worth at least the amount of such Allowed Claim and included in any Plan unless and until a Stipulated Treatment Termination occurs.</p> <p>If a Securitization Termination has not occurred, except as set forth in the RSA in the event of an Individual Termination (as to such terminated Supporting Holder) or a Stipulated Treatment Termination (as to all Supporting Holders), and Securitization Bonds are issued under a confirmed plan providing the Supporting Holders the treatment set forth in the RSA, then the claims of the Supporting Holders shall be deemed allowed, solely for plan distribution purposes, in the discounted, secured amounts that would be satisfied in accordance with Bankruptcy Code section 1129(b) by their treatments provided in the plan.</p>
<p><b>Assured Treatment</b> RSA § 6(d)(i), Recovery Plan Term Sheet ¶ VII</p>	<p>Assured shall have all the rights and obligations related to any Assured Insured Bonds, including without limitation the exclusive right to vote such Assured Insured Bonds on account</p>

Provision	Summary Description
	<p>of any Plan, other than as otherwise expressly set forth in the RSA.</p> <p>As set forth in the Recovery Plan Term Sheet, the Plan shall provide for the following treatments with respect to the Assured Insured Bonds and related obligations owned or insured by Assured, which treatments shall be selected by Assured in its sole discretion on or prior to the hearing on the disclosure statement:</p> <p><u>Assured Election</u>: At Assured’s election, all or any portion of the Assured Insured Bonds shall be paid on the effective date, at an acceleration price equal to the amount of outstanding principal on such Bonds plus accrued and unpaid interest, from proceeds of Securitization Bonds allocable to holders of such Assured Insured Bonds that shall be insured by Assured (at Assured’s option) and publicly offered to investors (such process described in more detail in the Recovery Plan Term Sheet). To the extent that the proceeds from such sale are insufficient to pay such acceleration price, any deficiency shall be paid by Assured pursuant to the terms of its insurance policies. At Assured’s election, other Securitization Bonds allocable to, or to be received by, Assured in accordance with the RSA shall also be publicly offered to investors with the proceeds of such sale to be transferred to Assured.</p> <p><u>Assured Bondholder Elections</u>: If Assured declines to make the election described above, then the Plan may offer the holders of Assured Insured Bonds any one or more of the following elections on terms acceptable to Assured: (i) payment by Assured of the applicable acceleration price in full discharge of Assured’s obligations under the applicable insurance policies and, in exchange, Assured shall receive the Securitization Bonds (which, at Assured’s election, may be insured by Assured) allocable to the applicable holder; (ii) a custodial trust or escrow arrangement in accordance with the terms of the Recovery Plan Term Sheet; or (iii) in full satisfaction of Assured’s obligations under its insurance policies, the applicable holder receives Securitization Bonds (which, at Assured’s election, may be insured by Assured) and a cash payment in an amount to be determined by Assured prior to the hearing on the disclosure statement.</p> <p>In exchange for Assured’s insurance of any Securitization Bonds and related obligations, it shall be entitled to receive</p>

Provision	Summary Description
	<p>insurance premiums in cash or additional Tranche A Bonds, as applicable, as set forth in the Recovery Plan Term Sheet.</p> <p>Nothing in the RSA or the 9019 Order shall prejudice the rights of the beneficial holders of any Assured Insured Bonds against Assured.</p>
<p><b>Forbearance</b> RSA § 3</p>	<p>Supporting Holders shall forbear from exercising rights and remedies related to the Bonds. In exchange, the Government Parties shall not bring a Lien Challenge, subject to certain exceptions. No other party can bring a Lien Challenge on the Government Parties' behalf.</p>
<p><b>Additional RSA Party Commitments</b> RSA §§ 3(k), 5(a), 6(a), 6(b)</p>	<p>Commit to (i) working on finalizing the necessary documents to effect the Securitization Bond Treatment, (ii) support and take all commercially reasonable, necessary, or appropriate actions to effect the Restructuring, (iii) support confirmation of the Plan; and (iv) support and not interfere with a Transformation Transaction consistent with RSA.</p> <p>Supporting Holders shall support actions to implement the Restructuring. Subject to court approval of a disclosure statement as containing adequate information, Supporting Holders shall vote in favor of a Plan consistent with the RSA, including a Plan that offers the Stipulated Treatment after any Securitization Termination, and shall support confirmation of such Plan</p>
<p><b>Government Parties Obligations</b> RSA §§ 5, 7, 22</p>	<p>The Government Parties commit to propose a Plan that treats Supporting Holders' claims in accordance with the RSA.</p> <p>Prior to the effective date of a Restructuring, (i) Transformation Transaction for transmission and distribution assets shall not close, and (ii) PREPA shall not sell any of its useful generation assets.</p> <p>The Government Parties commit to reimburse certain fees and expenses of the Ad Hoc Group and Assured, in each case as more fully set forth in (and subject to the limitations of) the RSA. In the event of an AAFAF/PREPA Termination, certain portions of such fee reimbursement will be in the form of Administrative Claims which shall be paid in cash on the Effective Date.</p> <p>Other miscellaneous covenants.</p>



Provision	Summary Description
<p><b>Termination Rights</b> RSA §§ 1(a)(xxxi), 9(b), (c), (d)</p>	<p>There are three termination rights under the RSA: (1) Stipulated Treatment Termination (or Individual Termination); (2) Securitization Termination; and (3) AAFAF/PREPA Termination.</p> <p><b><u>Securitization Termination (Partial Termination)</u></b></p> <p>Any Government Party may declare a Securitization Termination if any of FOMB, the governing board of PREPA, or AAFAF determines the Securitization Bond Treatment will impede or have an adverse impact on the Transformation Transaction or the terms of the Restructuring are inconsistent with the Transformation Transaction.</p> <p><b><u>Effect of Securitization Termination</u></b></p> <p>The Government Parties are no longer obligated to issue Securitization Bonds and all other rights and obligations of the RSA shall terminate to the extent they relate to the Securitization Bonds. However, all other terms of the RSA survive, including the obligation of the Government Parties to provide Supporting Holders with the Stipulated Treatment, the Supporting Holders’ RSA obligations to vote for a plan providing the Stipulated Treatment, and the Supporting Holders’ entitlement to Administrative Claims, Settlement Payments, and other required payments.</p> <p><b><u>Stipulated Treatment Termination/Individual Termination (Full Termination)</u></b></p> <p>Any Government Party may terminate the RSA and elect not to provide the Stipulated Treatment (as to all Supporting Holders) if:</p> <ul style="list-style-type: none"> <li>○ The applicable Required Threshold (i.e. minimum percentage of bondholders party to the RSA) is not met prior to (i) entry of the 9019 Order, (ii) September 1, 2019; or (iii) expiration of any Joinder Period;</li> <li>○ The 9019 Order is reversed on appeal;</li> <li>○ The Title III case is dismissed;</li> <li>○ Confirmation of a plan that complies with the RSA is denied, subject to a 45-day period where the Parties shall work together in good faith to amend the Plan in a manner that takes into account the Title III Court’s ruling denying</li> </ul>

Provision	Summary Description
	<p>Plan confirmation and confirmation of such amended Plan is also denied; or</p> <ul style="list-style-type: none"> <li>o Any Supporting Holder (other than Assured or the Ad Hoc Group) participates in contesting or defending a Lien Challenge that was brought in compliance with the RSA (provided that an election with respect to this termination event is made prior to entry of the 9019 Order).</li> <li>• Any Government Party may terminate the RSA and elect not to provide the Stipulated Treatment to any Supporting Holder that commits a Bondholder Breach (an “<b>Individual Termination</b>”)</li> <li>• A “<b>Bondholder Breach</b>” means, whether prior to or after termination of the RSA (a) any Supporting Holder commences or joins a Bondholder Litigation; (b) a Supporting Holder takes any action that has a material adverse effect on any Transformation Transaction; or (c) a breach by a Supporting Holder of specified material undertakings, representations, warranties, or covenants of the Supporting Holders set forth in the RSA which, in the case of each of clauses (a)-(c), remains uncured for a period of twenty business days after the receipt of written notice of such breach.</li> </ul> <p><b><u>Effect of Stipulated Treatment Termination (or Individual Termination)</u></b></p> <ul style="list-style-type: none"> <li>• The RSA is void and of no further force and effect but the Supporting Holders’ Bond Claims will be reduced by the amount of any payments made under the RSA; all prior payments received by the Supporting Holders shall be retained by the recipient, and, unless the Stipulated Treatment Termination resulted from denial of plan confirmation, accrued and unpaid Administrative Claims shall be disallowed (other than Administrative Claims for certain unreimbursed reasonable fees and expenses).</li> </ul>
<p><b>Joining the RSA</b> RSA § 6(c)</p>	<p>Any holder of Uninsured Bonds may join the RSA by signing the Joinder Agreement attached as Exhibit A to the RSA and will receive the Securitization Bond Treatment (or the Allowed Claim if a Securitization Termination occurs).</p> <p>Such holder’s entitlement to Administrative Claims, Settlement Payments, Increased Settlement Payments, and Adequate Protection Payments shall depend on when the holder joins the RSA (or, if a holder joins by buying Bonds already subject to</p>

Provision	Summary Description
	<p>the RSA, be determined based on when each Bond it holds became subject to the RSA), as set forth above in “Claim and Payment Start Date.”</p>
<p><b>Treatment of Bonds Not Subject to RSA</b>                      RSA § 6(d)</p>	<p>Bonds that choose not to join the RSA have no rights under the RSA and retain whatever rights they have under their Bonds. Unless a bondholder joins the RSA, any Bonds it holds will not necessarily be entitled to the treatment provided in the RSA, including receiving Securitization Bonds at the exchange rate set forth above or recovery on a fully secured Allowed Claim in the discounted amount, and may be subject to having their liens and claims challenged which, if such challenges are successful, could result in substantially reduced recoveries.</p>
<p><b>Bondholders Holding Insured Bonds</b></p>	<p>Holders of Insured Bonds that are party to the RSA are (i) not entitled to payments or distributions under the RSA in respect of those Insured Bonds, but (ii) are subject to certain of the negative covenants and voting obligations.</p> <p>Nothing in the RSA prejudices the rights of holders of Insured Bonds against the insurer of their Insured Bonds.</p>
<p><b>Transfer Provisions</b>                      RSA § 6(c)</p>	<p>A Supporting Holder shall not transfer Uninsured Bonds unless the transferee is a Supporting Holder or signs a joinder to the RSA.</p> <p>Rights to Administrative Claims and continued receipt of Settlement Payments travel with the Bonds to the new transferee.</p>
<p><b>Additional Commitment of RSA Parties</b>                      RSA §§ 3(c), 3(o), 6(c)</p>	<p>The Parties, subject to certain conditions, shall among other things, enter into an agreement in substantially the form of <b>Exhibit B</b> hereto, tolling unexpired statutes of limitations for Lien Challenges (“<u>Tolling Agreement</u>”).</p> <p>By signing or joining the RSA, a Supporting Holder (i) joins such Tolling Agreement, (ii) directs the Trustee to join this Motion and (iii) consents to an amendment to the Trust Agreement to increase certain thresholds thereunder for Bondholder action or direction if and to the extent the Required Parties deem such amendment reasonable and appropriate to facilitate implementation of the RSA.</p>
<p><b>No Bondholder Liability</b></p>	<p>No Bondholder shall have any liability to any other Bondholder related to extensions of RSA deadlines, the termination of the</p>

Provision	Summary Description
RSA § 21	RSA pursuant to its terms, any modifications to the RSA, or their exercise or failure to exercise any rights.
<b>Exculpation</b> RSA § 2(a)	The 9019 Order shall include a full exculpation of the Trustee and the directing Supporting Holders for any liability for joining the Settlement Motion and entering into the Tolling Agreement or providing direction in respect of the same.
<b>Remedies</b> RSA § 16	None of the RSA Parties shall be entitled to monetary damages for any breach of the RSA. Specific performance or other equitable relief and the right to terminate the RSA shall be the sole remedies for breach of the RSA.
<b>Most Favored Nation Status</b> RSA § 23	The Ad Hoc Group and Assured have a most favorable nations covenant with respect to agreements struck with other legacy debt holders.

42. The terms of the RSA represent a reasonable, fair, and equitable resolution of the claims of the Supporting Holders and the Government Parties’ related rights and defenses, and that its approval is in the best interests of PREPA. Further, the benefits from the settlement (followed by the confirmation of a plan) to PREPA and Puerto Rico (including by facilitating transformation and modernization of the power sector) outweigh the chances of success and risk in litigation against the Supporting Holders and the time and expense of that litigation, even if the Government Parties have to litigate against non-settling creditors, because even if non-settling creditors prevail in whole or part, PREPA will remain entitled to the discounts provided by the Supporting Holders.

**Relief Requested**

43. By this Motion the Oversight Board and AAFAF seek the entry of the proposed 9019 Order in the form attached hereto as Exhibit A, among other things: (i) authorizing all Government Parties to enter into the RSA and to carry it out; (ii) approving the RSA; (iii) allowing the claims of the Supporting Holders as provided in the RSA; (iv) tolling all statutes of limitation,

if any,<sup>13</sup> governing the Lien Challenge as against the Supporting Holders; and (v) providing the Order is not automatically stayed.

#### **Basis for Relief**

44. The Oversight Board consents under PROMESA § 305 to the Court's determination of this Motion and its entry of the proposed 9019 Order. Additionally, Bankruptcy Code section 502(b) allows the court to determine objections to claims and Bankruptcy Code section 922(d) enables the debtor to make voluntary payments of pledged special revenues.<sup>14</sup> Bankruptcy Code section 362(d) allows the Court to grant stay relief in the absence of adequate protection or for other cause, thereby empowering the court to approve payments resulting in a creditors' relinquishment of its right to prosecute a motion for stay relief. Bankruptcy Rule 9019 manifests the Court's power to assess settlements.<sup>15</sup> The RSA is a settlement resulting from extensive negotiations among the Oversight Board, AAFAF, PREPA, and other interested parties that have been going on for more than a year. The RSA reflects a compromise of the Supporting Holders' prepetition claims, locking in their treatment under the terms set forth in the RSA and a discounted recovery (subject to exceptions in the RSA), solving the various complex legal issues raised in the contested matters and adversary proceedings discussed above and paving the road for PREPA's debt restructuring and ultimate transformation.

45. Bankruptcy Rule 9019(a) provides a court may approve a debtor's "compromise and settlement" after notice and a hearing. Bankruptcy Rule 9019(a). The First Circuit has emphasized that "[s]tipulations of settlement are favored by the courts, and they will rarely be set

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<sup>13</sup> PREPA does not believe there are any statutes of limitations governing its right to object to secured claims on the grounds they are not perfected or do not extend to certain property.

<sup>14</sup> The term "special revenues" is defined in section 902(2) of the Bankruptcy Code.

<sup>15</sup> See *supra* n. [5].

aside absent fraud, collusion, mistake or other such factor.” *In re Indian Motorcycle Co.*, 289 B.R. 269, 282 (B.A.P. 1st Cir. 2003); *see also In re Healthco Int’l, Inc.*, 136 F.3d 45, 50 n.5 (1st Cir. 1998).

46. In line with these principles, many courts have approved restructuring support agreements and other deals similar to the RSA under Bankruptcy Rule 9019. *See, e.g., Energy Future Holdings Corp. v. Del. Trust Co.*, 648 Fed. Appx. 277, 285 (3d Cir. 2016) (affirming approval under 9019 of holistic settlement of secured creditors’ claims because no “other creditor’s recovery is impacted by the settlement, [nor] any requirement of Chapter 11 [] subverted by the plan.”); *In re Residential Capital, LLC*, 2013 Bankr. LEXIS 2601 (Bankr. S.D.N.Y. Jun. 27, 2013) (approving plan support agreement under section 363 and 9019); *In re CHC Grp. Ltd.*, Case No. 16-31854-BJH, ECF No. 1381 (Bankr. N.D. Tex. Dec. 20, 2016) (approving plan support agreement under Rule 9019); *In re Federal-Mogul Global Inc., T&N Limited*, Case No. 01-BK-10578-JFK, ECF No. 11508 (Bankr. D. Del. Feb. 7, 2007) (same); *In re Fiddler’s Creek, LLC*, Case No. 10-BK3846-CPM, ECF No. 702 (Bankr. M.D. Fla. Feb. 25, 2011) (same); *In re Nautilus Holdings Ltd.*, Case No. 14-BK-22885-RDD, ECF No. 165 (Bankr. S.D.N.Y. Oct. 3, 2014) (same); *Motorola, Inc. v. Official Comm. of Unsecured Creditors (In re Iridium Operating LLC)*, 478 F.3d 452, 467 (2d Cir. 2007) (approving settlement of lien challenge and claims of secured creditors as it “cleared the way for implementation of a reorganization plan.”).

47. The standard courts apply for approval of settlements under Rule 9019 is deferential to the debtor’s judgment and merely requires the Court to ensure that the settlement does not fall below the lowest point in the range of reasonableness in terms of benefits to the Debtor. *See Allied Waste Servs. Of Mass., LLC (In re Am. Cartage, Inc.)*, 656 F.3d 82, 92 (1st Cir. 2011) (“The task of both the bankruptcy court and any reviewing court is to canvass the issues and see whether the

settlement falls below the lowest point in the range of reasonableness . . . If a trustee chooses to accept a less munificent sum for a good reason (say, to avoid potentially costly litigation), his judgment is entitled to some deference.”) (citing *In re Thompson*, 965 F.2d 1136, 1145 (1st Cir. 1992)).

48. The approval of settlements is within the court’s “wide discretion.” See *Jeremiah v. Richardson*, 148 F.3d 17, 22 (1st Cir. 1998). However, while a court should apply its own independent judgment to determine whether to approve a settlement, it should also afford deference to the judgment of the trustee or debtor in possession. See *In re Receivership Estate of Indian Motorcycle Mfg., Inc.*, 299 B.R. 8, 21 (D. Mass. 2003) (the court should give “substantial deference to the business judgment of a bankruptcy trustee when deciding whether to approve a settlement”); *Hill v. Burdick (In re Moorhead Corp.)*, 2008 B.R. 87, 89 (B.A.P. 1st Cir. 1997) (“The [bankruptcy] judge . . . is not to substitute her judgment for that of the trustee, and the trustee’s judgment is to be accorded some deference.” (citation omitted)); *City Sanitation, LLC v. In re Healthco Int’l, Inc.*, 136 F.3d at 50 n.5. (“the bankruptcy judge . . . is not to substitute her judgment for that of the trustee, and the trustee’s judgment is to be accorded some deference. Compromises are favored in bankruptcy.”) (internal citations and quotations omitted). Moreover, “In evaluating a Rule 9019 settlement, a bankruptcy court need not ‘conduct a mini-trial to determine the probable outcome of any claims waived in the settlement.’ Rather, the bankruptcy court must ‘apprise [itself] of the relevant facts and law so that [it] can make an informed and intelligent decision.’” *In re Age Refining, Inc.*, 801 F. 3d 530, 541 (5th Cir. 2015) (citations omitted).

49. In determining the reasonableness of a settlement, courts in the First Circuit consider the following four factors: (i) the probability of success in the litigation being

compromised; (ii) the difficulties, if any, to be encountered in the matter of collection; (iii) the complexity of the litigation involved, and the expense, inconvenience and delay attending it; and (iv) the paramount interest of the creditors and a proper deference to their reasonable views in the premise. *Jeffrey*, 70 F.3d at 185; see also *In re Indian Motorcycle Co.*, 289 B.R. at 283; *In re Laser Realty, Inc. v. Fernandez (In re Fernandez)*, 2009 Bankr. LEXIS 2846, at \*9 (Bankr. D.P.R. Mar. 31, 2009); *In re C.P. del Caribe, Inc.*, 140 B.R. 320, 325 (Bankr. D.P.R. 1992).

50. The RSA is a product of arm's length, good faith negotiations among the RSA Parties, involving careful consideration by the Oversight Board, AAFAF, and the governing board of PREPA, in consultation with their respective financial and legal advisors, and following lengthy exploration of various alternative restructuring and litigation strategies and an analysis of the impact of the deal on PREPA, its exit from Title III, its transformation, the Puerto Rico economy, and the Puerto Rico electric system. The RSA is eminently reasonable, and this Court should approve it.

51. **Resolution of Substantial Portion of PREPA's Debt Claims.** The RSA provides the foundation for a plan of adjustment for PREPA by resolving the claims of a majority of PREPA's Uninsured Bondholders, as well as the claims of Assured, and binding them to support a Plan that provides them with replacement Securitization Bonds or, in the alternative, a stipulated economic equivalent recovery of 73.25% of their principal plus interest. The effectiveness of the Definitive RSA is conditioned upon, among other things, execution of the Definitive RSA by at least 67% in amount of Uninsured Bonds, and 67% in amount of the total outstanding Bonds, by September 1, 2019, thus assuring PREPA sufficient votes in any class of Uninsured Bonds or



Bonds as a whole to meet the dollar thresholds for acceptance under the confirmation requirements of PROMESA.<sup>16</sup>

52. **The RSA is an Important Step Towards a Confirmable Title III Plan.** Although the RSA only deals with the claims of Supporting Holders under the Trust Agreement and does not determine or commit to propose any future plan treatment of any other creditors, approval of the RSA will lay the foundation for a plan that will have the support of key stakeholders at Plan confirmation. The approval of the RSA will serve as the foundation for the Debtor's restructuring and provide a path to a timely exit from Title III when the transformation transaction for the transmission and distribution system is ready to close. At the same time, it only binds the RSA Parties and is limited to claims held by Supporting Holders arising under the Trust Agreement. As such, it should be approved as a reasonable compromise. *In re Motors Liquidation Co.*, 555 B.R. 355, 367-68 (Bankr. S.D.N.Y. 2016) (“the role of this Court is not to second-guess the business decision of the [settling party]; rather, the Court is only to see whether the settlement falls below the lowest point in the range of reasonableness. The RSA was negotiated by very experienced counsel, at arm’s length, and approved by the [settling parties’] members after due deliberations.”) (internal quotes and citations omitted).

53. **The RSA Settles Complicated Litigation With the Supporting Holders That Would Take Substantial Time and Efforts to Resolve Absent a Compromise.** Given litigation’s inherent uncertainties, the compromise of contentious litigation is encouraged in bankruptcy. *In re Manuel Mediavilla, Inc.*, 568 B.R. 551, 567 (1st Cir. B.A.P. 2017) (recognizing “federal policy encouraging settlement of bankruptcy litigation.”). While the Government Parties

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<sup>16</sup> See 11 U.S.C. § 1126(c), incorporated into PROMESA pursuant to § 301(a). While the Required Threshold will satisfy the dollar threshold requirement under PROMESA, PREPA may still need to seek support of further Bondholders to meet the numerosity requirement (i.e., more than half in number of voting creditors).

believe they would prevail in a challenge to its bondholders' asserted security interests and defeat the Renewed Receiver Motion, the First Circuit's decisions in the ERS Title III case, *Altair Global Credit Opp., et al v. Employees Retirement System, et al.*, No. 18-1836 (1st Cir. 2019), as well as the First Receiver Motion, demonstrate the inherent uncertainty in litigation, even when the facts and law appear clear to both sides. *See In re Sabine Oil & Gas Corp.*, 555 B.R. 180, 257 (Bankr. S.D.N.Y., 2016) (approving settlement and "recogniz[ing] the uncertainties of law and fact in any particular case and the concomitant risks and costs necessarily inherent in taking any litigation to completion"). The RSA Parties have agreed, pursuant to the terms of the RSA, to settle all litigation and causes of action relating to the Supporting Holders' claims and security interests relating to PREPA and any opposition they could otherwise assert to confirmation of a PREPA plan of adjustment, and establish a specific level of recovery in any Plan, except in the case of a Stipulated Treatment Termination as to all Supporting Holders or an Individual Termination with respect to an individual holder. As such, the Supporting Holders' agreement to resolve their Bond claims at a discounted price, after going several years without debt service, redounds to the significant benefit of PREPA.

**54. The Tolling of Applicable Statutes of Limitations Is Appropriate and Necessary to the Settlement.** Upon entry of the 9019 Order, the RSA Parties and the Trustee will enter into a Tolling Agreement tolling all unexpired statutes of limitation for any action related to Bonds, including, without limitation, any Lien Challenge and any potential Bondholder Litigation (the "Tolled Actions") until the later of the Effective Date of a Plan or 45 days after a Stipulated Treatment Termination.<sup>17</sup> This will preserve the rights of both sides to assert Tolled

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<sup>17</sup> The Oversight Board believes tolling is not required for certain of PREPA's objections to the secured claims of Bondholders, including, without limitation, on grounds relating to the scope of the Bondholders' liens or the Bondholders' failure to perfect their security interests. *See, e.g. In re Mid Atlantic Fund, Inc.*, 60 B.R. 604 (Bankr. S.D.N.Y. 1986) (trustee could object to claim on basis the incurrence of the liability was fraudulent transfer and that

Actions in the future if the RSA terminates, while giving them the benefits of a settlement now and allowing them to focus on implementing the RSA without worrying about having to assert their rights in court or lose them.

55. As the Trustee will be a party to the Tolling Agreement, Movants believe the Tolling Agreement represents an entirely consensual tolling of applicable statutes of limitations in relation to all PREPA Bondholders (including those who have not joined the RSA and all monoline insurers), and should be approved on that basis as a fair and reasonable settlement.<sup>18</sup> Additionally, any statute of limitations with respect to the Tolloed Actions should be tolled as to Bondholders or monoline insurers who have not joined the RSA or Tolling Agreement under principles of equitable tolling because: (1) Movants have been pursuing their rights diligently (and are prepared, if necessary, to file a Lien Challenge within the statute of limitations period set forth in Bankruptcy Code section 546), and (2) extraordinary circumstances—specifically, the RSA Parties’ entry into the RSA holistically settling the Supporting Holders’ claims and the reasonable desire of the parties to avoid unnecessary litigation—are present that more than justify the tolling of causes of action relating to the Trust Agreement while the RSA is in effect.<sup>19</sup> *See, e.g., Pace v. DiGuglielmo,*

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trustee had priority as judicial lien creditor under section 544 based upon section 502(d), notwithstanding the expiration of the statute of limitations set forth in section 546); *United States Lines v. United States (In re McLean Indus.)*, 196 B.R. 670, 676 (S.D.N.Y. 1996) (trustee can object to claim under section 502(d) on basis it is preferential under section 547 without complying with section 546, in line with “majority” of courts); *In re KF Dairies*, 143 B.R. 734, 736 (9th Cir. BAP 1992) (same); *In re Stoecker*, 143 B.R. 118, 131 (Bankr. N.D. Ill.), *aff’d*, 143 B.R. 879 (N.D. Ill. 1992) (same); *Lassman v. Poulos (In re American Pie, Inc.)*, 361 B.R. 318, 324 (Bankr. D. Mass. 2007) (trustee could assert judicial lien creditor priority to defeat claims of creditors outside of section 546); *Wallick v. Cambio (In re Block)*, 259 B.R. 498 (Bankr. D.R.I. 2001) (“I also agree with and follow those decisions holding that the limitations provisions in Section 546 do not apply when the trustee uses the § 544(a)(3) strong-arm power defensively.”). Movants are requesting tolling of these actions out of an abundance of caution.

<sup>18</sup> The Oversight Board believes the Trustee holds all claims and security interests under the Trust Agreement on behalf of all Bondholders, and has the power to take any actions necessary to execute the trust and make litigation decisions for the benefit of *all* PREPA bondholders. *See* Trust Agreement §§ 809, 902.

<sup>19</sup> Section 546 articulates a statute of limitations that may be tolled on equitable grounds. *In re Int’l Admin. Services, Inc.*, 408 F.3d 689, 699 (11th Cir. 2005) (citing *In re Rodriguez*, 283 B.R. 112, 116–18 (Bankr. E.D.N.Y. 2001)); *see In re Malavet*, 552 B.R. 24, 32 (Bankr. D.P.R. 2016) (referring to Bankruptcy Code section 546 as a “statute of limitations”); *In re Margaux Texas Ventures, Inc.*, 545 B.R. 506, 526 (Bankr. N.D. Tex. 2014) (noting that Bankruptcy Code section 546 “is without a doubt a statute of limitations”); *see also In re Martin Levy Of Berlin*

544 U.S. 408, 418 (2005) (“For those statutes of limitation to which equitable tolling applies, a litigant who seeks tolling must establish at least two elements: (1) that he has been pursuing his rights diligently, and (2) that some extraordinary circumstances stood in his way.”); *see also Neves v. Holder*, 613 F.3d 30, 36 n. 5 (noting that criteria for equitable tolling are “diligence in the pursuit of one’s rights” and “an absence of prejudice to a party opponent.”). No Bondholder or monoline insurer who has not joined the RSA or Tolling Agreement will be prejudiced by the tolling of such statutes of limitations. If tolling is granted pursuant to the 9019 Order, such non-parties will be able to avoid defending claims against them the Oversight Board would otherwise be forced to file. If tolling is not granted, the Oversight Board can bring all meritorious claims before the statutes lapse to preserve them under the terms of the Definitive RSA, and currently is prepared and intends to do so. Such litigation while the RSA is in effect will generate litigation, and consume time and expense that may well prove unnecessary.

56. The RSA, among other things, (a) will likely reduce costly, time consuming, and uncertain litigation with the Supporting Holders and provides certainty as to how they will be treated in a Plan, (b) will facilitate PREPA’s progression towards the formulation of a confirmable plan of adjustment, (c) binds a significant percentage of PREPA’s bondholders to support a plan of adjustment providing them with the Securitization Bonds or with the Stipulated Treatment, and (d) will only bind the Oversight Board, AAFAF, and PREPA if the RSA is joined by enough Bondholders to exceed the dollar amount thresholds for acceptance of both a class of Uninsured Bonds and a class of all Bonds. The Oversight Board and AAFAF believe all relevant factors militate in favor of its approval.

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*D.M.D., P.C.*, 416 B.R. 1, 7 (Bankr. D. Mass. 2009) (collecting the clear majority of cases which hold that Bankruptcy Code section 546 “is a true statute of limitations and does not serve as a jurisdictional bar.”).

### A. Probability of Success

57. In examining the probability of success in the litigation being compromised, courts look to the legal and evidentiary obstacles to litigating the claim. *In re Healthco Int'l, Inc.*, 136 F.3d 45, 50 (1st Cir. 1998); *In re Hansen*, 2017 Bankr. LEXIS 1120, at \*12 (Bankr. D.N.H. Apr. 25, 2017). In addition, the probability of success is measured against the “definitive, concrete and immediate benefit” that a settlement provides against the uncertainty and delay of litigation. *See Yacovi v. Rubin & Rudman, L.L.P. (In re Yacovi)*, 411 Fed. Appx. 342, 346-47 (5th Cir. 2011) (citing *In re Healthco Int'l, Inc.*, 136 F.3d 45, 50 (1st Cir. 1998)). And, “th[e] responsibility of the bankruptcy judge . . . is not to decide the numerous questions of law and fact raised by appellants but rather to canvass the issues and see whether the settlement `fall[s] below the lowest point in the range of reasonableness.’” *Id.*

58. Litigating the challenges to the Supporting Holders’ security interests and pursuing a contested confirmation of a Plan are complicated undertakings. The challenges to the security interests depend on precise and technical examinations of the Trust Agreement and the Uniform Commercial Code. While the Government Parties believe they have strong arguments to invalidate the Bondholders’ security interest, the Supporting Holders likewise believe they have meritorious defenses and that the security interests are valid. Any litigation of these issues will be contentious and resource-intensive. As a result, various parties-in-interest in PREPA’s Title III case have already taken opposite positions as to the correct scope and nature of the Bondholders’ security interests. *See, e.g., Limited Reply of Scotiabank de Puerto Rico, as Administrative Agent, and Solus Alternative Asset Management LP*, Case No. 17 BK 4780-LTS, ECF No. 687 (arguing Bondholders’ security interests only attach to and are perfected in moneys in the Sinking Fund); *Supplemental Objection of Assured Guaranty Corp. and Assured Guaranty Municipal Corp.*, Case

No. 17 BK 4780-LTS, ECF No. 652 at 2-3 (arguing the Bondholders have attached and perfected security interests in “all of the ‘revenues of the System,’ without deduction,” and various contractual covenants); *Objection of Official Committee of Unsecured Creditors*, Case No. 17 BK 4780-LTS, ECF No. 1151 (arguing Bondholders’ security interests only attach to moneys in certain specified funds of PREPA, including the Sinking Fund). Where parties’ positions are so far apart, courts generally favor the certainty of a settlement. *See In re Fibercore, Inc.*, 391 B.R. 647, 655 (Bankr. D. Mass. 2008) (“[W]hat is ‘clear’ to one party appears foggy to another and the Trustee believes it is better to pursue a guaranteed, relatively immediate payment to the estate . . . than pursue litigation hoping for more. This Court cannot quarrel with that conclusion.”); *In re Laser Realty, Inc. v. Fernandez (In re Fernandez)*, 2009 Bankr. LEXIS 2846, at \*9-10 (Bankr. D.P.R. Mar. 31, 2009) (“The Court concludes that the uncertainty of the litigation between the debtors and Citibank weighs heavily in favor of the approval of the Settlement Agreement . . .”).

59. Similarly, PREPA’s ability to confirm a Plan absent the support of the Supporting Holders and potentially over their objection is uncertain, particularly given the dearth of jurisprudence in cases either under chapter 9 of the Bankruptcy Code or PROMESA Title III dealing with the issues in this case. The promise by the Supporting Holders, a large plurality of PREPA’s overall debt, to support a Plan significantly reduces the risks attendant to confirmation and should provide PREPA one or more accepting impaired classes of Bond claims that may help the Government Parties to avoid a protracted cramdown battle with PREPA’s Bondholders at confirmation.

60. Finally, settlement with Assured may help avoid or at least simplify costly litigation of the Renewed Receiver Motion. Specifically, the Renewed Receiver Motion was filed by National, Syncora, and Assured, who allege they collectively hold or insure “approximately 27%

of the Bonds.” Renewed Receiver Motion at 1. However, upon the approval of the RSA, Assured will withdraw as a movant in the Renewed Receiver Motion. Without Assured’s support, the remaining movants (National and Syncora) will, by their own admission, hold or insure less than 20% of the Bonds<sup>20</sup>—an insufficient number to circumvent the Trust Agreement’s no-action clause (prohibiting individual Bondholders from taking actions to enforce their rights without engaging the Trustee). Trust Agreement § 808.<sup>21</sup> Moreover, without the support of the Supporting Holders, movants in the Renewed Receiver Motion will not be able to show that the Renewed Receiver Motion is for the “benefit of all holders of bonds,” another requirement of the no-action clause. *Id.* As a result, the Renewed Receiver Motion will be subject to dismissal for failure to comply with the no-action clause, and future Bondholder actions will be rendered significantly less likely because prospective movants will hold an insufficient percentage of bonds to overcome section 808. This will create additional certainty in PREPA’s Title III Case and reduce the possibility PREPA will have to divert its resources from implementing a restructuring to fighting creditor actions, thus benefitting all PREPA stakeholders.

**B. Complexity of Litigation Involved and Expense, Inconvenience, and Delay Attending It.**

61. The complexity of the unresolved issues between PREPA and its Bondholders is evident by not only the difficulty of the legal issues involved (as discussed above), but also the

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<sup>20</sup> Specifically, the draft complaint attached to the Renewed Receiver Motion alleges that National holds or insures (including by way of subrogation) \$1,476,100,909 (at ¶ 5) and Syncora holds or insures (including by way of subrogation) \$174,785,000 (at ¶ 6), representing less than 20% of the \$8.259 billion in principal amount outstanding.

<sup>21</sup> Pursuant to Trust Agreement section 808, Bondholders are prohibited from pursuing remedies in their own name if they hold (in aggregate) less than 10% of the principal amount of outstanding Bonds. If the moving Bondholders hold more than 10%, they can institute an action only if they have made a “written request of the Trustee” and have “offered to the Trustee reasonable security and indemnity against the costs, expenses and liabilities to be incurred therein.” *See* Trust Agreement § 808. Based on information and belief, movants in the Renewed Receiver Motion have not complied with these requirements. These requirements can only be bypassed if the movants hold more than 20% of outstanding Bonds, but in either case, the action must be maintained for the benefit of *all* Bondholders. *Id.* The Trustee is not required to seek to appointment of a receiver unless the request is made by holders of 25% or more of outstanding Bonds. *Id.* § 804.

number of parties involved, the multiple actions that have been filed, the significant costs incurred, and the ramifications of delay in resolving the dispute. If the RSA is not approved, PREPA would be forced to restart negotiations with Bondholders almost from square one and would have to wait in formulating a Plan until all open issues are resolved. Moreover, the expense and inconvenience of litigating the Renewed Receiver Motion and the security interest challenge against all the Bondholders and over the objection of the Supporting Holders would be substantial. It would require substantial discovery into and litigation concerning complex legal and factual issues. As just one of many examples, the bondholders have alleged that PREPA is not authorized under the Trust Agreement or the Bankruptcy Code to deduct capitalized expenditures from Revenues without stripping the lien off of the Revenues in violation of section 928(a). The bondholders may argue there would have to be discovery into the nature and amount of each expenditure incurred by PREPA during the Title III cases and whether such expenditures could be deducted from the Revenues. These issues are not simple. They involve technical interpretations of the Trust Agreement and certain Bankruptcy Code provisions, both of which have not been extensively litigated. And regardless of who prevails on these issues, the results would likely be appealed to appellate courts, which, as demonstrated in other appeals, could take at least a year or more to resolve. This would result in additional expenses to PREPA, at a time when PREPA needs to use its resources to facilitate its emergence from Title III and transformation.

62. The Government Parties' decision to avoid some of these costs, resolve a number of these complicated issues, and defray the risks of a potentially substantial delay should be given substantial deference. *See Jeffrey v. Desmond*, 70 F.3d 183, 187 (1st Cir. 1995) (“[C]oupled with the bankruptcy court’s inquiries and findings regarding the inconvenience and expense to the estate in attending the state court action, and the fact that the compromise would provide creditors with



an immediate and certain payment of a large percentage of the outstanding debt, illustrates that the bankruptcy court did not abuse its discretion in approving the compromise.”); *Bos v. Jalbert (In re ServiSense.com, Inc.)*, 2003 U.S. Dist. LEXIS 17057 at \*16 (D. Mass. Sep. 26, 2003) (“When augmentation of an asset involves protracted investigation or potentially costly litigation, with no guarantee as to the outcome, the trustee must tread cautiously - and an inquiring court must accord him wide latitude should he conclude that the game is not worth the candle.”) (quoting *LeBlanc v. Salem (In re Mailman Steam Carpet Cleaning Corp.)*, 212 F.3d 632 (1st Cir. 2000); *In re Hunt*, 2016 Bankr. LEXIS 1993 at \*9 (Bankr. C.D. Cal. May 12, 2016) (“The certainty that the estate will receive funds now—as opposed to the uncertainty that the estate might obtain a recovery after protracted litigation—weighs in favor of approving the Settlement Agreement.”).

63. For the same reasons, the very limited exculpation of the Trustee and Supporting Holders for joining the Settlement Motion and entering into the Tolling Agreement or providing direction in respect of the same is sufficiently warranted. Notably, no party is released under the RSA, and the exculpation is limited to a subset of actions critical to the implementation of the RSA. As such, the exculpation provision in the RSA is appropriate. *See, e.g., In re Quincy Med. Ctr.*, 2011 Bankr. LEXIS 4405, \*8-9 (Bankr. D. Mass. Nov. 16, 2011) (“I find the exculpation provision . . . reasonable and appropriate either on the basis that the exculpated parties provided financial and other consideration to the estate . . . or as estate fiduciaries they are entitled to limited immunity in order to encourage participation in the bankruptcy process . . . .”); *In re Health Diagnostic Lab., Inc.*, 551 B.R. 218, 232 (Bankr. E.D. Va. 2016) (“The practical effect of a proper exculpation provision is not to provide a release for any party, but to raise the standard of liability of fiduciaries for their conduct during the bankruptcy case.”); *In re PWS Holding Corp.*, 228 F.3d 224, 247 (3d Cir. 2000) (noting an exculpation provision “sets forth the appropriate standard of

liability”); *In re Nat’l Heritage Found., Inc.*, 478 B.R. 216, 233 (Bankr. E.D. Va. 2012) (“Exculpation provisions . . . generally are permissible, so long as they are properly limited and not overly broad.”).

64. Moreover, approval of the RSA will facilitate the PREPA transformation process. The deal will send a message to potential transformation counterparties that PREPA has a clear framework for its exit from bankruptcy through a confirmation order that will help support the transformation transaction(s).

### **C. Interests of Creditors**

65. The creditors who are RSA Parties have clearly determined for themselves that the RSA is a superior option to lengthy and costly ongoing litigation. The rights of all other creditors are left unprejudiced and unaffected. Put differently, the RSA clearly benefits some creditors, and leaves all others unaffected. Thus, the RSA creates benefits for creditors and no detriments.

66. The payments under the RSA can be made without Court approval. Therefore, the Court’s approval of them does not prejudice other creditors. The allowance of secured claims in reduced amounts helps the creditors whose claims are allowed by their own determinations, and does not impair any other creditor from prosecuting its claim for allowance in larger amounts. The settlement provides and promotes rational certainty rather than uncertain gambles.

67. Finally, other Uninsured Bondholders are invited to join the RSA on the same terms as the existing Uninsured Supporting Holders.

68. Unsecured claimholders may also benefit, and are not prejudiced for several reasons. First, for so long as the RSA is in effect, the Supporting Holders are agreeing to the reduction of the secured claims they have asserted. Second, the payments to the Supporting Holders are coming from new—not existing—charges. While unsecured claimholders may argue

that PREPA should have litigated whether the Supporting Holders have unavoidable secured claims, PREPA's judgment to settle is rational by any yardstick, even if some unsecured claimholders would prefer to roll the dice.

69. The elimination of the risk of litigation by the Supporting Holders relating to their treatment under a Plan gives all parties-in-interest significantly more certainty as to the features of a Plan and its confirmability. This enhanced certainty may expedite plan negotiations with other creditors (who may not wish to be left behind and subject to the possibility of claim disallowance and unfavorable cramdown) and therefore expedite PREPA's exit from Title III, while in no way preventing creditors (other than parties to the RSA) from objecting to any Plan. The RSA will also substantially reduce PREPA's costs in completing its Title III case, as major litigation from the Supporting Holders over a lien challenge, rights and remedies under the Trust Agreement, and Plan confirmation will be avoided. *See City Sanitation, LLC v. Allied Waste Servs. of Mass., LLC (In re Am. Cartage, Inc.)*, 656 F.3d 82, 93 (1st Cir. 2011) ("Finally, the bankruptcy court appropriately took into account the paramount interest of the creditors. Settling quickly for \$12,000 allowed the trustee to distribute something to creditors. In bankruptcy, as in life, half a loaf is sometimes better than none."); *In re Laser Realty, Inc. v. Fernandez (In re Fernandez)*, 2009 Bankr. LEXIS 2846, at \*11-12 (Bankr. D.P.R. Mar. 31, 2009) (holding that the interest of creditors weighs in favor of the settlement because "[with the settlement], the Court anticipates the expeditious conclusion of these bankruptcy cases and the attendant distribution to all other creditors.").

70. Furthermore, the Supporting Holders' agreement not to seek to lift the stay to appoint a receiver, or support such a request, assists the Government Parties in opposing the Renewed Receiver Motion. The Government Parties believe the appointment of a receiver could

devastate or significantly delay PREPA's restructuring efforts and impede the Oversight Board's statutory mission. Approval of the RSA will result in Assured withdrawing its support from the Renewed Receiver Motion and obligate the other Supporting Holders not to support it. And as discussed above, the remaining movants to the Renewed Receiver Motion—National and Syncora—do not possess a sufficient percentage of Bonds to circumvent the Trust Agreement's no-action clause, likely necessitating dismissal of the Renewed Receiver Motion. As such, approval of the RSA will redound to the benefit of all creditors by aiding the Government Parties' efforts to retain control of PREPA.

71. Additionally, because of the importance of a healthy PREPA to Puerto Rico's revitalization, transformation of PREPA (which is facilitated by PREPA having a roadmap to emerge from Title III) is also important for the successful restructuring of Puerto Rico's debt. Similarly, the more expeditiously PREPA can exit Title III—a result that will be furthered by approval of the RSA—the sooner both PREPA and Puerto Rico will be able to regain access to the capital markets and begin the island's long road to economic recovery.

72. The RSA provides a more than reasonable solution to an extraordinarily complex series of actual and potential disputes. *See Am. Cartage*, 656 F.3d at 91-92 (the court should "canvass the issues and see whether the settlement falls below the lowest point in the range of reasonableness."). PREPA will be able to move forward toward a final resolution of this Title III case more expeditiously, and will be able to use funds that otherwise would have been spent litigating to work towards confirming a plan of adjustment and emerging from these proceedings. The RSA is eminently fair and equitable and should be approved.

### **Notice**

73. Movants have provided notice of this Motion to: (a) the Office of the United States Trustee for the District of Puerto Rico; (b) the indenture trustees and/or agents, as applicable, for the Debtor's Bonds; (c) all Bondholders;<sup>22</sup> (d) any party that has requested notice pursuant to Rule 2002 of the Federal Rules of Bankruptcy Procedure; (e) counsel to the statutory committee appointed in the Title III case; (f) the Office of the United States Attorney for the District of Puerto Rico; (g) counsel to AAFAF; (h) the Puerto Rico Department of Justice; (i) the Puerto Rico Treasury Department; (j) the Other Interested Parties;<sup>23</sup> and (k) all parties filing a notice of appearance in this Title III case. Movants submit that, in light of the nature of the relief requested herein, no other or further notice need be given.

### **No Prior Request**

74. No prior request for the relief sought in this Motion has been made to this or any other court.

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<sup>22</sup> Beneficial owners of Bonds as of May 13, 2019 will be provided notice of the Motion through the bank or brokerage firm holding the Bonds on their behalf or that firm's agent (collectively, the "Nominees"). Nominees will be entitled to receive reasonably sufficient copies of the notice to distribute to the beneficial owners of the Bonds. PREPA shall be responsible for such Nominees' reasonable, documented costs and expenses associated with the distribution of the notice to beneficial owners of the Bonds.

<sup>23</sup> The "Other Interested Parties" include the following: (i) counsel to certain of the insurers and trustees of the bonds issued or guaranteed by the Debtors; and (ii) counsel to certain ad hoc groups of holders of bonds issued or guaranteed by the Debtors.

WHEREFORE PREPA respectfully requests the Court to enter the RSA, granting the relief requested herein and any other relief as is just and proper.

Dated: May 10, 2018  
San Juan, Puerto Rico

Respectfully submitted,

/s/ Martin J. Bienenstock

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## Analysis

# PREPA Debt Restructuring 3.0: It is Even Worse Than You Think



Sergio M. Marxuach  
Policy Director  
**Center for a New Economy**

May 2019



# Introduction

On May 3, 2019, the Puerto Rico Electric Power Authority (“PREPA”), the Puerto Rico Fiscal Agency and Financial Advisory Authority (“AAFAF”), and the Financial Oversight and Management Board for Puerto Rico (the “FOMB”), executed a “Definitive Restructuring Support Agreement” (the “RSA”), with the members of the Ad Hoc Group of PREPA Bondholders (the “Ad Hoc Group”), and Assured Guaranty Corp. and Assured Guaranty Municipal Corp. (collectively, “Assured”), for the restructuring of a portion of certain bonds issued by PREPA.

In this post we summarize some of the principal terms and conditions of the RSA and provide some analysis of its potential effects on Puerto Rico’s electricity market.

## Description of the Transaction

The proposed transaction consists of an exchange of existing PREPA bonds for new bonds (the “New Bonds” or “Securitization Bonds”) to be issued by a new, “bankruptcy-remote” special purpose vehicle (the “Issuer”) created specifically for that purpose.

The New Bonds, in turn, are divided into two tranches: Tranche A Bonds and Tranche B Bonds. Tranche A Bonds will be exchanged at a ratio of 67.5% of principal amount of outstanding bonds subject to the exchange, plus other consideration we will describe below. While Tranche B Bonds will be exchanged at a ratio of 10% of principal amount of outstanding bonds subject to the exchange.

For example, a person who owns existing PREPA bonds with a face value of \$100,000, and which are subject to the exchange, would receive Tranche A Bonds with a face value of \$67,500 and Tranche B Bonds with a face value of \$10,000, for a total nominal recovery of \$ 77,500. This implies a reduction in the nominal principal, or face value, of the existing bonds of 22.5%. **This is the same reduction, or “haircut”, in face value that was agreed to in the previous RSA dated July 30, 2018 (the “July 2018 RSA”), which was subsequently rejected as insufficient.**

The **Tranche A Bonds** will have a stated maturity of 40 years, subject to early redemption under certain circumstances. They will bear interest at an annual rate of 5.25% to be paid in cash, on a tax-exempt basis. Any interest not paid when due shall be added to the interest to be paid on the next payment date for Tranche A Bonds. The obligation to pay the Tranche A Bonds will extend beyond the stated final maturity if not paid in full on the stated final maturity until all principal of, and accrued and unpaid interest on, the Tranche A Bonds is paid in full.

The **Tranche B Bonds** will have a stated maturity of 47 years. The interest on Tranche B Bonds will be paid in kind, that is, in the form of additional Tranche B Bonds, and will accrete at an annual rate of 7.00% (if tax exempt) or of 8.75% (if taxable). In any event, Tranche B Holders will not receive any cash payments until Tranche A Bonds are paid in full.

**These are essentially the same terms agreed to ten months ago and set forth in the July 2018 RSA.**

## Assured Treatment

In contrast with the July 2018 RSA, the new RSA provides for the special treatment of certain PREPA indebtedness insured or owned by Assured (the "Assured Treatment"). These are the Assured Insured Bonds; Uninsured Bonds beneficially owned by Assured; and the Assured Insured Interest Rate Swaps.

For example, at Assured's election (the "Assured Election"), all or any portion of the Assured Insured Bonds selected by Assured shall be paid, in full, on the Effective Date, at an acceleration price (the "Acceleration Price") equal to the outstanding principal amount of such Bonds plus the accrued and unpaid interest thereon (or, in the case of any capital appreciation bonds, the compounded amount thereof) as of the Effective Date from:

- (a) the proceeds of all or any portion of the Assured Securitization Bonds allocable to holders of Assured Insured Bonds that shall be:
  - (i) insured, at Assured's election, in accordance with a new insurance policy issued by Assured on terms acceptable to Assured;
  - (ii) underwritten in an "offering" within the meaning of SEC Rule 15c2-12; and
  - (iii) sold into the market such that they are issued and delivered to such underwriter(s) on the Effective Date; and
- (b) to the extent such proceeds of Assured Securitization Bonds are not sufficient to pay the Acceleration Price, amounts equal to such deficiency paid by Assured in accordance with the insurance policies (the "Assured Insurance Policies") guaranteeing the Assured Insured Bonds.

The Assured Treatment appears to be designed to entice the participation of Assured in the debt restructuring by minimizing Assured's exposure, at the expense of Puerto Rican ratepayers.

## Payment of the New Bonds

The repayment of the New Bonds would be secured by a lien on the future cash flow generated by PREPA through the imposition of a Transition Charge. **This is a special charge that will be added to the amount billed to PREPA's customers and used to pay the New Bonds.**

According to the RSA, the Transition Charge shall be set at the following levels:

- FY 21-23: 2.768 c/kWh
- FY 24-28: 2.957 c/kWh
- FY 29: 3.242 c/kWh
- FY 30: 3.323 c/kWh
- FY 31: 3.406 c/kWh
- FY 32: 3.492 c/kWh
- FY 33: 3.579 c/kWh
- FY 34: 3.668 c/kWh
- FY 35: 3.760 c/kWh
- FY 36: 3.854 c/kWh
- FY 37: 3.950 c/kWh
- FY 38: 4.049 c/kWh
- FY 39: 4.150 c/kWh
- FY 40: 4.254 c/kWh
- FY 41: 4.361 c/kWh
- FY 42: 4.470 c/kWh
- FY 43: 4.552 c/kWh
- FY 44 through transition charge termination: 4.552 c/kWh

Under the July 2018 RSA, the Transition Charge would have been 2.636 c/kWh for the first five years; 2.729 c/kWh during years 6 to 10; 2.868 c/kWh during year 11; and would then have increased at an annual rate of 2.5% until it reached the amount of 4.348 c/kWh. At that time, the Transition Charge would remain fixed at that amount until the expiration of the New Bonds.

**Thus, after ten months of additional negotiations we end up with the same reduction in principal AND paying a higher Transition Charge under the new RSA than under the July 2018 RSA. Surely, that was money well spent in legal and financial advisory fees.**

According to Schedule I-A of the Securitization Term Sheet, "Transition Charges are non-by passable charges, the payment of which shall be obligatory" and "Transition Charges shall be assessed on all Customers, regardless of the date as of which they become Customers."

For purposes of the Transition Charge, Customer means: "a service location or premise that:

- (a) is connected to the System,
- (b) uses or leases any part of the System,
- (c) is connected to a microgrid, municipal utility or electric cooperative that is connected to or uses the System, or
- (d) benefits from any agreement that requires the System to provide the Customer electricity under any condition, including without limitation, an obligation to provide power on a standby, maintenance, emergency, or similar basis."

However, a "Customer shall not include any **permanently disconnected service location or premise** that does not benefit from any agreement that requires the System to provide the Customer with electricity under any condition, including without limitation, an obligation to provide power on a standby, maintenance, emergency, or similar basis."

But, "notwithstanding the foregoing, a microgrid, municipal utility or electric cooperative permanently operating solely in island-mode shall not be considered 'permanently disconnected' if it uses or leases any part of the System."

**Thus, customers that generate their own electricity will be subject to the Transition Charge, unless they are completely and permanently disconnected from the electric system.**

Customers with their own generation, called behind the meter generation customers ("BTMG Customers") in the Term Sheet, are in turn divided into two classes: (1) Grandfathered BTMG Customers and (2) Non-Grandfathered BTMG Customers.

Grandfathered BTMG Customers are those who had their generation facilities installed on or before September 30, 2020 (the "Implementation Date"). Those customers will be subject to a monthly Transition Charge in the form of a fixed charge calculated for each month by multiplying:

- (x) the Transition Charge Rate applicable to such month by
- (y) a monthly average of the Grandfathered BTMG Customer's Net Consumption over the prior twenty-four (24) month period, after considering a three (3) month lag time (such period, the "Twenty-Four Month Period").

The effect of using a 3 month moving average over 24 months is to smooth out consumption peaks and troughs: on months when a customer's consumption peaks it will end up paying a little bit less than otherwise, and on months when its consumption is relatively lower, it will end up paying a little bit more than otherwise.

Any Grandfathered BTMG Customer loses that status if its behind the meter **capacity**, in contrast with generation, increases by more than 20% above the capacity in place on the Implementation Date. In addition, all Grandfathered BTMG Customers shall cease to be Grandfathered BTMG Customers on the 20th anniversary of the Effective Date of the Plan of Adjustment of PREPA's debt.

Non-Grandfathered BTMG Customers are all BTMG Customers, except Grandfathered BTMG Customers. Such non-grandfathered customers shall be obligated to pay for the cost of installing a revenue grade meter to measure the amount of electricity that is generated behind the meter (a "BTMG Meter"). Each Non-Grandfathered BTMG Customer with a BTMG Meter shall be subject to a monthly Transition Charge equal **to the greater of:**

- (x) a fixed charge calculated for each month by multiplying
  - (i) the Transition Charge Rate applicable to such month by
  - (ii) the monthly average of that Non- Grandfathered BTMG Customer's **Gross Consumption** during the then-applicable Twenty-Four Month Period, and
- (y) the product of the Transition Charge Rate applicable to such month and the Non-Grandfathered BTMG Customer's Net Consumption for **such month**.

Until such time as a Non-Grandfathered BTMG Customer has an operating BTMG Meter, then, the monthly average of that Non-Grandfathered BTMG Customer's Gross Consumption during the then-applicable Twenty-Four Month Period shall be deemed to be the gross electricity inflows received from the System in the month for which the fixed charge is being calculated.

The fixed charge applicable to Grandfathered BTMG Customers and Non- Grandfathered BTMG Customers shall be recalculated by the Servicer on the Effective Date and every anniversary thereof (the "Update Date") as follows:

1. For Grandfathered BTMG Customers, at the conclusion of each Twenty-Four Month Period measured from the Effective Date, by calculating that Grandfathered BTMG Customer's average monthly Net Consumption for the most recent Twenty-Four Month Period preceding such Update Date;
2. For Non-Grandfathered BTMG Customers, at the conclusion of each Twenty- Four Month Period measured from the Effective Date, by calculating that Non-Grandfathered BTMG Customer's average monthly Gross Consumption for the most recent Twenty-Four Month Period preceding such Update Date; and
3. For all BTMG Customers, every year on the Update Date, to reflect changes in the applicable Transition Charge Rate to ensure that the fixed charge is consistent with the Transition Charge Rate for such month.

Customers without behind the meter generation will be charged a Transition Charge calculated by multiplying each customer's consumption by the then applicable per kWh Transition Charge Rate.

The Puerto Rico Energy Bureau can amend the charge applicable to BTMG customers if it determines that the fixed charge is contributing to, and is likely to continue to contribute to BTMG Customer defection from the System that is likely to result in "material changes in Transition Charge revenue" (a "Fixed Charge Amendment").

Any Fixed Charge Amendment shall be:

- (a) supported by third-party expert studies quantifying the impact of implementing the Fixed Charge Amendment as compared with the status quo;
- (b) put into effect only:
  - (i) if the Securitization Bonds have an investment grade rating,
  - (ii) if every rating agency that has rated the Securitization Bonds has confirmed that the Fixed Charge Amendment shall not result in a downgrade of the rating on the Securitization Bonds or otherwise cause an adverse action by the rating agency, and

(iii) upon the affirmative vote of the holders of a majority of principal amount of the Securitization Bonds at that time outstanding, excluding any Securitization Bonds held by the Government, any Government Entity, and any Puerto Rico municipality; and

(c) may be implemented no more frequently than once every three (3) years.

Finally, “each microgrid, municipal utility, cooperative or any person selling electricity directly or indirectly to a microgrid, municipal utility, cooperative, or Customer that is subject to the provisions of the RSA Term Sheet shall be a “subservicer” and each shall enter into the Servicing Agreement with the Servicer.” This clause, in essence, forces certain customers with BTMG to become agents of the servicer in charge of monitoring consumption and collecting the Transition Charge. This provision, if included in the final RSA, could be challenged on constitutional grounds, probably as an adversary proceeding in federal court under Title III of PROMESA.

In our opinion, the application of the Transition Charge, as currently proposed, would essentially constitute a regressive tax on all customers. It will also discourage the installation of BTMG systems. Probably only upper-middle class and wealthier customers, and those with a strong preference to disconnect completely from the PREPA system, will be able to afford to install behind the meter generation capacity. However, the majority of residential, and probably commercial, clients will be discouraged from installing their own generation capacity, a result that goes against the objectives stated in the recently enacted Puerto Rico energy policy.

## Subsidy Charge

Schedule I-A to the Securitization Term Sheet also mandates the imposition of a subsidy charge (“the Subsidy Charge”) on all customers, except those expressly excepted by legislation. This charge seeks to recover from all of PREPA’s clients: (1) costs incurred by PREPA or any successor for subsidies granted to various customer classes; (2) certain uncollected amounts from private clients; and (3) uncollected amounts from government clients.

The Subsidy Charge for any month shall include the monthly average of the sum of:

- (1) an amount to cover Subsidized Entities’ Non-Collections and an amount to cover General Public Non-Collections (together, the “Uncollected Amounts Charge”); and
- (2) an amount to cover Government Non-Collections.

“Subsidized Entities’ Non-Collections” means, in any given year, the amount of billed but unpaid kilowatt hours for the preceding year attributable to deliveries under contributions in lieu of taxes (“CILT”) arrangements, for public lighting, for low-income (public) housing, or for other subsidies, exemptions or credits then in effect. **The amount to cover Subsidized Entities’ Non-Collections equals the Subsidized Entities’ Non-Collections multiplied by the then-applicable Transition Charge Rate.**

“General Public Non-Collections” means, in any given year, the amount of billed but unpaid kilowatt hours delivered to Customers that are not included in the Subsidized Entities’ Non-Collection and that are not the Government or a Government Entity (such Customers, “General Public Customers”). The amount to cover General Public Non- Collections equals the then-applicable Transition Charge Rate multiplied by:

- (i) in the event that (x) there is a private third-party acting as the System operator or (y) PREPA or any Government Entity is operating or managing the System and is following the Collection Regulations (to be issued by the Puerto Rico Energy Bureau), **any amounts over 1.5% of the total kilowatt hours consumed by General Public Customers that were billed but not collected during the previous year;** or
- (ii) in the event that PREPA or any Government Entity is operating or managing the System and is not following the Collection Regulations, **all total kilowatt hours consumed by General Public Customers that were billed but not collected during the previous year.**

However, if the actual uncollected amounts for any given year **are less** than the amount that was charged to Customers through the Uncollected Amounts Charge, the Uncollected Amounts Charge shall be reduced in the next year to rebate such excess to Customers in the form of a lower Uncollected Amounts Charge. On other hand, if the actual uncollected amounts for any given year **are greater** than the amount that was charged to Customers through the Uncollected Amounts Charge, the Uncollected Amounts Charge for the next year **shall be increased** to make up for such shortfall.

In our view, this kind of subsidy charge is unfair to customers that do not benefit from any subsidy, does not promote energy efficiency, discourages PREPA from improving its collection procedures, and should be eliminated, or limited to recovering only those costs related to subsidies whose social value has been confirmed.



## Other Charges, Fees, and Assorted Payments

The RSA includes a plethora of charges, fees, and payments for the benefit of the participating bondholders and at the expense of PREPA's clients. Among those we find the following:

First on the list is a **Settlement Charge** for agreeing to support the restructuring agreement. This charge will be included in customer bills commencing on July 1, 2019, and is equal to 1 c/kWh. Commencing on August 30, 2019, PREPA will pay participating bondholders an amount equal to the number of kilowatt hours billed by PREPA during the previous month, multiplied by 92% (to account for losses and subsidies), multiplied by the Settlement Charge.

However, if a Title III plan for PREPA has not been confirmed and become effective by **March 31, 2021**, then the Settlement Charge should be increased to equal the amount of the Transition Charge that would have gone into effect on that date, assuming the Effective Date had occurred and the New Bonds were issued on that date (the "**Increased Settlement Charge**").

Second, bonds subject to the RSA prior to a certain date (depending on the class of bond) are entitled to an administrative expense claim ("**Administrative Claim**") for an amount equivalent to the Tranche A Bond interest payments accrued in respect of such bond less the amount of Settlement Payments or Increased Settlement Payments made on account of such bond.

Third, on the Effective Date and concurrently with the issuance of the New Bonds:

- (a) Ad Hoc Group Members shall receive a **waiver and support fee** in the form of Tranche A Bonds equal to 1.9350% of the par amount of PREPA Bonds held by the members of such Ad Hoc Group as of July 1, 2018;
- (b) Assured shall receive a **waiver and support fee** in the form of Tranche A Bonds equal to 1.8850% of the par amount of PREPA Bonds held or insured by Assured as of May 1, 2019; and
- (c) Supporting Holders, including any additional signatories of the RSA, may receive **additional support (and potential waiver fee)** in the form of Tranche A Bonds initially equal to 0.8360% of par amount of total outstanding PREPA Bonds as of May 1, 2019, in a manner to be agreed upon in the future.

Fourth, **reimbursement of reasonable fees and expenses:** (a) incurred by the Ad Hoc Group members prior to July 23, 2018, up to \$25 million; (b) incurred by the Ad Hoc Group members after July 23, 2018 through the Effective Date; and (c) incurred by Assured on or after August 1, 2018 through the Effective Date; shall be paid on or after the Effective Date.

# Exemption from Existing Legislation

Schedule I-B to the Securitization Term Sheet requires that the following laws or provisions not apply to the Issuer of the New Bonds, except as agreed to by the Required Parties:

1. Chapters 4 and 6 of Act 26-2017, as amended, known as the "Fiscal Plan Compliance Act";
2. Act 1-2012, as amended, known as the "Puerto Rico Government Ethics Act of 2011";
3. Act 103 of May 25, 2006, as amended, known as the "Act for the Fiscal Reform of the Government of the Commonwealth of Puerto Rico of 2006";
4. Act 8-2017, as amended, known as the "Act for the Transformation of the Government's Human Resources";
5. Act 237-2004, as amended, known as the "Act to Establish Uniform Parameters for Contracting Professional and Consulting Services by Agencies and Instrumentalities of the Government of Puerto Rico";
6. Act 197-2002, as amended, known as the "Act to Regulate the Transition Process of the Government of Puerto Rico";
7. Act 78-2011, as amended, known as the "Electoral Code of Puerto Rico for the XXI Century";
8. Act 38-2017, known as the "Uniform Administrative Procedures Act of the Government of Puerto Rico";
9. Plan 3-2011, as amended, known as "General Services Administration Reorganization Plan";
10. Act 230 of July 23, 1974, as amended, known as the "Government Accounting Act";
11. Act 3-2017, known as the "Law to Address the Economic, Fiscal and Budgetary Crisis and Ensure the Functioning of the Government of Puerto Rico";
12. Act 14 of April 17, 1972, as amended;
13. Act 2-2017;
14. Act 5-2017;
15. Act 17-2019, known as the "Puerto Rico Energy Public Policy Act"; and
16. Section 6.25A of Act 57-2014.

# Analysis

In the general, the basic structure of the new RSA is quite similar to the one set forth in the eventually discarded July 2018 RSA, with some additional incentives to induce the participation of Assured. It is not clear to us why this RSA is preferable to the rejected July 2018 RSA, given they are substantially similar and, in some aspects, the terms and conditions of the new RSA are significantly more onerous.

## ***Debt Relief***

Much of the public discussion has focused on the amount of the “haircut,” or reduction, to the outstanding bonds’ principal, an amount equal to 22.5%. It is difficult, relying solely on information contained in public documents, to determine whether that amount is (1) reasonable and/or (2) sufficient to allow PREPA to continue operating in a sustainable way.

On the one hand, we should remember that the outstanding PREPA bonds are “special revenue bonds,” which usually enjoy a high degree of protection in municipal bankruptcy cases under Chapter 9 of the U.S. Bankruptcy Code. These are bonds commonly issued by governmental agencies that provide such basic services as transportation, water, sewers, electricity, gas for heating, and so on. The repayment guarantee for these bonds, as is the case with the existing PREPA bonds, is a lien against the net revenues (after paying the operating costs of the issuer) generated by the issuer.

According to James E. Spiotto, an expert in municipal bankruptcies and author of *Municipalities in Distress?: How States and Investors Deal with Local Government Financial Emergencies*, Congress amended the Bankruptcy Code in 1988 specifically to make it clear that revenues encumbered on behalf of this type of bondholders could not be diverted for other purposes, and that those bondholders had the right to continue receiving their payments—again, we stress, net of the issuer’s operating costs—even after the debtor had filed for bankruptcy. Therefore, these bonds are not as a general rule substantially modified, if at all, in a case under Chapter 9. Thus, we might say that in comparison with other bankruptcies by similar entities in the United States, the 22.5% reduction in the principal set forth in the RSA is reasonable.

However, PREPA is not undergoing a process pursuant to Chapter 9, even though Title III of PROMESA incorporates many of the provisions of that Chapter through its Section 301 (a). Therefore, the FOMB may have more leeway to negotiate a restructuring of PREPA’s debt. In addition, in the case of PREPA, we must take the following factors into account: (1) it operates in an economy that has shown no growth in 13 years; (2) its administrators have negligently postponed maintenance on its generation plants and its transmission and distribution lines for decades; (3) the demand for electricity is projected to decrease over the next few years; (4) PREPA needs a massive injection of capital in order to modernize and optimize its operations; and (5) Hurricane Maria wreaked havoc with PREPA’s transmission and distribution system, and while the grid is currently functional, it is still quite fragile and will need substantial repairs in the near future.

Given those factors, a haircut of 22.5% to the principal of the existing debt may not be sufficient to allow PREPA to continue operating in a sustainable manner. That may be the explanation for the bondholders' having agreed to waive the right to declare the Issuer of the New Bonds in default in case of a non-payment. It appears that the parties to the agreement are assuming from the outset that there is a high probability that the Issuer will not be able to honor the negotiated terms and conditions, and so have agreed on a mechanism beforehand to assign and mitigate that risk.

The RSA documents do not explain how the haircut amount was determined or whether that amount of debt relief is sufficient to allow PREPA to continue operating without incurring another default in the near future. The August 1, 2018 certified Fiscal Plan, also does not explain or take into consideration debt service beyond stipulating that the amount of the existing debt is not sustainable (see page 27 of the Fiscal Plan of August 1, 2018). Nor do any of the projections laid out in the Fiscal Plan include an analysis of how electricity rates would be affected in a post-debt-restructuring scenario. In our opinion, it appears there is a disconnect between the certified Fiscal Plan's scenarios and what is set forth in the new RSA.

Finally, we have to analyze the proposed RSA in the context of the restructuring of Puerto Rico's other indebtedness. Puerto Rico accumulated through the decades a total indebtedness in the amount of approximately \$70 billion. And while it is true that there are several issuers and types of bonds outstanding, each with different legal protections and repayment sources, the fact remains that financial resources from the depressed Puerto Rican economy are the ultimate source for the repayment of all such indebtedness, regardless of whether it is through taxes, as in the case of COFINA, or monthly bills, as in the case of PREPA.

That is why experts such as Martin Guzman, among others, have suggested analyzing and restructuring Puerto Rico's debt in a holistic, comprehensive manner. An economy that has been in a depression for more than a decade can only dedicate a relatively small amount of resources to repay debt, if it wants to avoid imposing counterproductive austerity policies and undertake the necessary investment to jumpstart and sustain growth. Given that state of affairs, Guzman has suggested that Puerto Rico's overall debt stock needs to be reduced by more than 80%. So far the two consummated restructurings (GDB and COFINA) have generated debt relief significantly below that threshold. If Puerto Rico continues to be overly generous with its creditors, then the probabilities of another debt crisis in the short to medium term increase significantly.

Therefore, while we cannot determine with certainty, given the information publicly available at this time, whether the proposed debt relief represents the amount needed to maintain PREPA as a going concern, it would not be unreasonable to affirm at this time that the proposed transaction is overly generous to bondholders.

## ***Rate Increase in the Horizon?***

Another issue that has captured the public's attention is the Transition Charge. That debate has centered on trying to determine whether the charge is or is not a rate increase. In theory, as some government representatives argue, the imposition of the Transition Charge would not necessarily entail a rate increase for customers, so long as PREPA reduces its system-wide operating costs by an amount equal to or greater than the Transition Charge. In practice, achieving that reduction would be very difficult—although not impossible.

For example, on the most recent electric bill I received from PREPA, I was charged approximately 22 cents per kWh. The Transition Charge for the first year would be 2.768 cents per kWh, equivalent to 12.6% of the amount per kWh that PREPA billed me in that statement.

Under normal conditions, it might be feasible to achieve a reduction in operating costs in that amount. But we are not operating under normal conditions. As we argued before, the economy is in a deep depression and the demand for electricity is decreasing and is projected to continue decreasing. Furthermore, according to the Fiscal Plan, PREPA needs to make a series of capital investments in order to reduce its dependency on oil and reduce its operating costs, and those investments will have to be financed and repaid in some way.

We also note that if the RSA enters into effect, PREPA will start billing the Transition and Subsidy Charges in the very near term, while any savings from switching to cheaper fuel sources and other cost saving measures will probably take several years to materialize. Thus, it is highly unlikely PREPA will be able to fully offset the new charges set forth in the RSA. And Puerto Rican customers will end up paying higher rates for at least a generation.

## **Conclusion**

The proposed RSA is not a good transaction for Puerto Rico. Its terms and conditions are overly generous to creditors; it discourages the transition to distributed renewable generation; it is uncertain whether it provides the debt relief necessary to maintain PREPA as a going concern, while avoiding another restructuring in the short to medium term; and will in all likelihood result in a significant rate increase for Puerto Rican ratepayers for decades to come. For all the foregoing reasons the proposed RSA should be rejected and we respectfully recommend the parties go back to the negotiation table.

The *Center for a New Economy (CNE)* is an independent think-tank with no partisan political affiliation that advocates the development of a new economy for Puerto Rico. Founded in 1998, CNE produces rigorous research and analysis of public policy and is one of the most credible and influential voices in the discussion on the economy of Puerto Rico. CNE is organized as a 501 (c) (3) non-profit entity and does not request or accept government funds. CNE depends exclusively on grants from individuals, private institutions and philanthropic foundations.

**The Socio-Economic Impacts of the Puerto Rico Electric Power Authority (PREPA)  
Restructuring Support Agreement (RSA) on the Population of Puerto Rico**

**By**

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This report examines the demographic and socio-economic composition Puerto Rico's population; levels of electric consumption and payments by income category; the socio-economic impact of the proposed PREPA 2019 Restructuring Support Agreement (RSA) on the population of Puerto Rico; and the expected macro-social impacts including increased outmigration and reduced electricity consumption on the island. The report also finds that:

- 1) **A significant proportion of Puerto Rico's population is poor and vulnerable.** If we combine the proportion of the population in Puerto Rico that is below poverty, or that is younger than 15 years of age, or that is older than 65 years of age, or that has any disability, as seen in Table 4, that adds up to about 68.9% of the population.
- 2) **The poor and low-income populations in Puerto Rico consume significantly less electricity.** Households in the bottom 40% of the income distribution in Puerto Rico consume about 28% of the total kilowatt hours. In contrast, households in the top 20% of the income distribution consume about 33%, or one third, of the total energy consumed by households in Puerto Rico.
- 3) **The contemplated price increases are significant especially for populations with low incomes or with fixed income from pensions or other retirement income.** About 13% of the rate increase is expected to be collected from households in the bottom 20% of the income distribution (the poorest households) but they only make 1.4% of the total income in Puerto Rico. Households in the second quintile are expected to cover about 14.8% of the electricity rate increase but they make only about 7.5% of the total household income. At the other top extreme of the income distribution, households in the top 5% of the household income distribution in Puerto Rico are expected to cover about 10.5% of the electricity rate increase while making 26.4% of the total income.
- 4) **The electric rate increase hits the poor and vulnerable more as a proportion of their incomes and makes the settlement agreement unfair and inequitable.** For the base year, it is estimated that the bottom 20% spent about 33% of their income in electric costs and, assuming constant incomes, that percentage goes up to 42% of household income by the last increase required under the RSA. The proportion of income spent on electricity for households in the second quintile in the base year is about 9% and that percentage could go up to about 11%. For the third, fourth and top quintiles the proportion of income spent on electricity hovers between one and 5% in the base year and that percentage could go up to between two and 7% by the time of the fourth increase. The data suggest that the average household in the bottom 20% of the income distribution will pay, after the fourth increase, an average of \$991.25 per year in electrical charges. The second quintile will pay an average of \$1065.77 per year. It is unreasonable to expect that families with very low incomes would be able to afford any additional price increases. The RSA is not fair and equitable as it is unreasonable to expect low income families in Puerto Rico to bear such a disproportionate burden of increased costs mandated in the PREPA RSA.
- 5) **Electricity consumption seems to be declining with time.** In 2009, the average family consumed about 222 kWh per month and that number appears to have gone down to about 202 kWh per month in 2017 and 179 kWh per month if we use 2019 prices.
- 6) **Increased electric costs add to migration pressures and further exacerbate the demographic and socioeconomic death spiral that Puerto Rico has been trapped in for the last 15 years.** Examining Puerto Rico data between 2000 and 2017 shows that there is a correlation between increases in electricity costs and out-migration from Puerto Rico. Increases in the price of electricity lead to higher levels of out-migration. At the same time, increases in levels of outmigration and in the number of persons and families leaving Puerto Rico reduces the demand for electricity further eroding the income potential of the Puerto Rico Electric Power Authority (PREPA).
- 7) **The approval of the RSA will automatically cause an increase in the cost of living of the people of Puerto Rico, which, in turn, will cause additional social and economic precariousness to the most vulnerable segments of the population, particularly those at the bottom 40% of the income distribution.** Increases in the costs of electric and related services (as other costs would also increase with more expensive energy); the changing demographic profile of the population, high levels of poverty and disability, and continued population declines due to persistent outmigration and precariousness cause a further slowdown in economic activity which further exacerbates outmigration trends and lowers the demand for electricity. With lower demand for electricity, the prospects of PREPA complying with operational requirements and obligations to workers and retirees will be severely impaired. The RSA has a disproportionate impact on poor and low-income populations, threatens PREPA's ability to consistently provide its essential services to the population, and leads to a vicious cycle that affects revenue collection and the overall mission and finances of the Puerto Rico Electric Power Authority (PREPA).



**1) A significant proportion of Puerto Rico's population is poor and vulnerable.**

- a. In 2009 there were about 1 million persons under 18 years of age in Puerto Rico and by 2017 that number was close to 700,000 for a decrease of about 300,000 persons under 18 years of age. The young population constituted about 26% of Puerto Rico's population in 2009 and that declined to about 21% of the population by 2017.
- b. In 2009 there were about 2.1 million persons between 19 and 59 years of age in Puerto Rico and that number decreased to about 1,760,000 by 2017 or a decrease of almost 400,000 persons. In contrast there were about 786,000 persons over 60 in Puerto Rico in 2009 and that number increased by about 85,000 persons to 872,000 by 2017. Persons over 60 were about 20% of the population of Puerto Rico in 2009 and that number increased about 26% of the total by 2017. This is a remarkable increase in the population over 60 and a decrease in the population under 18 in a short period of eight years in Puerto Rico.
- c. On the island, less than 10% of the population is nine years of age or younger and only about 36% of the population is below the age of 29.
- d. A significant proportion of the population on the island, about 21.8%, report one or more type of disability and this means that there is a segment of the population that relies disproportionately on the continuity of electric service for their safety, the stability of their health, and well-being and the continuity of their daily lives.
- e. About 24.6% of the population in Puerto Rico, or 812,258 persons, report incomes below half of the poverty line--or less than about \$6,000 per person per year. Another 19.9%, or 658,795 persons, have incomes between half and the poverty line (between \$6,000 and \$12,000 per person per year) which means that the proportion of the population below poverty in Puerto Rico is 44.5%.
- f. If we combine the proportion of the population in Puerto Rico that is below poverty, or that is younger than 15 years of age, or that is older than 65 years of age, or that has any disability, as seen in Table 4, that adds up to about 68.9% of the population. This means that close to 2.3 million, out of the 3.3 million persons reported residing on the island in 2017, is either below poverty, or is younger than 15 years of age, or is older than 65 years of age, or has reported a disability.
- g. About 35.5% of the population reported being employed, 7% reported looking for work (the definition of unemployment status), and about 56.5% of the population reported being out of the labor force. This does not include the slightly over half a million persons that are 16 years of age and younger that are not considered part of the labor force.

**2) The poor and low-income populations in Puerto Rico consume significantly less electricity.**

- a. Households in the bottom 20% of the population together consume about 13% of the total kilowatt hours and together with households in the next 20%, which consume about 15% of the total kilowatt hours, households at the bottom 40% of the income distribution in Puerto Rico consume about 28% of the total kilowatt hours.
- b. In contrast, households in the top 20% of the income distribution consume about 33%, or one third, of the total energy consumed by households in Puerto Rico. Households with incomes in the top 5% of the population consume about 11% of the total energy consumed by households in Puerto Rico.

- 3) The contemplated price increases are significant especially for populations with low incomes or with fixed income from pensions or other retirement income.**
- a. The average monthly electrical bill for the total population is estimated at \$95.81 per month. Estimates by income level indicate that households at the bottom 20% were estimated to pay about \$65.88, households in the next 20% (second quintile) pay on average \$70.83. Households in the third quintile pay about \$84.59 per month while those in the fourth quintile pay about \$103.93. Households in the top 15% pay about \$135.47 per month while households in the top 5% of the population were estimated to pay about \$195.25 per household per month in electrical bill.
  - b. The total amount paid by households in the bottom 20% was about \$14.3 million per month while all households in the second quintile paid about \$16.2 million in their total aggregate electric bill per month.
  - c. Households in the bottom 20% of the income distribution are estimated to pay about \$65.88 per month in the base year and that will go up to \$77.21 per month with the first increase required if the RSA is approved, \$77.78 in the second increase, \$78.66 in the third increase, and up to a total of \$82.60 with the fourth increase. That means that total fee collections from households at the bottom 20% of the income distribution would increase from \$14.3 million per month in the base year to potentially about \$17.9 million per month after the fourth increase or \$3.6 million more in payments per month.
  - d. The total amount of electrical charges paid by households in each of the income segments of the distribution suggests that in the base month total collections are estimated at about \$110 million and they would increase \$128.9 million per month with the first increase to a total of \$129.8 million with the second increase, \$131.3 million for the third increase and up to \$137.9 million per month with the fourth increase.
  - e. Of the first electricity rate increase of \$18.9 million, about \$2.5 million will be charged to households in the bottom 20% of the income distribution (the poorest households), \$2.8 million to households in the second quintile (also below poverty), \$3.4 million to households in the third quintile, \$4.2 million to households in the fourth quintile, \$4.1 million from households in the top 15%, and about \$2 million from households in the top 5% of the household income distribution in Puerto Rico.
  - f. About 13% of the rate increase is expected to be collected from households in the bottom 20% of the income distribution (the poorest households) but they only earn 1.4% of the total income in Puerto Rico. Households in the second quintile are expected to cover about 14.8% of the electricity rate increase but they earn only about 7.5% of the total household income. Households in the third quintile are expected to cover about 17.7% of the rate increase while they make 13.9% of the total household income. At the other top extreme of the income distribution, households in the top 15% of incomes are expected to cover about 21.7% of the electricity rate increase while making 28.8% of the income while households in the top 5% of the household income distribution in Puerto Rico are expected to cover about 10.5% of the electricity rate increase while taking 26.4% of the total income.
  - g. The average bill per person is expected to increase from \$46.66 per person per month to about \$58.50 per month per person with the full electricity rate increase. Individuals in households at the bottom 20% of the income distribution are estimated to currently pay about \$39.61 per person per month and that would increase to \$46.43 per person per month with the first increase and up to \$49.67 with the fourth electricity rate increase.

- h. The data suggest that the average household in the bottom 20% of the income distribution pays on average \$790.54 per year in their electrical bill. The second quintile pays an average of \$849.97 per year, the third quintile pays about \$1,015, the fourth quintile pays about \$1,247, those in the top 15% of income earners pay about \$1,625 per year while those in the top 5% pay close to \$2,343 per year electrical bill.

**4) The electric rate increase affects the poor and vulnerable more as a proportion of their incomes and makes the settlement agreement unfair and inequitable.**

- a. Those at the bottom 20% of the household income distribution, for example would see an electricity bill increase of about \$136 per year after the first increase mandated by the RSA, while those in the second quintile will shoulder an increase of about \$146 per household per year. The third quintile we see an electricity bill increase of \$175 per household per year for that first increase while those in the fourth quintile would see an electricity bill increase of \$215 per year. The top 15% will pay about \$280 more per year while those in the top 5% will pay about \$403 more per year. On average the fee increases total about \$198 per household or a total of \$227 million dollars more than the amount collected in the base year.
- b. For the base year, it is estimated that the bottom 20% spent about 33% of their income in electricity costs and, assuming constant incomes, that percentage goes up to 42% of household income by the last increase. The proportion of income spent on electricity for households in the second quintile in the base year is about 9% and that percentage could go up to about 11%. For the third, fourth and top quintiles the proportion of income spent on electricity hovers between one and 5% in the base year and that percentage could go up to between two and 7% by the time of the fourth increase.
- c. It is clear that as a proportion of income, the regressive electricity fee increase impacts those at the bottom two quintiles of the income distribution (the poorest segments of the population) significantly more than those in the third, fourth and top quintiles of the income distribution with the very poor faring significantly worse.
- d. The data suggest that the average household in the bottom 20% of the income distribution will pay, after the fourth increase, an average of \$991.25 per year in their electrical bill. The second quintile will pay an average of \$1,065.77 per year. It is unreasonable to expect that families with very low incomes (averaging \$2,365 for the bottom 20% and \$9,788 for the second quintile) would be able to afford any additional price increases. The third quintile pays about \$1272.81, the fourth quintile pays about \$1563.86, those in the top 15% of income earners pay about \$2,038.30 per year while those in the top 5% pay close to \$2,938.04 per year in electrical bill.

**5) Electricity consumption in Puerto Rico is declining over time for all socio-economic sectors.**

- a. In 2009, the average family consumed about 222 kWh per month and that number appears to have gone down to about 202 kWh per month in 2017 (using 2017 prices) and 179 kWh per month if we base the calculation on 2019 prices.

- 6) **Higher electric rates (already among the highest of any US jurisdiction) add to migration pressures and further exacerbate the demographic and socioeconomic death spiral that Puerto Rico has been trapped in for the last 15 years.**
- a. Labor market collapse has led to unprecedented numbers of Puerto Ricans migrating out of the island with an estimate of about 89,000 leaving in 2015, and about 25,000 returning to the Island, for a net outmigration of 64,238 in just one year, 2015. If we examine the net migration patterns over the last decade, we see an increase in net out-migration from an average around 25 thousand per year between 2005 and 2010 to an average over 50 thousand per year between 2011 and 2014 with all signs suggesting that the net migration number continues to be in the 80 thousand to 90 thousand range or higher since 2014.
  - b. Analyzing Puerto Rico data between 2000 and 2017 shows that there is a correlation between increases in electricity costs and out-migration from Puerto Rico. Increases in the price of electricity lead to higher levels of out-migration. At the same time, increases in levels of outmigration and in the number of persons and families leaving Puerto Rico reduces the demand for electricity further eroding the income potential of the Puerto Rico Electric Power Authority (PREPA).
  - c. The shape of Puerto Rico's population pyramid shows fewer young persons and a significant aging of the population between 1950 and 2017. By the year 2050 we see an inversion of the age pyramid with the largest cohorts being those between ages 50 and 80 and much smaller younger age cohorts. By 2100 we see how Puerto Rico's population is expected to be significantly smaller especially when compared to 1950 where we see age cohorts that have close to 400,000 persons turning into age cohorts that are about one fourth of the size with about 100,000 persons remaining in that age group.
- 7) **The approval of the RSA will automatically cause an increase in the cost of living of the people of Puerto Rico, which, in turn, will cause additional social and economic precariousness to the most vulnerable segments of the population, particularly those at the bottom 40% of the income distribution.** Increases in the costs of electric and related services (as other costs would also increase with more expensive energy); the changing demographic profile of the population; high levels of poverty and disability; and continued population declines due to persistent outmigration and precariousness cause a further slowdown in economy activity which further exacerbates outmigration trends and lowers the demand for electricity. With lower demand for electricity, the prospects of PREPA complying with operational requirements and obligations to workers and retirees will be severely impaired. The RSA has a disproportionate impact on poor and low-income populations, threatens PREPA's ability to consistently provide its essential services to the population, and leads to a vicious cycle that affects revenue collection and the overall mission and finances of the Puerto Rico Electric Power Authority (PREPA).

## **I. Puerto Rico's Crises and the PREPA RSA**

By now it is broadly acknowledged across a range of sectors, in Puerto Rico and beyond, that the island is in a deep crisis and that it will take a sustained effort and significant resources for Puerto Rico to recover from a long-term recession, financial bankruptcy, and the multiple effects of calamitous natural disasters on the Island's infrastructure and population. The current crisis in Puerto Rico has various dimensions and manifestations: there is a *social dimension* reflected in increased population loss and outmigration, growing pessimism, and a sense of despair; an *economic dimension* reflected in reductions in employment and flattening of incomes and a high poverty rate particularly for young persons and children; a *fiscal dimension* manifested in high levels of government debt, the bankruptcy of the Puerto Rico government and various instrumentalities and public corporations, and the fiscal reorganization process; and a *recovery and reconstruction dimension* that involves repairing the damage from the recent storms, taking stock of the infrastructure on the Island, particularly the Puerto Rico Electric Power Authority (PREPA), planning for continuing climate related changes, and developing the capacity to address the various needs of the changing population.

To deal with the fiscal crisis and bankruptcy process, Congress passed the PROMESA law (Puerto Rico Oversight Management and Economic Stability Act) in 2016 granting broad powers to a Financial Oversight and Management Board of Puerto Rico (FOMBPR), named by the US Congress and the President, to approve Puerto Rico's local government expenditure and income budget parameters; make any changes to local government pensions; and to represent Puerto Rico in court proceedings seeking to address Puerto Rico's bonded debt and other liabilities. The PROMESA law requires that the Financial Oversight Board (FOMBPR) approve a fiscal plan (PRFP) setting broad budgetary parameters and goals for the government and its various instrumentalities and public corporations including the Puerto Rico Electric Power Authority (PREPA). The various versions of the PRFP approved by FOMBPR have included significant cuts to the University of Puerto Rico (UPR); cuts to central government support to Puerto Rico municipalities, and various other cuts and changes to the central government payroll and expenses. It was during the early stages of implementation of the first FOMBPR approved fiscal plan (PRFP)<sup>1</sup> that hurricanes Irma and Maria hit the Island of Puerto Rico around September 20, 2017. The devastation caused by the hurricanes forced the FOMBPR and the Commonwealth government to re-do the PRFP and seek support from Congress and the administration in Washington, DC for disaster relief, reconstruction, and to mitigate the economic, health, housing, physical infrastructure and related impacts of a storm that landed on top of a ten-year recession.

The storms exposed the significant impacts of climate change on Puerto Rico and exposed the substantial level of poverty and the many vulnerabilities of the local population. The high level of direct (and indirect) deaths attributed to the storm<sup>2</sup> and the loss of electric power in the weeks and months after have highlighted the need for the Island to have a resilient infrastructure and dependable electric service. The Puerto Rico Electric Power Authority (PREPA) received substantial media and other attention from the public as efforts to restore electricity to portions of the island took many months. The

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<sup>1</sup> <https://www.elnuevodia.com/english/english/nota/ayearofpromesa-2341707/>

<sup>2</sup> For a detailed report on deaths after the hurricanes and some of the direct and indirect causes see <https://publichealth.gwu.edu/sites/default/files/downloads/projects/PRstudy/Acertainment%20of%20the%20Estimated%20Excess%20Mortality%20from%20Hurricane%20Maria%20in%20Puerto%20Rico.pdf>

Puerto Rico Electric Power Authority (PREPA) has seen a significant reduction in its workforce and the infrastructure has suffered from a lack of maintenance as is well documented in the fiscal plans submitted to the Federal Oversight and Management Board of Puerto Rico [FOMBPR] [*PREPA 2018 Amended and Restated Fiscal Plan (April 5, 2018)*<sup>3</sup>]. The Puerto Rico Electric Power Authority (PREPA) must continue to manage costs, expenses, and income in order to provide steady, reliable, and affordable electricity to the population of Puerto Rico. In addition to the effects of climate change and storms, management of fiscal matters and priorities appear to threaten the viability and ability of the Puerto Rico Electric Power Authority (PREPA) to fulfill its mission.

As the FOMBPR and PREPA completed negotiations of the latest Restructuring Support Agreement (RSA) [*PREPA RSA (May 3, 2019)*<sup>4</sup>] there have been growing concerns over the contents of the agreement and, in particular, the impacts on the significant proportion of Puerto Rico's population that is poor, elderly, and/or disabled. Since electricity is such an essential service for families in Puerto Rico there is a need to examine the potential impacts of the PREPA RSA on the population of Puerto Rico and the poorest and most disadvantaged segments in particular.

This study seeks to fill that gap by providing a social scientific analysis of:

- a) The socio-economic and demographic characteristics of the population highlighting the most disadvantaged sectors and assessing the impact of AEE [Puerto Rico Electric Power Authority (PREPA)] RSA [agreement] on those segments of the population.
- b) The vulnerability of the population in Puerto Rico with respect to poverty and disability and the impact of AEE/PREPA RSA on populations with low-incomes and disabilities.
- c) The aging of the population in Puerto Rico; the vulnerabilities of the population under 18 years of age and of populations over 65 years of age; and the impact of AEE/PREPA RSA on populations and households with minors and elderly.
- d) The differential impact of the AEE/PREPA RSA on households by income level and the effects of price increases on disposable incomes and in the quality of life of the most vulnerable and disadvantaged segments of the population in Puerto Rico.
- e) Examine the effects of increases in the price of energy on increases in emigration, changes in the composition of the population, and population decline.
- f) Study the likelihood of substantial impairment of EEA\PREPA's income due to the impact of price increases on further emigration from the island and the effects of population decline, and changes in composition, on reductions in electricity consumption.

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<sup>3</sup> [http://www.aafaf.pr.gov/assets/prepa-fiscal-plan-\(v\\_april\)-4.5.18.pdf](http://www.aafaf.pr.gov/assets/prepa-fiscal-plan-(v_april)-4.5.18.pdf) and <http://www.aafaf.pr.gov/assets/fiscal-plan---pr-electric-power-authority.pdf>

<sup>4</sup> <https://oversightboard.pr.gov/documents/>

## II. Data Sources and Research Methods

Several primary and secondary data sources were consulted in the preparation of this report. I analyzed the monthly reports [*PREPA Monthly Reports*<sup>5</sup>] for the Corporation for the month of March to get basic data on the pricing structure to residential customers. I also examined the corporations RSA and the fiscal plans submitted to the Federal Oversight and Management Board of Puerto Rico [FOMBPR] [*PREPA RSA (May 3, 2019)*<sup>6</sup> and *PREPA 2018 Amended and Restated Fiscal Plan (April 5, 2018)*<sup>7</sup>]. Some of the key data from the Puerto Rico Electric Power Authority (PREPA) that was collected from the various reports is summarized in the table below and it was used in the production of the estimates and projections of the socioeconomic impact of the RSA on the population in Puerto Rico.

Key Study Assumptions and PREPA Data				
Fee Structure	March-09	March-17	March-19	Fee After Increase
Basic	\$ 0.0505	\$ 0.0566	\$ 0.0574	
Provisional		\$ 0.0122	\$ 0.0119	
Fuel Charge	\$ 0.0838	\$ 0.0734	\$ 0.0955	
Purchased Power	\$ 0.0423	\$ 0.0518	\$ 0.0538	
Total Cents per KwHr	\$ <b>0.1766</b>	\$ <b>0.1940</b>	\$ <b>0.2186</b>	
KWHr per client	355	366.0	328.0	
Total Residential Clients	1,327,244	1,335,398	1,348,854.00	
Increase #1			\$ 0.02768	\$ 0.24628
Increase #2			\$ 0.02957	\$ 0.24817
Increase #3			\$ 0.03242	\$ 0.25102
Increase #4			\$ 0.04522	\$ 0.26382

In addition, I examined the report prepared by the Center for the New Economy [*GRUPO CNE Analysis of the RSA (May 2019)*<sup>8</sup>], a think tank in Puerto Rico, on the PREPA RSA. In order to study the potential impacts of the PREPA RSA on the population I looked at a report on migration from Puerto Rico prepared by the Puerto Rico Institute of Statistics [*Perfil del Migrante*<sup>9</sup>, Instituto de Estadísticas de Puerto Rico] and a series of materials from the United Nations Population Division [*World Population Prospects*<sup>10</sup>] that estimate population change in Puerto Rico both in terms of changing population levels and in terms of the age composition of the population.

The bulk of the demographic and socioeconomic analysis of energy\electricity consumption and the effects of the RSA on electricity cost to consumers in Puerto Rico by income group was done with data from the Puerto Rico Community Survey (PRCS)<sup>11</sup> produced by the US Bureau of the Census. For the analysis, I use the data file for 2017 that was recently released (on October 2, 2018) and includes data from a one-year (2017) sample of the population in Puerto Rico. The household level file includes information on households in Puerto Rico and the families that make up these households. The data

<sup>5</sup> <https://aeepr.com/es-pr/investors/Paginas/Financial-Information.aspx>

<sup>6</sup> <https://oversightboard.pr.gov/documents/>

<sup>7</sup> [http://www.aafaf.pr.gov/assets/prepa-fiscal-plan-\(v\\_april\)-4.5.18.pdf](http://www.aafaf.pr.gov/assets/prepa-fiscal-plan-(v_april)-4.5.18.pdf) and <http://www.aafaf.pr.gov/assets/fiscal-plan---pr-electric-power-authority.pdf>

<sup>8</sup> <http://grupocne.org/wp-content/uploads/2019/05/PREPA-Debt-Restructuring-3.0-FINAL.pdf>

<sup>9</sup> [https://estadisticas.pr/files/Publicaciones/PM\\_2016\\_1.pdf](https://estadisticas.pr/files/Publicaciones/PM_2016_1.pdf)

<sup>10</sup> <https://population.un.org/wpp/>

<sup>11</sup> <https://www.census.gov/programs-surveys/acs/about/puerto-rico-community-survey.html>

contains information on key socioeconomic characteristics of the households including household structure and income and it also includes a variable that asked the respondents about their monthly electric bill. The data on the monthly electric bill was combined with the price data from the various PREPA reports in order to estimate consumption levels for households in Puerto Rico by income category. The total monthly bill divided by the price of a kilowatt per hour will give us an estimate of the number of kilowatts consumed by households in Puerto Rico of various income levels. To produce the estimates, I used 2017 consumption levels at 2019 prices and then added the subsequent increases to estimate the impact on households per month and per year. The household expenditures divided by the number of persons per household gives us an estimate of per capita consumption and the prices paid monthly for electricity per person. Those estimates are used to then estimate the impact of the RSA on monthly and annual electric bills for households of different income levels in Puerto Rico. Finally, I use data on the estimated annual electric bill to compute the proportion of annual household income spent on electricity for households in Puerto Rico different income levels. This analysis shows the differential impact of an increase in electric costs on the poorest and most disadvantaged households in Puerto Rico.

It is important to point out that while all the PREPA documents I examined, including the Puerto Rico Electric Power Authority (PREPA) RSA and the fiscal plans submitted to the Federal Oversight and Management Board of Puerto Rico [*PREPA RSA (May 3, 2019)*<sup>12</sup> and *PREPA 2018 Amended and Restated Fiscal Plan (April 5, 2018)*<sup>13</sup>], provide substantial information on the workings of the Puerto Rico Electric Power Authority (PREPA), and its plans moving forward, there is little or no mention of the socioeconomic characteristics of the Puerto Rico Electric Power Authority (PREPA) customer base, and the potential impacts of changes in the price structure on customers of different income levels in Puerto Rico. The purpose of this study is to fill some of that knowledge gap by focusing on socio-economic differences in electric consumption, what different segments spent on electricity, and on the impact of changes in electric prices on households of different income levels in Puerto Rico.

### **III. Population Composition in Puerto Rico and Socio-Economic Characteristics**

Having a clear data-based understanding of the socio-economic and changing demographic characteristics, and the rapid aging, of the population that lives in Puerto Rico is essential in order to understand the effects of the Puerto Rico Electric Power Authority (PREPA) RSA on the population of Puerto Rico. On the island, less than 10% of the population is nine years of age or younger and only about 36% of the population is below the age of 29 as seen in Table 1 showing the age distribution. Puerto Rico's rapidly aging population is exemplified by the fact that one of the two largest age cohorts on the island are persons between 50 and 59 years of age which comprise about 13.1% of the population. The age cohorts between 30 and 39 years of age and 40 and 49 years of age are unusually and comparatively small reflecting significant outmigration from Puerto Rico and its effects on the population's age structure.

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<sup>12</sup> <https://oversightboard.pr.gov/documents/>

<sup>13</sup> [http://www.aafaf.pr.gov/assets/prepa-fiscal-plan-\(v\\_april\)-4.5.18.pdf](http://www.aafaf.pr.gov/assets/prepa-fiscal-plan-(v_april)-4.5.18.pdf) and <http://www.aafaf.pr.gov/assets/fiscal-plan--pr-electric-power-authority.pdf>



Table 1 Age Categories (grouped) in Puerto Rico (PRCS 2017, 1yr file)			
	Frequency	Percent	Cumulative Percent
10 to 19	322,447	9.7	9.7
20 to 29	431,338	12.9	22.6
30 to 39	449,244	13.5	36.0
40 to 49	405,162	12.1	48.2
50 to 59	420,031	12.6	60.8
60 to 69	437,239	13.1	73.9
70 to 79	406,651	12.2	86.1
80 to 89	305,567	9.2	95.2
90 and Older	132,542	4.0	99.2
<b>Total</b>	<b>3,337,177</b>	<b>100.0</b>	

A significant proportion of the population on the island, about 21.8%, report one or more type of disability. This means that there is a large segment of the population that relies disproportionately on the continuity of electric service for their safe and stable functioning. Many disabled persons in Puerto Rico are low income and poor which compounds their vulnerability particularly before, during, and after storms and related events.

Table 2 Disability in Puerto Rico (PRCS 2017, 1yr file)			
	Frequency	Percent	Cumulative Percent
No Disability	2,609,952	78.2	78.2
With Disability	727,225	21.8	100.0
<b>Total</b>	<b>3,337,177</b>	<b>100.0</b>	

About 24.6% of the population in Puerto Rico reports income below half of the poverty line, or less than about \$6,000 per person per year. This is about 812,258 persons. Another 19.9%, or 658,795 persons, have incomes between half and the poverty line (between \$6,000 and \$12,000 per person per year) which means that the overall proportion of the population living below the federal poverty guidelines is 44.5%. The poverty rate for children in Puerto Rico is about 56%. Puerto Rico’s poverty rate is more than double the poorest states in the nation and has been persistently so for the last two decades or more<sup>14</sup>.

Table 3 Poverty Level in Puerto Rico (PRCS 2017, 1yr file)				
Family Income Level	Frequency	Percent	Valid Percent	Cumulative Percent
Extreme Poverty (below 49%)	812,258	24.3	24.6	24.6
Below Poverty (50-99%)	658,795	19.7	19.9	44.5
Near Poverty (100-149%)	525,859	15.8	15.9	60.4
Low Income (150-199%)	373,766	11.2	11.3	71.7
Middle Income + (over 200%)	936,466	28.1	28.3	100.0
<b>Total</b>	<b>3,307,144</b>	<b>99.1</b>	<b>100.0</b>	
<b>Missing</b>	<b>30,033</b>	<b>0.9</b>		
<b>Total</b>	<b>3,337,177</b>	<b>100.0</b>		

<sup>14</sup>For a detailed analysis of poverty in Puerto Rico see Cordero-Guzman, Hector, Raul Figueroa and Alberto Velazquez (2016) Poverty in Puerto Rico: A Socio-Economic and Demographic Analysis. San Juan, PR: Inter-American University Press and Human Services Research Partnerships Puerto Rico. Available at <https://www.dropbox.com/s/rj26lxcywcbwodq/Tomo%20IV-Cordero-Figueroa-Velazquez-PR-Poverty-8-16.pdf?dl=0>

In a recent article published in the journal Caribbean Studies<sup>15</sup> the authors propose a definition of vulnerability that includes elements of age, poverty status, and disability. If we combine the proportion of the population in Puerto Rico that is below poverty, that is younger than 15 years of age, or that is older than 65 years of age, or that has a disability, as seen in Table 4, that adds up to about 68.9% of the population. This is close to 2.3 million out of the 3.3 million persons reported residing on the island in 2017. This suggests that a significant proportion of the population, more than two in three residents in Puerto Rico, is vulnerable in terms of their age, their income, or their disability status (or a combination of the three). With significant proportions of the population below poverty, with some disability, and either under 16 or over 65 years of age, Puerto Rico appears uniquely susceptible to the consequences of economic, social and environmentally related challenges and to discontinuities and increases in the costs of electric service.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative Percent</u>
Poor, >15, 65+, or Disabled	2,297,974	68.9	68.9
Able bodied person 16-64 not poor	1,039,203	31.1	100.0
<b>Total</b>	<b>3,337,177</b>	<b>100.0</b>	

A significant proportion of the population in Puerto Rico, about 26.5% many of them young persons or elderly, did not report any income. Another 28.9% of the population reported incomes of between one dollar and \$9,999 dollars. Another 22.5% of the population reported incomes between \$10,000 and \$19,999. About 87.5% of the population in Puerto Rico reported incomes of \$29,999 or less. The income distribution for persons in Puerto Rico can be seen in Table 5 and shows significant concentrations in the low-income segments and also significant levels of socio-economic inequality that have to be understood in order to evaluate the socio-economic effects of the PREPA RSA on the overall population.

<u>Personal Income</u>	<u>Frequency</u>	<u>Percent</u>	<u>Valid Percent</u>	<u>Cumulative Percent</u>
Lowest thru 0	746,554	22.4	26.5	26.5
1 to 9999	812,662	24.4	28.9	55.4
10k to 19,999	631,490	18.9	22.5	77.9
20k to 29,999	270,688	8.1	9.6	87.5
30k to 39999	145,954	4.4	5.2	92.7
40k to 49999	66,753	2.0	2.4	95.1
50k to 59999	45,251	1.4	1.6	96.7
60k to 79999	40,322	1.2	1.4	98.1
80k to 99999	17,199	0.5	0.6	98.7
100k to 124999	7,089	0.2	0.3	99.0
Over 150,000	28,254	0.8	1.0	100.0
<b>Total</b>	<b>2,812,216</b>	<b>84.3</b>	<b>100.0</b>	
<b>LT 15 years of age</b>	<b>524,961</b>	<b>15.7</b>		
<b>Total</b>	<b>3,337,177</b>	<b>100.0</b>		

<sup>15</sup> Padilla-Elias, Nilsa, et. al. "Una Mirada a las Poblaciones Vulnerables en Puerto Rico Ante Desastres." Caribbean Studies 44(1-2):141-163.

Table 6 divides the population of Puerto Rico into five more or less equally sized segments each including about 20% of the population or close to 660,000 of the 3.3 million persons reported residing on the island in 2017. The groups are ranked by income quintile from the bottom 20%, the second quintile, the third quintile, the fourth quintile and then the fifth quintile is divided into the top 15% of incomes and the very top 5% of incomes in Puerto Rico. In the subsequent tables and analysis, I will use these six income groupings to explore patterns of energy consumption and the impact of the RSA on different income groups in the population of Puerto Rico.

Table 6 Income Quintiles in 2017 in Puerto Rico (PRCS 2017, 1yr file)				
Personal Income Quartile	Frequency	Percent	Valid Percent	Cumulative Percent
Bottom 20%	655,970	19.7	19.8	19.8
Second 20%	664,035	19.9	20.1	39.9
Third 20%	659,449	19.8	19.9	59.9
Fourth 20%	658,524	19.7	19.9	79.8
Top 15%	503,771	15.1	15.2	95.0
Top 5%	165,395	5.0	5.0	100.0
<b>Total</b>	<b>3,307,144</b>	<b>99.1</b>	<b>100.0</b>	
<b>Missing</b>	<b>30,033</b>	<b>0.9</b>		
<b>Total</b>	<b>3,337,177</b>	<b>100.0</b>		

In order to understand the capacity of residents of the island of Puerto Rico to pay for electric service at different levels it is critical to understand the employment status of the population presented in Table 7. After the substantial collapse in the labor market since 2006, the number of jobs and persons employed has declined significantly. About 35.5% of the population reported being employed, 7% reports looking for work (the definition of unemployed), and about 56.5% of the population reported being out of the labor force. This does not include the slightly over half a million persons that are 16 years of age and younger and not considered part of the labor force. It does include a significant proportion of the population that is over age 65. Puerto Rico's labor force includes 983,444 persons employed and 194,546 persons that reported looking for work or are unemployed. Another 1.6 million persons in Puerto Rico are not in the labor force.

Table 7 Employment Status in Puerto Rico (PRCS 2017, 1yr file)				
	Frequency	Percent	Valid Percent	Cumulative Percent
Civilian employed, at work	983,444	29.5	35.5	35.5
Civilian employed, with a job but not at work	26,055	0.8	0.9	36.4
Unemployed	194,546	5.8	7.0	43.4
Armed forces, at work	2,405	0.1	0.1	43.5
Not in labor force	1,565,924	46.9	56.5	100.0
<b>Total</b>	<b>2,772,374</b>	<b>83.1</b>	<b>100.0</b>	
<b>LT 16 yrs of age</b>	<b>564,803</b>	<b>16.9</b>		
<b>Total</b>	<b>3,337,177</b>	<b>100.0</b>		

There are significant demographic differences by income in the population of Puerto Rico as shown in the averages and percentages presented in Table 8 by socio-economic background. Lower income persons in Puerto Rico tend to be significantly younger, more likely to be students and in school, less likely to have graduated from high school, more likely to have changed residences in the previous year, less likely to be married, and significantly more likely to be unemployed or out of the labor force. The proportion of the population with a high school degree, that is married, that is employed and in the labor force, increases significantly by income group. It is important to keep these socio-economic differences in mind when trying to understand the differential impact of increases in electric rates on various segments of the population in Puerto Rico.

Personal Income Quartile	Age	In School	High School Graduate	Recent Movers	Married	Employed	Unemployed	Not in Labor Force
Bottom 20%	32	35%	49%	10%	13%	10%	17%	73%
Second 20%	42	24%	54%	7%	25%	26%	8%	67%
Third 20%	45	21%	64%	4%	33%	35%	5%	59%
Fourth 20%	42	25%	73%	5%	36%	49%	4%	47%
Top 15%	45	18%	83%	4%	43%	56%	3%	40%
Top 5%	44	23%	83%	5%	45%	64%	2%	34%
<b>Total</b>	<b>41</b>	<b>25%</b>	<b>65%</b>	<b>6%</b>	<b>30%</b>	<b>37%</b>	<b>7%</b>	<b>56%</b>

Sources and levels of income also vary significantly by income group in Puerto Rico. Low-income persons are more likely to receive public assistance, Social Security income, and a smaller proportion of their total income comes from wages and earnings. As we go up the income distribution, income from interests, dividends and rents; retirement income; self-employment income; and wages and salaries increase significantly. Income from public assistance decreases with income levels while income from Social Security is concentrated more heavily in the middle-income categories. Puerto Rico's income shows significant concentration with the bottom 20% making 1% of the income, the next 20% making about 8% of the income. This means that the bottom 40% of the population makes about 9% of the total income. The third quintile makes about 14% of the total income, the fourth quintile makes 22%, and the top 20% take about 55% of all the income. The top 5% in Puerto Rico make about 25% of all income generated on the Island.

Income Quintile in 2017	Mean	Interest, dividends, and net rental income past 12 months	Public assistance income past 12 months	Retirement income past 12 months	Self-employment income past 12 months	Supplementary Security income past 12 months	Social Security income past 12 months	Wages or salary income past 12 months	Total person's earnings	Total person's income	Usual hours worked per week past 12 months
Bottom 20%	Mean	\$ 2.77	\$ 208.08	\$ 28.48	\$ 93.19	\$ 7.22	\$ 352.74	\$ 310.65	\$ 415.28	\$ 1,208.73	\$ 22.39
	Sum	\$ 1,322,100	\$ 99,403,250	\$ 13,603,120	\$ 44,519,780	\$ 3,449,800	\$ 168,508,220	\$ 148,398,610	\$ 192,918,390	\$ 577,423,130	\$ 1,321,074
Second 20%	Mean	\$ 21.86	\$ 144.74	\$ 171.68	\$ 350.93	\$ 13.45	\$ 2,430.40	\$ 2,112.04	\$ 2,502.68	\$ 5,485.30	\$ 29.10
	Sum	\$ 12,075,090	\$ 79,945,850	\$ 94,828,300	\$ 193,832,780	\$ 7,428,100	\$ 1,342,420,930	\$ 1,166,574,140	\$ 1,360,406,920	\$ 3,029,776,400	\$ 4,585,337
Third 20%	Mean	\$ 64.67	\$ 89.33	\$ 643.09	\$ 314.85	\$ 19.70	\$ 3,541.40	\$ 4,869.80	\$ 5,235.05	\$ 9,860.57	\$ 34.64
	Sum	\$ 37,060,830	\$ 51,194,560	\$ 368,553,080	\$ 180,440,280	\$ 11,292,800	\$ 2,029,569,220	\$ 2,790,871,610	\$ 2,971,311,890	\$ 5,851,071,490	\$ 7,433,528
Fourth 20%	Mean	\$ 95.14	\$ 17.87	\$ 1,444.95	\$ 521.89	\$ 20.99	\$ 2,994.53	\$ 10,018.34	\$ 10,671.14	\$ 15,567.00	\$ 36.92
	Sum	\$ 54,498,350	\$ 10,236,740	\$ 827,707,110	\$ 298,954,560	\$ 12,023,500	\$ 1,715,353,020	\$ 5,738,796,530	\$ 6,037,751,090	\$ 8,917,228,380	\$ 10,811,582
Top 15%	Mean	\$ 391.90	\$ 25.69	\$ 2,636.40	\$ 1,247.83	\$ 36.41	\$ 2,984.18	\$ 16,830.50	\$ 18,200.85	\$ 25,264.60	\$ 38.08
	Sum	\$ 181,045,700	\$ 11,869,930	\$ 1,217,940,840	\$ 576,461,260	\$ 16,822,000	\$ 1,378,606,690	\$ 7,775,200,920	\$ 8,351,662,180	\$ 11,671,512,090	\$ 10,486,133
Top 5%	Mean	\$ 6,041.43	\$ 14.02	\$ 7,086.43	\$ 6,688.36	\$ 77.44	\$ 3,516.59	\$ 48,946.48	\$ 56,509.24	\$ 73,472.07	\$ 40.19
	Sum	\$ 882,380,470	\$ 2,047,250	\$ 1,035,009,250	\$ 976,867,860	\$ 11,310,500	\$ 513,615,920	\$ 7,148,877,644	\$ 8,125,745,504	\$ 10,730,962,674	\$ 3,911,759
<b>Total</b>	<b>Mean</b>	<b>\$ 419.68</b>	<b>\$ 91.49</b>	<b>\$ 1,277.88</b>	<b>\$ 815.76</b>	<b>\$ 22.39</b>	<b>\$ 2,567.55</b>	<b>\$ 8,896.78</b>	<b>\$ 9,853.55</b>	<b>\$ 14,575.37</b>	<b>\$ 35.15</b>
	<b>Sum</b>	<b>\$ 1,168,382,540</b>	<b>\$ 254,697,380</b>	<b>\$ 3,557,641,700</b>	<b>\$ 2,271,076,520</b>	<b>\$ 62,326,700</b>	<b>\$ 7,148,074,000</b>	<b>\$ 24,768,719,454</b>	<b>\$ 27,039,795,974</b>	<b>\$ 40,577,974,164</b>	<b>\$ 38,549,413</b>

#### IV. Consumption of Electricity by Household Income Level

The Puerto Rico Community Survey (PRCS) asks respondents to provide the amount of the previous months electric bill. With that information, and information on the prices per kilowatt hour, we can estimate the electric consumption of households. Table 10 estimates the average consumption of kilowatt hours for households in different parts of the income distribution in Puerto Rico from low to high incomes. Whether we compute consumption using prices for 2017 or prices for 2019, the pattern is essentially the same. Low-income households consume significantly less energy, as measured in kilowatt hours, than higher income households in Puerto Rico. Households in the bottom 20% of the population consume about 340 kWh per month compared to 1007 KWh per month for households at the top 5% of the income distribution. Households in the bottom 20% of the population together consume about 13% of the total kilowatt hours and together with households in the next 20%, which consume about 15% of the total kilowatt hours, households at the bottom 40% of the income distribution in Puerto Rico consume about 28% of the total kilowatt hours. In contrast, households in the top 20% of the income distribution consume about 33%, or one third, of the total energy consumed by households in Puerto Rico. Households with incomes in the top 5% of the population consume about 11% of the total energy consumed by households in Puerto Rico.

Table 10 Monthly KWhr Consumption in Puerto Rico by Income in 2017 Prices (PRCS 2017, 1yr file)				
HH Income Quintile in 2017	at \$19.40 Kwh	KWhr Consumption 2017	PP KWhr Consumption 2017	Percentage of Consumption
<b>Bottom 20%</b>	Mean	340	204	
<i>[from \$0 to \$6,499]</i>	Sum	73,621,990		13%
<b>Second 20%</b>	Mean	365	225	
<i>[from \$6,500 to \$14,399]</i>	Sum	83,740,144		15%
<b>Third 20%</b>	Mean	436	225	
<i>[from \$14,400 to \$24,499]</i>	Sum	100,433,670		18%
<b>Fourth 20%</b>	Mean	536	240	
<i>[from \$25,000 to \$45,099]</i>	Sum	126,131,691		22%
<b>Top 15%</b>	Mean	698	280	
<i>[from \$45,100 to \$90,799]</i>	Sum	123,223,052		22%
<b>Top 5%</b>	Mean	1,007	376	
<i>[higher than \$90,800]</i>	Sum	59,673,649		11%
<b>Total</b>	<b>Mean</b>	<b>494</b>	<b>241</b>	
	<b>Sum</b>	<b>566,824,196</b>		<b>100%</b>

If we use 2019 prices of 21.86 cents per kilowatt hour the consumption level decreases for households but the pattern by income level remains essentially the same. Households and individuals in the top 5% consume about three times more energy, as measured in kilowatt hours per household or person, than households in the bottom 20% of the population.

Table 11 Monthly KWhr Consumption in Puerto Rico by Income 2019 Prices (PRCS 2017, 1yr file)				
HH Income Quintile in 2017	at \$21.86 Kwh	KWhr Consumption 2019	PP KWhr Consumption 2019	Percentage of Consumption
<b>Bottom 20%</b>	Mean	301	181	
[from \$0 to \$6,499]	Sum	65,336,990		13%
<b>Second 20%</b>	Mean	324	199	
[from \$6,500 to \$14,399]	Sum	74,316,505		15%
<b>Third 20%</b>	Mean	387	200	
[from \$14,400 to \$24,499]	Sum	89,131,436		18%
<b>Fourth 20%</b>	Mean	475	213	
[from \$25,000 to \$45,099]	Sum	111,937,548		22%
<b>Top 15%</b>	Mean	620	249	
[from \$45,100 to \$90,799]	Sum	109,356,231		22%
<b>Top 5%</b>	Mean	893	334	
[higher than \$90,800]	Sum	52,958,317		11%
<b>Total</b>	<b>Mean</b>	<b>438</b>	<b>213</b>	
	<b>Sum</b>	<b>503,037,027</b>		<b>100%</b>

**V. Electricity Costs and the Effects of RSA Increases by Household Income Level**

Using 2019 prices, we can estimate the average monthly electrical bill for households in Puerto Rico by income level and then project increase in rates forward to calculate the impact of the rate increases on households of different income levels. Table 12 shows the average monthly electrical bill for the total population estimated at \$95.81 per month and then by income level. Households in the bottom 20% are estimated to pay about \$65.88, households in the next 20% (second quintile) pay on average \$70.83. Households in the third quintile pay about \$84.59 per month while those in the fourth quintile pay about \$103.93. Households in the top 15% pay about \$135.47 per month while households in the top 5% of the population pay about \$195.25 per household per month in electrical bill.

Table 12 also includes the sum of the payments expected to be made by households in each of the income categories. We can see households in the bottom 20% paid about \$14.3 million per month while all households in the second quintile paid about \$16.2 million in electric bill in total per month. The table provides information on the average monthly electrical bill and the total paid by households in each income segment in the base year in the first column and then projects the impact of the rate increases forward. Households in the bottom 20% of the income distribution that are estimated to pay about \$65.88 in the base year will go up to pay \$77.21 with the first increase required by the RSA, \$77.78 in the second increase, \$78.66 in the third increase, and up to a total of \$82.60 with the fourth increase required by the RSA. That means that collections from households at the bottom 20% of the income distribution would increase from \$14.3 million per month in the base year to potentially about \$17.9 million per month after the fourth increase required by the RSA.

Table 12 Monthly Electricity Costs and Effects of RSA Increases in Puerto Rico by Income Level at 2019 prices (PRCS 2017, 1yr file)						
HH Income Quintile in 2017		Monthly Electricity Cost				
		(\$2186)	Increase #1 (\$2462)	Increase #2 (\$2481)	Increase #3 (\$2510)	Increase #4 (\$2641)
<b>Bottom 20%</b>	Mean	\$ 65.88	\$ 77.21	\$ 77.78	\$ 78.66	\$ 82.60
[from \$0 to \$6,499]	Sum	\$ 14,282,666	\$ 16,739,337	\$ 16,863,477	\$ 17,052,954	\$ 17,908,869
<b>Second 20%</b>	Mean	\$ 70.83	\$ 83.01	\$ 83.63	\$ 84.57	\$ 88.81
[from \$6,500 to \$14,399]	Sum	\$ 16,245,588	\$ 19,039,889	\$ 19,181,090	\$ 19,396,608	\$ 20,370,154
<b>Third 20%</b>	Mean	\$ 84.59	\$ 99.14	\$ 99.88	\$ 101.00	\$ 106.07
[from \$14,400 to \$24,499]	Sum	\$ 19,484,132	\$ 22,835,474	\$ 23,004,824	\$ 23,263,305	\$ 24,430,927
<b>Fourth 20%</b>	Mean	\$ 103.93	\$ 121.81	\$ 122.71	\$ 124.09	\$ 130.32
[from \$25,000 to \$45,099]	Sum	\$ 24,469,548	\$ 28,678,400	\$ 28,891,081	\$ 29,215,700	\$ 30,682,082
<b>Top 15%</b>	Mean	\$ 135.47	\$ 158.77	\$ 159.94	\$ 161.74	\$ 169.86
[from \$45,100 to \$90,799]	Sum	\$ 23,905,272	\$ 28,017,066	\$ 28,224,843	\$ 28,541,976	\$ 29,974,543
<b>Top 5%</b>	Mean	\$ 195.26	\$ 228.85	\$ 230.54	\$ 233.14	\$ 244.84
[higher than \$90,800]	Sum	\$ 11,576,688	\$ 13,567,921	\$ 13,668,542	\$ 13,822,121	\$ 14,515,875
<b>Total</b>	Mean	\$ 95.81	\$ 112.29	\$ 113.13	\$ 114.40	\$ 120.14
	Sum	\$ 109,963,894	\$ 128,878,086	\$ 129,833,857	\$ 131,292,664	\$ 137,882,449

Table 13 details the total amount of electrical charges paid by households in each of the income segments of the distribution. In the base month total collections are estimated at about \$110 million and they would increase \$128.9 million per month with the first increase to a total of \$129.8 million with the second increase, \$131.3 million for the third increase and up to \$137.9 million per month with the fourth increase. The table details the amounts that could potentially be due and collected from households in each of the segments of the income distribution in Puerto Rico including the bottom 40% of households.

Table 13 Monthly Electricity Costs and Effects of RSA Increases in Puerto Rico by Income Level at 2019 prices (PRCS 2017, 1yr file)					
HH Income Quintile in 2017	Monthly Electricity Cost (\$2186)	Increase #1 (\$2462)	Increase #2 (\$2481)	Increase #3 (\$2510)	Increase #4 (\$2641)
Bottom 20%	\$ 14,282,666	\$ 16,739,337	\$ 16,863,477	\$ 17,052,954	\$ 17,908,869
Second 20%	\$ 16,245,588	\$ 19,039,889	\$ 19,181,090	\$ 19,396,608	\$ 20,370,154
Third 20%	\$ 19,484,132	\$ 22,835,474	\$ 23,004,824	\$ 23,263,305	\$ 24,430,927
Fourth 20%	\$ 24,469,548	\$ 28,678,400	\$ 28,891,081	\$ 29,215,700	\$ 30,682,082
Top 15%	\$ 23,905,272	\$ 28,017,066	\$ 28,224,843	\$ 28,541,976	\$ 29,974,543
Top 5%	\$ 11,576,688	\$ 13,567,921	\$ 13,668,542	\$ 13,822,121	\$ 14,515,875
<b>Total</b>	\$ 109,963,894	\$ 128,878,086	\$ 129,833,857	\$ 131,292,664	\$ 137,882,449

Table 14 includes the base year in the first column and then it includes the total additional amount to be collected from households in each of the income categories with each of the proposed and projected electricity rate increases included in the PREPA RSA. The second column (increase #1) shows that of the total collected after the first increase of \$18.9 million about \$2.5 million will be due to households in the bottom 20% of the income distribution (the poorest households), \$2.8 million to households in the second quintile, \$3.4 million to households in the third quintile, \$4.2 million to households in the fourth quintile, \$4.1 million from households in the top 15%, and about \$2 million from households in the top 5% of the household income distribution in Puerto Rico.

The amounts of subsequent increases and the quantities expected to be collected from each segment of the household income distribution are included in the rest of Table 14. Column six of the table includes the percent of the total increase that is expected to be collected from households in each of the segments of the income distribution while the last column includes the percent of total income that is received by households in

each segment of the household income distribution. As we can see in Table 14, about 13% of the rate increase is expected to be collected from households in the bottom 20% of the income distribution (the poorest households) but they only make 1.4% of the total income in Puerto Rico. Households in the second quintile are expected to cover about 14.8% of the electricity rate increase but they make only about 7.5% of the total household income. Households in the third quintile are expected to cover about 17.7% of the rate increase while they make 13.9% of the total household income. At the other top extreme of the income distribution, households in the top 15% of incomes are expected to cover about 21.7% of the electricity rate increase while making 28.8% of the income while households in the top 5% of the household income distribution in Puerto Rico are expected to cover about 10.5% of the electricity rate increase while making 26.4% of the total income.

This means that a disproportionate burden of the increase falls on the bottom 40% of the population and, in particular, on the poorest bottom 20% of the population that has the fewest resources, the highest levels of vulnerability, and the lowest incomes.

HH Income Quintile in 2017	Monthly Electricity Cost (\$2186)	Increase #1 (\$2462)	Increase #2 (\$2481)	Increase #3 (\$2510)	Increase #4 (\$2641)	Percentage of Rate Increase Paid by each Quintile	Percentage of Total Income in each Quintile
Bottom 20%	\$ 14,282,666	\$ 2,456,671	\$ 124,140	\$ 189,477	\$ 855,915	13.0%	1.4%
Second 20%	\$ 16,245,588	\$ 2,794,301	\$ 141,201	\$ 215,518	\$ 973,546	14.8%	7.5%
Third 20%	\$ 19,484,132	\$ 3,351,342	\$ 169,350	\$ 258,481	\$ 1,167,622	17.7%	13.9%
Fourth 20%	\$ 24,469,548	\$ 4,208,852	\$ 212,681	\$ 324,619	\$ 1,466,382	22.3%	22.0%
Top 15%	\$ 23,905,272	\$ 4,111,794	\$ 207,777	\$ 317,133	\$ 1,432,567	21.7%	28.8%
Top 5%	\$ 11,576,688	\$ 1,991,233	\$ 100,621	\$ 153,579	\$ 693,754	10.5%	26.4%
<b>Total</b>	<b>\$ 109,963,894</b>	<b>\$ 18,914,192</b>	<b>\$ 955,770</b>	<b>\$ 1,458,807</b>	<b>\$ 6,589,785</b>	<b>100%</b>	<b>100%</b>

Table 15 provides estimates of the monthly electrical bill per person by dividing the household electrical bill by the number of persons per household. The table also includes information on the per person impact of the rate increase for households in different segments of the income distribution in Puerto Rico. The average bill per person is expected to increase from \$46.66 per person per month to about \$58.50 per month per person with the full increases imposed under the PREPA RSA. Individuals in households in the bottom 20% of the income distribution estimated to currently pay about \$39.61 per person per month and that would increase to \$46.43 per person per month with the first increase and up to \$49.67 after the fourth increase. Table 15 provides the details of the impact of increases in rates per person for individuals in households that are in different segments of the income distribution in Puerto Rico.

HH Income Quintile in 2017	Electric Bill Per Person	PP Increase #1	PP Increase #2	PP Increase #3	PP Increase #4
Bottom 20%	\$ 39.61	\$ 46.43	\$ 46.77	\$ 47.30	\$ 49.67
Second 20%	\$ 43.60	\$ 51.09	\$ 51.47	\$ 52.05	\$ 54.66
Third 20%	\$ 43.70	\$ 51.21	\$ 51.59	\$ 52.17	\$ 54.79
Fourth 20%	\$ 46.62	\$ 54.64	\$ 55.05	\$ 55.67	\$ 58.46
Top 15%	\$ 54.37	\$ 63.72	\$ 64.19	\$ 64.91	\$ 68.17
Top 5%	\$ 72.97	\$ 85.52	\$ 86.16	\$ 87.12	\$ 91.50
<b>Total</b>	<b>\$ 46.66</b>	<b>\$ 54.68</b>	<b>\$ 55.09</b>	<b>\$ 55.71</b>	<b>\$ 58.50</b>



The annual electrical cost for households in Puerto Rico is included in table 16 for the overall population and also for households in different segments of the income distribution. The average annual electrical bill in Puerto Rico is estimated at \$1,149.76 per household and that is estimated to generate about \$1.3 billion a year in residential collections. The table includes information on the average annual electrical bill for households in different segments of the income distribution and it also includes the total annual payments made by households in each of the segments of the income distribution. I then estimate the annual impact of the rate increases on the overall population and for households in different segments of the income distribution. The table also includes information on both the average household income for households in different segments of the income distribution as well as the total estimated income generated by households in that segment of the income distribution. That information allows us to calculate the proportion of household income that is devoted to paying electrical bills and the impact of the electricity rate increases on household incomes and budgets for different segments of the population.

The data suggest that the average household in the bottom 20% of the income distribution pays on average \$790.54 per year in electrical bills. The second quintile pays an average of \$849.97 per year, the third quintile pays about \$1,015, the fourth quintile pays about \$1,247, those in the top 15% of income earners pay about \$1,625 per year while those in the top 5% pay close to \$2,343 for electric service per year. If we examine the effect of increases in the price of electricity, the data suggest that the average household in the bottom 20% of the income distribution will pay, after the fourth increase, an average of \$991.25 per year in electrical bill. The second quintile will pay an average of \$1,065.77 per year after the fourth increase. It is unreasonable to expect that families with very low incomes would be able to afford any additional price increases. The third quintile pays about \$1,272.81, the fourth quintile pays about \$1,563.86, those in the top 15% of income earners pay about \$2,038.30 per year while those in the top 5% pay close to \$2,938.04 per year in electrical bill after the fourth increase.

HH Income Quintile in 2017		Annual Electricity Cost (\$2,186)	Increase #1 (\$2,462)	Increase #2 (\$2,481)	Increase #3 (\$2,510)	Increase #4 (\$2,641)	Household income
<b>Bottom 20%</b>	Mean	\$ 790.54	\$ 926.51	\$ 933.39	\$ 943.87	\$ 991.25	\$ 2,365.36
	Sum	\$ 171,391,992	\$ 200,872,042	\$ 202,361,725	\$ 204,635,452	\$ 214,906,427	\$ 557,170,180
<i>[from \$0 to \$6,499]</i>							
<b>Second 20%</b>	Mean	\$ 849.97	\$ 996.17	\$ 1,003.56	\$ 1,014.83	\$ 1,065.77	\$ 9,788.58
	Sum	\$ 194,947,056	\$ 228,478,663	\$ 230,173,079	\$ 232,759,294	\$ 244,441,848	\$ 2,137,600,900
<i>[from \$6,500 to \$14,399]</i>							
<b>Third 20%</b>	Mean	\$ 1,015.09	\$ 1,189.69	\$ 1,198.51	\$ 1,211.98	\$ 1,272.81	\$ 19,210.01
	Sum	\$ 233,809,584	\$ 274,025,688	\$ 276,057,885	\$ 279,159,659	\$ 293,171,121	\$ 4,599,317,830
<i>[from \$14,400 to \$24,499]</i>							
<b>Fourth 20%</b>	Mean	\$ 1,247.21	\$ 1,461.74	\$ 1,472.58	\$ 1,489.12	\$ 1,563.86	\$ 33,812.51
	Sum	\$ 293,634,576	\$ 344,140,798	\$ 346,692,974	\$ 350,588,400	\$ 368,184,983	\$ 8,088,797,660
<i>[from \$25,000 to \$45,099]</i>							
<b>Top 15%</b>	Mean	\$ 1,625.58	\$ 1,905.19	\$ 1,919.32	\$ 1,940.88	\$ 2,038.30	\$ 60,974.09
	Sum	\$ 286,863,264	\$ 336,204,795	\$ 338,698,117	\$ 342,503,714	\$ 359,694,514	\$ 10,920,642,760
<i>[from \$45,100 to \$90,799]</i>							
<b>Top 5%</b>	Mean	\$ 2,343.14	\$ 2,746.17	\$ 2,766.54	\$ 2,797.62	\$ 2,938.04	\$ 173,131.50
	Sum	\$ 138,920,256	\$ 162,815,048	\$ 164,022,498	\$ 165,865,447	\$ 174,190,495	\$ 10,321,061,364
<i>[higher than \$90,800]</i>							
<b>Total</b>	Mean	\$ 1,149.76	\$ 1,347.53	\$ 1,357.52	\$ 1,372.78	\$ 1,441.68	\$ 31,268.43
	Sum	\$ 1,319,566,728	\$ 1,546,537,034	\$ 1,558,006,279	\$ 1,575,511,967	\$ 1,654,589,388	\$ 36,624,590,694

The effects of the annual increases are calculated in table 17 and show the regressive nature of the fee increase and how it impacts those at the bottom of the income distribution disproportionately and more significantly. Those at the bottom 20% of the household income distribution, for example, would see increases of about \$136 per year while those in the second quintile see an increase of about \$146 per household per

year. The third quintile will see an increase of \$175 per household per year for that first increase while those in the fourth quintile would see an increase of \$215 per year. The top 15% will pay about \$280 more per year while those in the top 5% will pay about \$403 more per year. On average, the fee increases are about \$198 per household or a total of \$227 million dollars more per year than the amount collected in the base year.

Table 17 details the dollar increases from the base year for each proposed electric rate increase. For the second, third, and then the fourth increase, the electric fee goes up by \$201 per household per year for those in the bottom 20% and \$216 per household per year for those in the second lowest quintile. The last column in the table details the amount of household income left over after paying for the last fee increase, of course assuming constant incomes. We see how the fee increase impacts those with lower income significantly more than those with the higher income households.

HH Income Quintile in 2017	Increase #1 (\$2462)	Increase #2 (\$2481)	Increase #3 (\$2510)	Increase #4 (\$2641)	Income left over
<b>Bottom 20%</b>	\$ 136	\$ 143	\$ 153	\$ 201	\$ 1,438.85
<i>[from \$0 to \$6,499]</i>	\$ 29,480,050	\$ 30,969,733	\$ 33,243,460	\$ 43,514,435	\$ 356,298,138.14
<b>Second 20%</b>	\$ 146	\$ 154	\$ 165	\$ 216	\$ 8,792.41
<i>[from \$6,500 to \$14,399]</i>	\$ 33,531,607	\$ 35,226,023	\$ 37,812,238	\$ 49,494,792	\$ 1,909,122,236.93
<b>Third 20%</b>	\$ 175	\$ 183	\$ 197	\$ 258	\$ 18,020.32
<i>[from \$14,400 to \$24,499]</i>	\$ 40,216,104	\$ 42,248,301	\$ 45,350,075	\$ 59,361,537	\$ 4,325,292,141.89
<b>Fourth 20%</b>	\$ 215	\$ 225	\$ 242	\$ 317	\$ 32,350.77
<i>[from \$25,000 to \$45,099]</i>	\$ 50,506,222	\$ 53,058,398	\$ 56,953,824	\$ 74,550,407	\$ 7,744,656,862.33
<b>Top 15%</b>	\$ 280	\$ 294	\$ 315	\$ 413	\$ 59,068.90
<i>[from \$45,100 to \$90,799]</i>	\$ 49,341,531	\$ 51,834,853	\$ 55,640,450	\$ 72,831,250	\$ 10,584,437,964.77
<b>Top 5%</b>	\$ 403	\$ 423	\$ 454	\$ 595	\$ 170,385.33
<i>[higher than \$90,800]</i>	\$ 23,894,792	\$ 25,102,242	\$ 26,945,191	\$ 35,270,239	\$ 10,158,246,315.57
<b>Total</b>	\$ 198	\$ 208	\$ 223	\$ 292	\$ 29,920.90
	\$ 226,970,306	\$ 238,439,551	\$ 255,945,239	\$ 335,022,660	\$ 35,078,053,659.63

The impact of the electric rate cost increases as a proportion of household income can be seen more clearly in table 18. For the base year, it is estimated that the bottom 20% spent about 33% of their income on electric bills and, assuming constant incomes, that percentage goes up to 42% of household income by the last increase. The proportion of income spent on electricity for households in the second quintile in the base year is about 9% and that percentage could go up to about 11%. For the third, fourth and top quintiles the proportion of income spent on electricity hovers between one and 5% in the base year and that percentage could go up to between two and 7% after the fourth increase mandated by the RSA. It is clear that as a proportion of income the regressive fee increases impact those at the bottom two quintiles of the income distribution significantly more than those in the third, fourth, and top quintiles of the income distribution with the very poor faring significantly worse.

HH Income Quintile in 2017		Annual Electricity Cost (\$2186)	Increase #1 (\$2462)	Increase #2 (\$2481)	Increase #3 (\$2510)	Increase #4 (\$2641)
<b>Bottom 20%</b>	Mean	33%	39%	39%	40%	42%
<i>[from \$0 to \$6,499]</i>	Sum	31%	36%	36%	37%	39%
<b>Second 20%</b>	Mean	9%	10%	10%	10%	11%
<i>[from \$6,500 to \$14,399]</i>	Sum	9%	11%	11%	11%	11%
<b>Third 20%</b>	Mean	5%	6%	6%	6%	7%
<i>[from \$14,400 to \$24,499]</i>	Sum	5%	6%	6%	6%	6%
<b>Fourth 20%</b>	Mean	4%	4%	4%	4%	5%
<i>[from \$25,000 to \$45,099]</i>	Sum	4%	4%	4%	4%	5%
<b>Top 15%</b>	Mean	3%	3%	3%	3%	3%
<i>[from \$45,100 to \$90,799]</i>	Sum	3%	3%	3%	3%	3%
<b>Top 5%</b>	Mean	1%	2%	2%	2%	2%
<i>[higher than \$90,800]</i>	Sum	1%	2%	2%	2%	2%
<b>Total</b>	Mean	4%	4%	4%	4%	5%
	Sum	4%	4%	4%	4%	5%

**VI. Effects of Population Changes and the Potential Effects on Additional Exodus from Puerto Rico**

Puerto Rico’s population has been decreasing at an unprecedented rate and the Island is caught up in a demographic and economic death spiral. Puerto Rico’s demographic death spiral was set in motion by the collapse of Puerto Rico’s labor market and it is having, and will continue to have, consequences for the population of the island whose full magnitude do not appear to be seen or appreciated<sup>16</sup>. In the year 2000, there were about 3.6 million Puerto Ricans living in Puerto Rico and about 3.4 million living in the continental United States but by 2013 there were 5.1 million living in the mainland and 3.5 million on the island. Of the 7 million Puerto Ricans in 2000, about half lived on the island and half on the mainland. By 2013, there were 8.6 million Puerto Ricans with 59.3% living on the mainland and 40.6% on the island. That ratio is going to continue to grow with recent migration trends and is unlikely to be reversed in the foreseeable future as millions of citizens from Puerto Rico leave the island with their children to join the over 55 million Hispanics\Latinos living in the continental US.

Table 19 shows how there have been significant changes in the age composition of the population between 2009 and 2017. In 2009, there were about 1 million persons under 18 years of age in Puerto Rico and by 2017 that number was close to 700,000 for a decrease of about 300,000 persons under 18 years of age. The young population was about 26% of Puerto Rico’s population in 2009 and that declined to about 21% of the population by 2017. In 2009, there were about 2.1 million persons between 19 and 59 years of age in Puerto Rico and that number decreased to about 1,760,000 by 2017 or a decrease of almost 400,000 persons. In contrast, there were about 786,000 persons over 60 in Puerto Rico in 2009 and that number increased by about 85,000 persons to 872,000 by 2017. Persons over 60 were about 20% of the population of Puerto Rico in 2009 and that number increased about 26% of the total by 2017. This is a remarkable increase in the population over 60 and a decrease in the population under 18 in a short period of eight years in Puerto Rico.

	2009	2017	Difference	2009	2017
under 18	1,025,102	705,757	(319,345)	26%	21%
19-59	2,155,871	1,759,704	(396,167)	54%	53%
over 60	786,315	871,716	85,401	20%	26%
<b>total</b>	<b>3,967,288</b>	<b>3,337,177</b>	<b>(630,111)</b>		

<sup>16</sup> Puerto Rico’s Oversight Board’s “Plan Fiscal” assumes a -0.2 population decline per year in the next decade. See page 15 <https://juntasupervision.pr.gov/index.php/en/documents/> “Commonwealth Fiscal Plan [CFP]” of March 13, 2017. In recent years, population decline has been orders of magnitude higher than the -.2% assumed in the CFP. See <https://tradingeconomics.com/puerto-rico/population-growth-annual-percent-wb-data.html>. For a more recent report on population change in Puerto Rico see Alexis Santos Lozada “Revisiting the Demography of Disaster: Population Estimates After Hurricane Maria” at <https://osf.io/preprints/socarxiv/n8vpe/>

The combined effects of high outmigration of younger populations, lower fertility rates for women in Puerto Rico, and an aging of the population will increasingly leave Puerto Rico with a population that is significantly smaller and significantly older over the next few decades. A smaller and older population has substantial consequences for estimates of the size of the labor force, employment, income, and economic activity; government collections and revenues; estimates of population needs; the provision and costs of infrastructure, electric, and related social services; the income and costs of pensions and related programs; and estimates of the potential for future economic activity and growth.

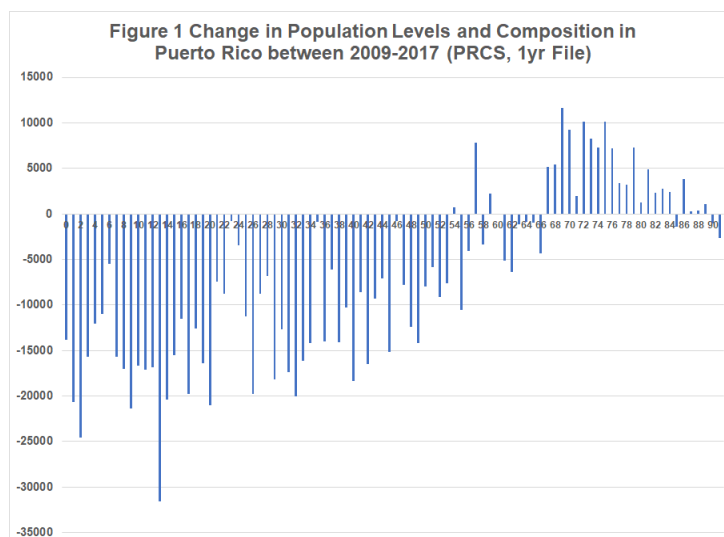
We can see the effects of population decline in reductions in electrical consumption at both the family and household level between 2009 and 2017. In 2009, the average family consumed about 222 kWh per month and that number appears to have gone down to about 202 kWh per month in 2017 and 179 kWh per month if we use 2019 prices.

Family Income (CATEGORIZED)	PP KwHr Consumption 2009 at \$.1766			PP KwHr Consumption 2017 prices at \$.1940		PP KwHr Consumption 2019 prices at \$.2186		
	Mean	Households 2009	Sum	Mean	Sum	Mean	Sum	Households 2017
Lowest thru 0	155	46,091	7,157,180	146	6,241,858	130	5,539,435	42,707
1 to 9999	165	167,837	27,670,746	148	20,718,616	131	18,387,061	140,189
10k to 19,999	195	199,371	38,807,316	178	28,997,289	158	25,734,099	163,145
20k to 29,999	219	137,485	30,160,085	189	23,396,494	168	20,763,585	123,779
30k to 39999	235	100,214	23,585,236	212	19,119,256	188	16,967,684	90,392
40k to 49999	247	71,451	17,656,289	219	15,320,893	195	13,596,766	69,809
50k to 59999	272	43,516	11,833,123	244	11,490,612	217	10,197,524	47,037
60k to 79999	294	47,518	13,951,704	257	12,694,828	228	11,266,225	49,381
80k to 99999	318	25,528	8,130,577	272	6,078,417	241	5,394,386	22,352
100k to 124999	348	12,335	4,291,522	306	3,656,750	272	3,245,240	11,939
Over 150,000	468	23,906	11,195,301	393	11,570,021	349	10,267,997	29,418
<b>Total</b>	<b>222</b>	<b>875,252</b>	<b>194,439,079</b>	<b>202</b>	<b>159,285,034</b>	<b>179</b>	<b>141,360,002</b>	<b>790,148</b>

Similarly, in terms of households, the data show a slight decline in the average consumption per household from 257 kWh per month in 2009 to about 241 kWh per month on average in 2017 (or 219 kWh per month using the 2019 prices). The table shows the persistent pattern of significant differences in electric consumption by income level with households in the lower income levels consuming much less electricity than households in the higher income brackets.

Household Income (CATEGORIZED)	PP KwHr Consumption 2009 at \$.1766			PP KwHr Consumption 2017 prices at \$.1940		PP KwHr Consumption 2019 prices at \$.2186		
	Mean	Households 2009	Sum	Mean	Sum	Mean	Sum	Households 2017
Lowest thru 0	215	68,407	14,711,096	222	15,562,649	197	13,811,317	70,078
1 to 9999	230	285,120	65,437,959	208	53,376,756	184	47,370,040	257,117
10k to 19,999	239	271,371	64,969,328	226	56,892,416	200	50,490,068	251,828
20k to 29,999	247	171,596	42,458,967	223	37,335,925	198	33,134,352	167,272
30k to 39999	256	120,936	30,903,951	253	29,965,118	224	26,593,014	118,605
40k to 49999	274	84,171	23,075,738	239	19,630,197	212	17,421,126	82,129
50k to 59999	293	52,362	15,361,170	273	16,016,797	243	14,214,358	58,594
60k to 79999	328	57,497	18,860,150	285	18,003,245	253	15,977,262	63,066
80k to 99999	340	28,946	9,852,258	340	9,472,349	302	8,406,385	27,849
100k to 124999	349	14,009	4,888,578	314	4,619,432	279	4,099,588	14,720
Over 150,000	507	26,696	13,547,730	416	15,150,307	369	13,445,378	36,426
<b>Total</b>	<b>257</b>	<b>1,181,111</b>	<b>304,066,923</b>	<b>241</b>	<b>276,025,192</b>	<b>213</b>	<b>244,962,888</b>	<b>1,147,684</b>

To illustrate the sharp declines in population and changes in the age composition, Figure 1 estimates which specific ages lost population and which ones gained population between 2009 and 2017. The data confirm and illustrate the large and significant population declines for the younger ages particularly for those between 30 and 50 years of age and their children younger than 18. The data also show increases for the population older than 60 years of age and the attendant aging of the population of Puerto Rico.



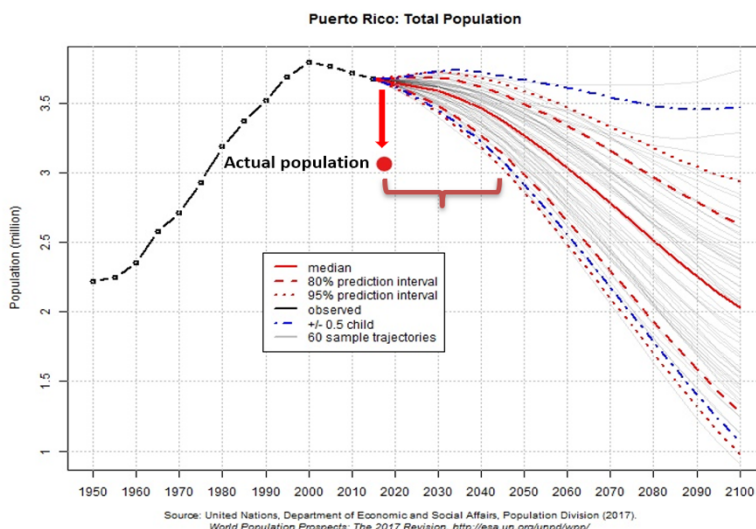
As a result of the combined effects of significant outmigration, decreases in fertility, and slight increases in mortality (due to increased aging), the population in Puerto Rico is projected to continue to decline from around 3.4 million in 2017 to about 3 million by the year 2050 according to estimates by the Pew Center<sup>17</sup>. Keep in mind, however, that the population losses have been more accelerated than the estimates suggest and that most estimates do not take into account population losses after the recent hurricanes.<sup>18</sup> Given recent population numbers, it appears that Puerto Rico’s population decline is at a pace a decade faster than expected and projected in estimates produced using 2010 US census data for Puerto Rico.

More recent projections and estimates of the total population for Puerto Rico produced by the United Nations Population Division in 2017 consider various possible scenarios but the vast majority suggest significant population decline. It also looks like Puerto Rico’s actual population numbers (3.1 million persons), as shown by the red dot and the blue arrow, are 20-30 years ahead (as shown by the bracket) of even the most conservative population estimates for Puerto Rico in the United Nations models. The expected population decline will have lasting effects and it is likely to be even larger and more precipitous than Figure 2 suggests.

<sup>17</sup> For a more detailed analysis of population change and migration in Puerto Rico see Cohn, D’Vera, Eileen Patten and Mark Hugo Lopez. 2014. “Puerto Rican Population Declines on Island, Grows on U.S. Mainland.” Washington, D.C.: Pew Research Center’s Hispanic Trends Project, July.

<sup>18</sup> See Edwin Melendez and Jennifer Hinojosa [Estimates of Post-Hurricane Maria Exodus from Puerto Rico](https://centrop.hunter.cuny.edu/sites/default/files/RB2017-01-POST-MARIA%20EXODUS_V3.pdf), Center for Puerto Rican Studies Research Brief (October 2017) available at [https://centrop.hunter.cuny.edu/sites/default/files/RB2017-01-POST-MARIA%20EXODUS\\_V3.pdf](https://centrop.hunter.cuny.edu/sites/default/files/RB2017-01-POST-MARIA%20EXODUS_V3.pdf)

**Figure 2**

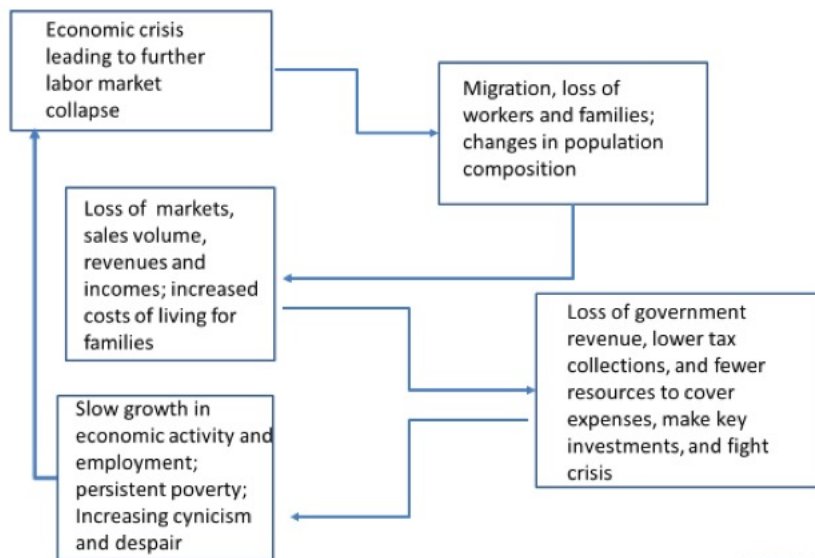


**Explanation:** These charts show estimates and probabilistic projections of the total population for countries or areas, geographical aggregates and World Bank income groups as defined in Definition of Regions. The population projections are based on the probabilistic projections of total fertility and life expectancy at birth, based on estimates of the 2017 Revision of the World Population Prospects. These probabilistic projections of total fertility and life expectancy at birth were carried out with a Bayesian Hierarchical Model. The figures display the probabilistic median, and the 80 and 95 per cent prediction intervals of the probabilistic population projections, as well as the (deterministic) high and low variant (+/- 0.5 child) of the 2017 Revision of the World Population Prospects.

As we have seen, even before Hurricanes Irma and Maria, a close to 20% reduction in the size of the labor force has led to a 10 to 15% reduction in the size of Puerto Rico’s population and a noticeable change in its age structure and composition with implications for the present and for the future. The effects of the 2017 hurricanes Irma and Maria have accelerated Puerto Rico’s demographic “death spiral.” The short, medium, and long-term consequences of large outmigration from Puerto Rico are significant and involve both *population decline* and *changes in the composition of the population*.

**Figure 3**

**Puerto Rico’s Economic and Demographic Death Spiral**



Labor market collapse has led to unprecedented numbers of Puerto Ricans migrating out of the island with an estimate of about 89,000 leaving in 2015, and about 25 thousand returning to the Island, for a net outmigration of 64,238 in just one year, 2015<sup>19</sup>. If we examine the net migration patterns over the last decade, we see an increase in net out-migration from an average around 25 thousand per year between 2005 and 2010 to an average over 50 thousand per year between 2011 and 2014 with all signs suggesting that the net migration number continues to be in the 80 thousand to 90 thousand range or higher since 2014 as seen in Figure 4 taken from various estimates from a number of sources and included in the most recent report on migration from Puerto Rico prepared by the Puerto Rico Institute of Statistics [*Perfil del Migrante*<sup>20</sup>, Instituto de Estadísticas de Puerto Rico].

**Figure 4**

Perfil del migrante: 2016  
Anejo A

Instituto de Estadísticas de Puerto Rico  
Estado Libre Asociado de Puerto Rico

**Tabla A3. Balance migratorio con Estados Unidos y balance de movimiento de pasajeros, 2000-2016**  
(miles de personas)

	Encuesta sobre la Comunidad			Bureau of Transportation Statistics			Autoridad de los Puertos		
	Emigrantes a Estados Unidos	Inmigrantes de Estados Unidos	Neto	Salidas	Llegadas	Neto	Salidas	Llegadas	Neto
2000	n/d	n/d	n/d	5,253	5,206	-47	5,429	5,449	20
2001	n/d	n/d	n/d	4,854	4,846	-8	4,989	4,954	-35
2002	40	n/d	n/d	4,772	4,742	-30	4,943	4,919	-24
2003	42	n/d	n/d	4,918	4,893	-25	5,126	5,159	33
2004	54	n/d	n/d	5,464	5,442	-22	5,660	5,618	-42
2005	47	35	-12	5,595	5,547	-48	5,859	5,783	-76
2006	67	31	-36	5,606	5,545	-61	5,843	5,751	-92
2007	60	29	-31	5,581	5,533	-48	5,840	5,756	-84
2008	68	34	-34	5,099	5,054	-45	5,344	5,281	-63
2009	62	32	-30	4,487	4,467	-20	4,683	4,654	-29
2010	60	32	-28	4,720	4,674	-46	4,887	4,856	-31
2011	76	23	-54	4,476	4,438	-38	4,537	4,483	-55
2012	75	20	-54	4,666	4,619	-47	4,772	4,711	-62
2013	74	25	-49	4,411	4,362	-49	4,707	4,649	-58
2014	84	20	-64	4,669	4,586	-83	4,816	4,726	-90
2015	89	25	-64	4,757	4,664	-93	4,929	4,836	-93
2016	89	21	-67	4,730	4,646	-84	5,136	5,038	-98

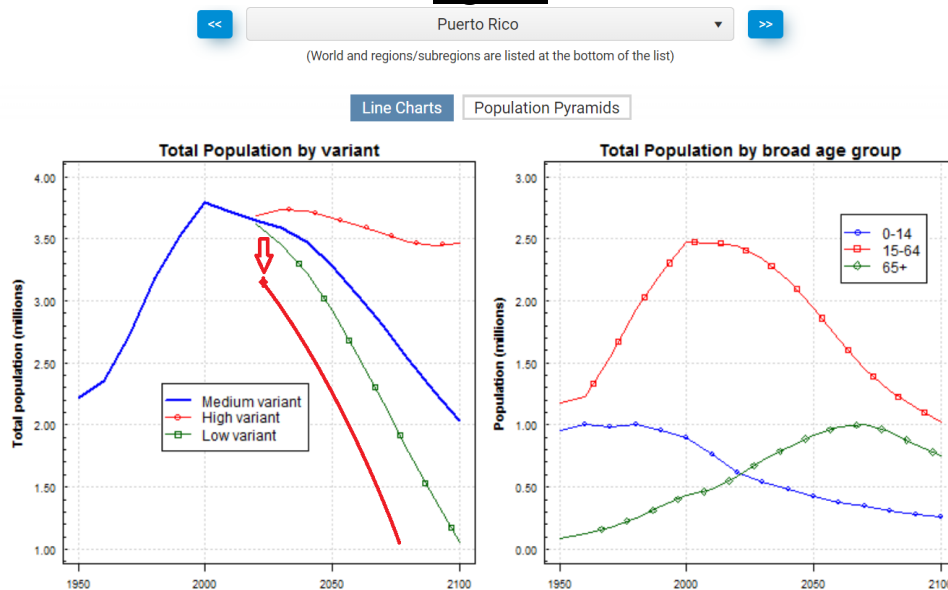
Fuente: Encuesta sobre la Comunidad, U.S. Census Bureau, Air Carrier Statistics, U.S. Bureau of Transportation Statistics, Encuesta de Pasajeros Aéreos y Marítimos, Autoridad de los Puertos

Figure 5 illustrates the expected population decline in Puerto Rico compared to the red line which appears to be closer to the actual pattern observed especially after Hurricanes Irma and Maria in 2017. The second panel of figure 5, taken from the United Nations population division, shows the expected change in the age composition of the population suggesting a precipitous and significant decrease in the populations 15 to 64 years of age and steady decline in the population younger than 14 years of age, and an increase in the population older than 65 years of age through 2060.

<sup>19</sup> For a more detailed analysis of the causes and consequences of population change in Puerto Rico see [https://www.newyorkfed.org/research/current\\_issues/ci20-4.html](https://www.newyorkfed.org/research/current_issues/ci20-4.html)

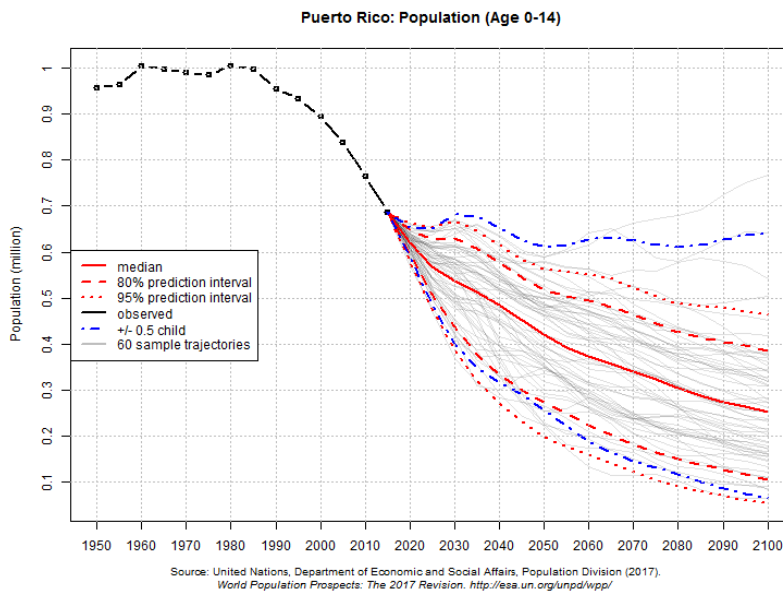
<sup>20</sup> [https://estadisticas.pr/files/Publicaciones/PM\\_2016\\_1.pdf](https://estadisticas.pr/files/Publicaciones/PM_2016_1.pdf)

**Figure 5**



The decline in the population younger than 14 can be seen clearly in figure 6 were the observed pattern of decline is closer to the more pessimistic estimates produced by the United Nations.

**Figure 6**

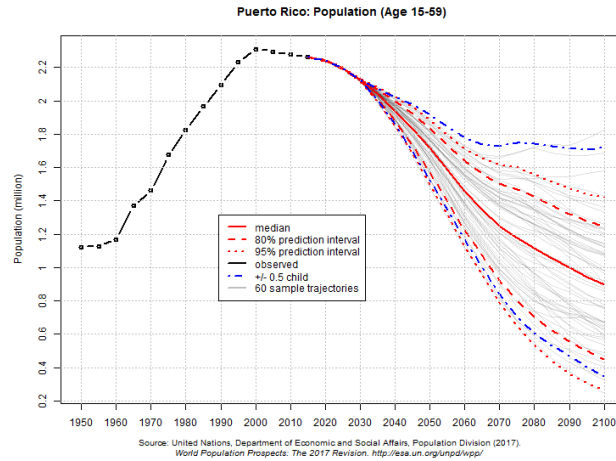


**Explanation:** These charts show estimates and probabilistic projections of the specified population age range for countries or areas with a population of 90,000 or more in 2017, along with geographical aggregates and World Bank income groups as defined in *Definition of Regions*. The population projections are based on the probabilistic projections of total fertility and life expectancy at birth, based on estimates of the 2017 Revision of the World Population Prospects. These probabilistic projections of total fertility and life expectancy at birth were carried out with a Bayesian Hierarchical Model. The figures display the probabilistic median, and the 80 and 95 per cent prediction intervals of the probabilistic population projections, as well as the (deterministic) high and low variant (+/- 0.5 child) of the 2017 Revision of the World Population Prospects.



Similarly, the adult population has started to decline significantly and is expected to continue in that pattern for the next decades due to continued outmigration and reductions in the size of the younger age cohorts.

**Figure 7**

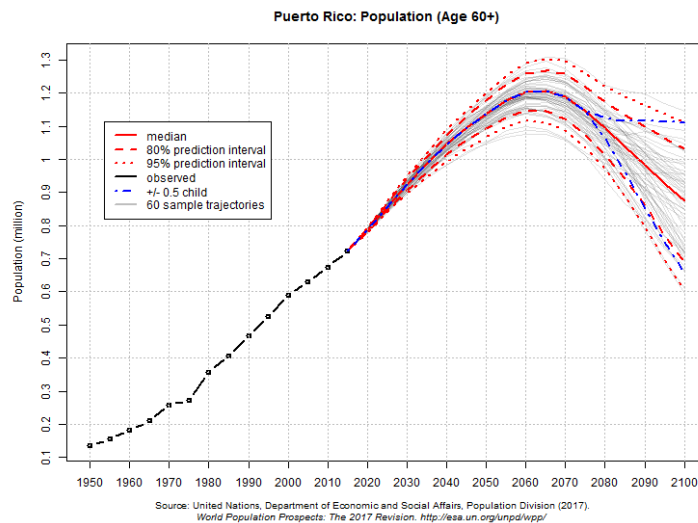


Source: United Nations, Department of Economic and Social Affairs, Population Division (2017).  
World Population Prospects: The 2017 Revision. <http://esa.un.org/unpd/wpp/>

**Explanation:** These charts show estimates and probabilistic projections of the specified population age range for countries or areas with a population of 90,000 or more in 2017, along with geographical aggregates and World Bank income groups as defined in Definition of Regions. The population projections are based on the probabilistic projections of total fertility and life expectancy at birth, based on estimates of the 2017 Revision of the World Population Prospects. These probabilistic projections of total fertility and life expectancy at birth were carried out with a Bayesian Hierarchical Model. The figures display the probabilistic median, and the 80 and 95 per cent prediction intervals of the probabilistic population projections, as well as the (deterministic) high and low variant (+/- 0.5 child) of the 2017 Revision of the World Population Prospects.

The rapid increase in the population over 60 years of age can be seen in figure 7 that shows the older population steadily increasing up until the younger cohorts of today, that are much smaller, begin to age and Puerto Rico's population would have shrunk significantly. The aging of the population in Puerto Rico has significant impacts for economic activity, infrastructure and electric needs, and for the vulnerability of the population to interruptions in electric service.

**Figure 8**

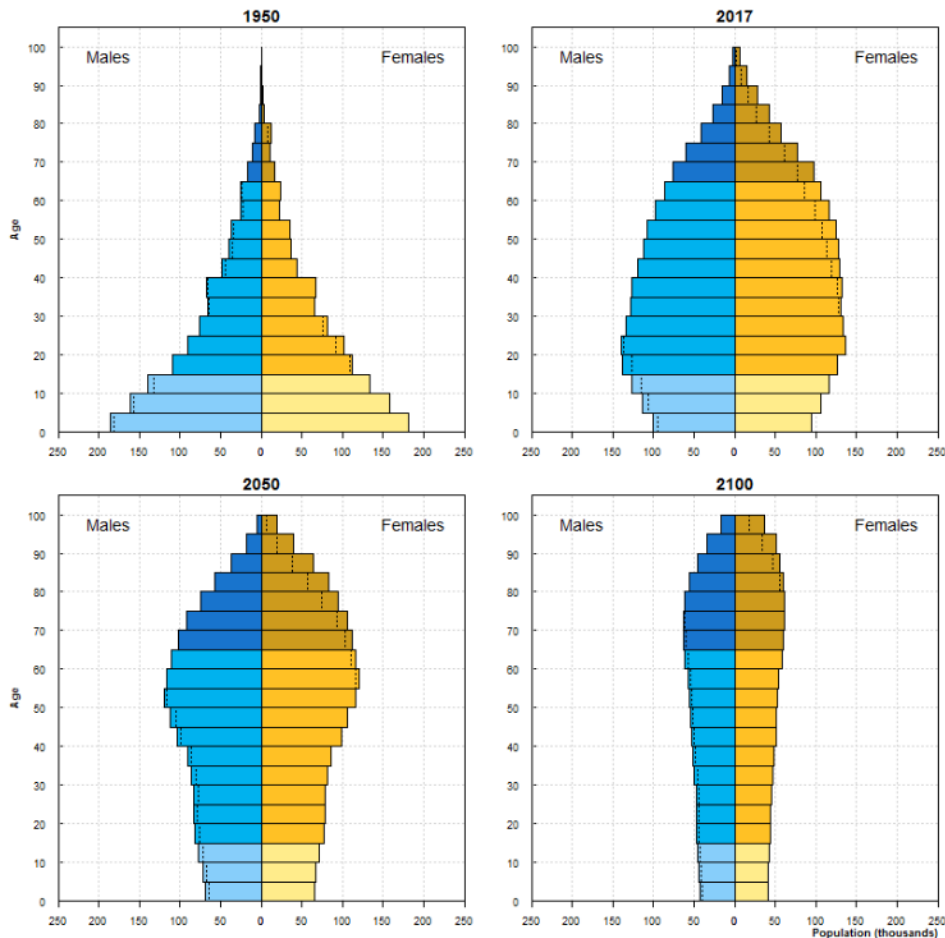


Source: United Nations, Department of Economic and Social Affairs, Population Division (2017).  
World Population Prospects: The 2017 Revision. <http://esa.un.org/unpd/wpp/>

**Explanation:** These charts show estimates and probabilistic projections of the specified population age range for countries or areas with a population of 90,000 or more in 2017, along with geographical aggregates and World Bank income groups as defined in Definition of Regions. The population projections are based on the probabilistic projections of total fertility and life expectancy at birth, based on estimates of the 2017 Revision of the World Population Prospects. These probabilistic projections of total fertility and life expectancy at birth were carried out with a Bayesian Hierarchical Model. The figures display the probabilistic median, and the 80 and 95 per cent prediction intervals of the probabilistic population projections, as well as the (deterministic) high and low variant (+/- 0.5 child) of the 2017 Revision of the World Population Prospects.

In addition to lower population levels for Puerto Rico, outmigration is significantly changing the age structure and composition of the population<sup>21</sup>. This is reflected in the shape of Puerto Rico's population pyramid in Figure 9 showing fewer young persons and a significant aging of the population between 1950 and 2017. By the year 2050 we begin to see almost an inversion of the age pyramid with the largest cohorts being those between ages 50 and 80 and much smaller younger cohorts in the population. By 2100 we see how Puerto Rico's population is expected to be significantly smaller especially when compared to 1950 where we observe age cohorts that have close to 400,000 persons turning into age cohorts that are about one fourth of the size with about 100,000 persons in them.

**Figure 9**



The dotted line indicates the excess male or female population in certain age groups. The data are in thousands or millions and represent the population in each age group.

Source: United Nations, Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision.

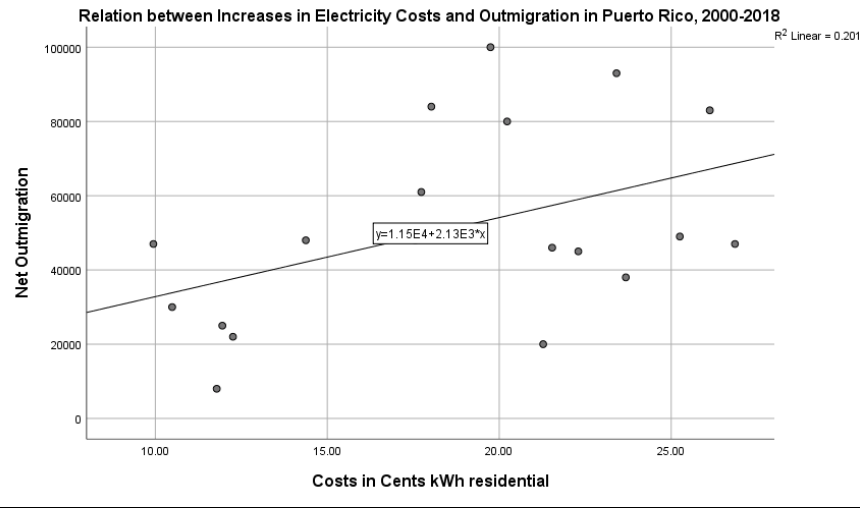
Suggested citation: Source: United Nations, Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision, Online Demographic Profiles. Available from <https://population.un.org/wpp/Graphs/DemographicProfiles/>, Accessed on [date].

<sup>21</sup> For an in depth discussion of population change and aging in Puerto Rico see the excellent book by Raul Figueroa Rodriguez [Elders Colony](https://www.amazon.com/Elders-Colony-Ra%C3%BAI-Figueroa-Rodr%C3%ADguez-ebook/dp/B00H9DOOR6) available at <https://www.amazon.com/Elders-Colony-Ra%C3%BAI-Figueroa-Rodr%C3%ADguez-ebook/dp/B00H9DOOR6>

The push forces of a collapsing Puerto Rico economy, the cuts in services, and increases in taxes and fees imposed by the PROMESA austerity regime combined with the pull of better wages, better living conditions, and more access to economic opportunity are significantly changing and shrinking Puerto Rico’s population. Hurricane Maria brought significant devastation to the local infrastructure including hundreds of thousands of homes, roads, water systems, electricity, communications infrastructure and it has caused significant disruption to businesses, markets, education, healthcare and other key aspects of life in Puerto Rico. The immediate phase after the storm hit was to provide emergency food and water and other forms of assistance and support. There was significant mobilization and out-migration with estimates suggesting that between 114,000 to 213,000 persons may have left Puerto Rico in the aftermath of hurricanes Irma and Maria<sup>22</sup>.

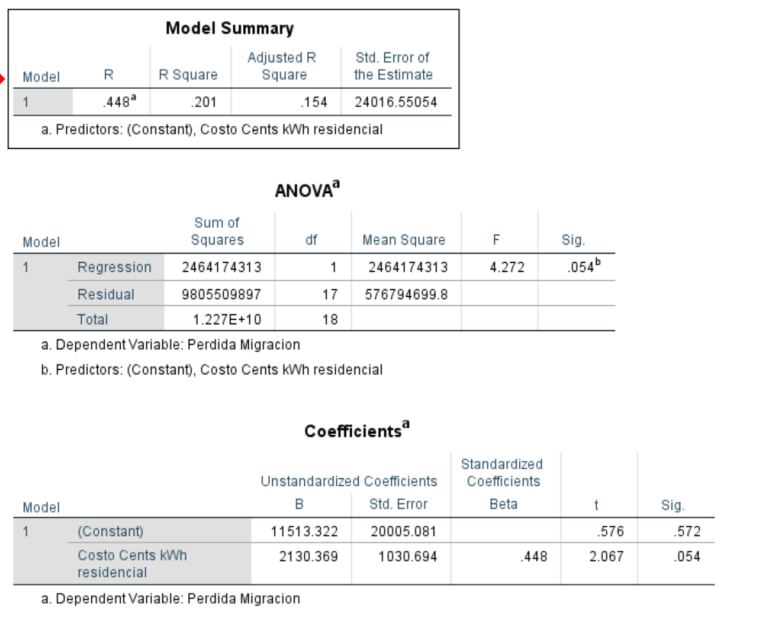
In order to study the effects of price increases on changes in outmigration from Puerto Rico we used the 2000-2016 data series on outmigration from the Bureau of Transportation Statistics (BTS) in Figure 4 from 2016 and added an estimate of 100,000 for 2017 and an 80,000 estimate for 2018 and plotted it against the PREPA prices by year between 2000 and 2018. Figure 10 and Figure 11 show that there is a correlation between increases in prices and higher outmigration levels and one can see the causal mechanism that links increased costs for a basic service adding to the pressures of local families and households, particularly those with lower incomes, for whom outmigration becomes the only option to be able to make ends meet. It is estimated that for every one cent increase in the price of electricity close to 2,100 persons leave Puerto Rico.

**Figure 10**



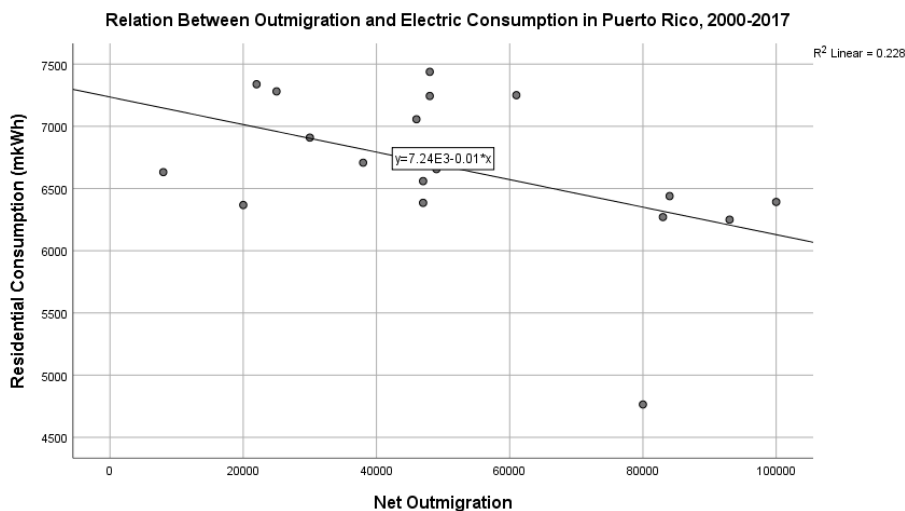
<sup>22</sup> See Edwin Melendez and Jennifer Hinojosa [Estimates of Post-Hurricane Maria Exodus from Puerto Rico](https://centrop.r.hunter.cuny.edu/sites/default/files/RB2017-01-POST-MARIA%20EXODUS_V3.pdf), Center for Puerto Rican Studies Research Brief (October 2017) available at [https://centrop.r.hunter.cuny.edu/sites/default/files/RB2017-01-POST-MARIA%20EXODUS\\_V3.pdf](https://centrop.r.hunter.cuny.edu/sites/default/files/RB2017-01-POST-MARIA%20EXODUS_V3.pdf)

**Figure 11**



We can also see in Figures 12 and 13 how an increase in outmigration from Puerto Rico is also associated with decreases in consumption of electricity by persons, families and households in Puerto Rico which further impairs the capacity of the Puerto Rico Electric Power Authority (PREPA) to generate income. The high, and projected higher if the PREPA RSA is approved, costs of electricity in Puerto Rico lead to a reduction in population and reductions in population lead to a further loss of consumption and, likely, income for PREPA. The data analysis suggests that the costs of electricity in Puerto Rico play a part in population loss and that population loss further reduces the demand for and consumption of electricity for families across income levels in Puerto Rico.

**Figure 12**



**Figure 13**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.478 <sup>a</sup>	.228	.183	546.2784445

a. Predictors: (Constant), Perdida Migracion

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1501393.625	1	1501393.625	5.031	.039 <sup>b</sup>
	Residual	5073142.361	17	298420.139		
	Total	6574535.986	18			

a. Dependent Variable: Consumo residencial (mkWh)

b. Predictors: (Constant), Perdida Migracion

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7235.327	282.173		25.641	.000
	Perdida Migracion	-.011	.005	-.478	-2.243	.039

a. Dependent Variable: Consumo residencial (mkWh)

**VII. On the Socio-Economic Impacts of the Puerto Rico Electric Power Authority (PREPA) Restructuring Support Agreement (RSA) on the Population of Puerto Rico**

**A significant proportion of Puerto Rico’s population is poor and vulnerable. This was clearly seen during and after hurricanes Irma and Maria. And it is quite visible still.** The combination of poverty, disability, and vulnerabilities due to age create significant inequalities in the population. Inequality involves different sets of risks and has differential impacts for particular segments of the population including in access to and the use of electricity. The most marginalized segments are affected by disasters in concrete ways. Before and as the storm hits, the poor and marginalized are: a) more likely to live in vulnerable structures and places; and b) have less supplies to prepare to protect life and property. During rescue and aid distribution phase these populations: a) have fewer cash and other reserves; b) often more isolated from aid distribution channels; c) are more prone to adverse impacts on affected personal networks and have less access to network resources; d) are more dependent on charity and the “kindness of strangers;” and e) are more vulnerable and insecure in life and property. During recovery and reconstruction, low income and marginalized populations are further disadvantaged because: a) their needs and voices are not considered central; b) often not incorporated in damage assessment and planning; c) are often seen as a cost and a nuisance that can be disposable; and d) have difficulties in having voices, positions and interests heard. This may also be the case with the PREPA RSA because of the disproportionate burden that vulnerable populations will be forced to bear if the agreement is approved.

This study finds that in 2009 there were about 1 million persons under 18 years of age in Puerto Rico and by 2017 that number was close to 700,000 for a decrease of about 300,000 persons under 18 years of age. The young population constituted about 26% of Puerto Rico's population in 2009 and that declined to about 21% of the population by 2017. In contrast there were about 786,000 persons over 60 in Puerto Rico in 2009 and that number increased by about 85,000 persons to 872,000 by 2017. Persons over 60 were about 20% of the population of Puerto Rico in 2009 and that number increased about 26% of the total by 2017. This is a remarkable increase in the population over 60 and a decrease in the population under 18 in a short period of eight years in Puerto Rico. A significant proportion of the population on the island, about 21.8%, report one or more type of disability and this means that there is a significant segment of the population that relies disproportionately on the continuity of electric service for their safe and stable functioning.

In addition, about 24.6% of the population in Puerto Rico, about 812,258 persons, report incomes below half of the poverty line, or less than about \$6,000 per person per year. Another 19.9%, or 658,795 persons, have incomes between half and the poverty line (between \$6,000 and \$12,000 per person per year) which means that the overall proportion of the population below poverty in Puerto Rico is 44.5%. If we combine the proportion of the population in Puerto Rico that is below poverty, or that is younger than 15 years of age, or that is older than 65 years of age, or that has any disability that adds up to about 68.9% of the population. This means that close to 2.3 million out of the 3.3 million persons reported residing on the island in 2017 is below poverty, or is younger than 15 years of age, or is older than 65 years of age, or that has any disability. **Puerto Rico's population is vulnerable and relies on accessible, steady and affordable electric power.**

**The contemplated price increases in electricity mandated by the PREPA RSA are significant particularly for populations with low incomes or with fixed income from pensions or other retirement income.** The average monthly electrical bill for the total population was estimated at \$95.81 per month for the total population and then by income level. Households at the bottom 20% were estimated to pay about \$65.88 per month while households in the next 20% (second quintile) paid an average of \$70.83. Households in the third quintile paid about \$84.59 per month while those in the fourth quintile paid about \$103.93. Households in the top 15% paid about \$135.47 per month on average while households in the top 5% of the population paid about \$195.25 per household per month in electrical bill. The total amount paid by households in the bottom 20% was about \$14.3 million per month while all households in the second quintile paid about \$16.2 million in electric bill in total per month. With the increase mandated by the PREPA RSA, households in the bottom 20% of the income distribution (who are estimated to pay about \$65.88 per month in the base year) would have to pay \$77.21 per month with the first increase, \$77.78 in the second increase, \$78.66 in the third increase, and up to a total of \$82.60 per month with the fourth increase. That means that total fee collections from households at the bottom 20% of the income distribution would increase from \$14.3 million per month in the base year to potentially about \$17.9 million per month after the fourth increase or \$3.6 million more in payments per month.

**In aggregate terms, of the first electricity rate increase of \$18.9 million, about \$2.5 million will be due to households in the bottom 20% of the income distribution (the poorest households), \$2.8 million to households in the second quintile (also below poverty), \$3.4 million to households in the third quintile, \$4.2 million to households in the fourth quintile, \$4.1 million from households in the top 15%, and about \$2 million from households in the top 5% of the household income distribution in Puerto Rico.** About 13% of the rate increase is expected to be collected from households in the bottom 20% of the income distribution (the poorest households) but they only make 1.4% of the total income in Puerto Rico. Households in the second quintile are expected to cover about 14.8% of the electricity rate increase but they make only about 7.5% of the total household income. Households in the third quintile are expected to cover about 17.7% of the rate increase while they make 13.9% of the total household income. At the other top extreme of the income distribution, households in the top 15% of the income distribution are expected to cover about 21.7% of the electricity rate increase while making 28.8% of the income. Households in the top 5% of the household income distribution in Puerto Rico are expected to cover about 10.5% of the electricity rate increase while making 26.4% the total income.

**The electric rate increase affects the poor and vulnerable much more as a proportion of their incomes and makes the settlement agreement unfair and inequitable.** Those at the bottom 20% of the household income distribution, for example, would see an electricity bill increase of about \$136 per year while those in the second quintile we see an increase of about \$146 per household per year. The third quintile we see an electricity bill increase of \$175 per household per year for that first increase while those in the fourth quintile would see an electricity bill increase of \$215 per year. The top 15% will pay about \$280 more per year while those in the top 5% will pay about \$403 more per year. On average the fee increases about \$198 per household or \$227 million dollars more than the amount collected in the base year. **For the base year, it is estimated that the bottom 20% spent about 33% of their income electric costs and, assuming constant incomes, that percentage goes up to 42% of household income by the last increase. The proportion of income spent on electricity for households in the second quintile in the base year is about 9% and that percentage could go up to about 11%.** For the third and fourth and top quintiles the proportion of income spent on electricity hovers between one and 5% in the base year and that percentage could go up to between two and 7% by the time of the fourth increase.

**It is clear that as a proportion of income the regressive electricity fee increase impacts those at the bottom two quintiles of the income distribution (the poorest segments of the population) significantly more than those in the third fourth and top quintiles of the income distribution with the very poor faring significantly worse.** The data suggest that the average household in the bottom 20% of the income distribution will pay, after the fourth increase, an average of \$991.25 per year in electrical bill. The second quintile will pay an average of \$1,065.77 per year. It is unreasonable to expect that families with very low incomes would be able to afford any additional price increases. The third quintile pays about \$1,272.81, the fourth quintile pays about \$1,563.86, those in the top 15% of income earners pay about thousand \$2,038.30 per year while those in the top 5% pay close to \$2,938.04 per year electrical bill.

**Electricity consumption in Puerto Rico is declining over time for all socio-economic sectors.** In 2009, the average family consumed about 222 kWh per month and that number appears to have gone down to about 202 kWh per month in 2017 and 179 kWh per month if we use 2019 prices. **Increase electric cost add to migration pressures and further exacerbate the demographic and socioeconomic death spiral that Puerto Rico has been trapped in for the last 15 years.** Labor market collapse has led to unprecedented numbers of Puerto Ricans migrating out of the island with an estimate of about 89,000 leaving in 2015, and about 25 thousand returning to the Island, for a net outmigration of 64,238 in just one year, 2015. If we examine the net migration patterns over the last decade, we see an increase in net out-migration from an average around 25 thousand per year between 2005 and 2010 to an average over 50 thousand per year between 2011 and 2014 with all signs suggesting that the net migration number continues to be in the 80 thousand to 90 thousand range or higher since 2014.

An analysis of Puerto Rico data between 2000 and 2017 shows that there is a correlation between increases in electricity costs and out-migration from Puerto Rico. **Increases in the price of electricity lead to higher levels of out-migration. At the same time, increases in levels of outmigration and in the number of persons and families leaving Puerto Rico reduces the demand for electricity further eroding the income potential of the Puerto Rico Electric Power Authority (PREPA).** The shape of Puerto Rico's population pyramid shows fewer young persons and a significant aging of the population between 1950 and 2017. By the year 2050 we see in Figure 9 an inversion of the age pyramid with the largest cohorts being those between ages 50 and 80 and much smaller younger cohorts. By 2100 we see how Puerto Rico's population is expected to be significantly smaller especially when compared to 1950 where we see age cohorts that have close to 400,000 persons turning into age cohorts that are about one fourth of the size with about 100,000 persons in them.

**The approval of the RSA will automatically cause an increase in the cost of living of the people of Puerto Rico, which, in turn, will cause additional social and economic precariousness to the most vulnerable segments of the population, particularly those at the bottom 40% of the income distribution.** Increases costs of electric and related services (as other costs would also increase with more expensive energy); the changing demographic profile of the population, high levels of poverty and disability, and continued population declines due to persistent outmigration and precariousness cause a further slowdown in economy activity which further exacerbates outmigration trends and lowers the demand for electricity. With lower demand for electricity, the prospects of PREPA complying with operational requirements and obligations to workers and retirees will be severely impaired. Thus, this will destroy PREPA's ability to consistently provide its essential services. This situation has become a vicious cycle that threatens revenue collection and the finances of the Puerto Rico Electric Power Authority (PREPA).



The PREPA RSA is far from being reasonable, fair and equitable, and it is also not feasible from the perspective of the population of Puerto Rico. For instance, due to the significant differences in household income among different groups of people in Puerto Rico, the RSA will impact incomes and electricity consumption, specifically within the lowest-income group, as almost half of its income will be compromised to paying the electrical bills, if the rates increase, as the RSA pursues. Thus, this demonstrates that apart from lacking fairness and equitableness, the RSA is not reasonable as the increase in rates will make affording energy consumption much more difficult for the most vulnerable segments of the population particularly, children, the disabled, elderly populations, and the close to 44.6% of the population in Puerto Rico that lives below the federal poverty line of approximately \$12,000 per person per year. The undue burden of higher electric costs, particularly on the most vulnerable segments of the population of Puerto Rico, threatens their ability to sustain themselves on the island, leads to more outmigration and, rather than solving, further exacerbates Puerto Rico's many overlapping economic, social, demographic, and fiscal crises and attempts against its economic recovery and long term viability.

August 30, 2019

AN INDEPENDENT ECONOMIC EVALUATION OF THE  
DEFINITIVE RESTRUCTURING SUPPORT AGREEMENT  
FOR OUTSTANDING PREPA'S DEBT, OF PREPA FISCAL  
PLAN AND A MODEST PROPOSAL

RAMÓN J. CAO GARCÍA PH.D.

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Ramón J. Cao García, Ph.D.  
August 26, 2019

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August 30, 2019

## I. Introduction

In this report it is considered that, as a principle, we should repay as much of PREPA's debt as it is possible. The question is: how much is possible without compromising future operation of the Authority? This question must be answered because it is the core for avoiding future financial and operational crisis in PREPA. Also, electric power is a necessity for consumers, as well in all production processes, i.e., it is essential for the economy to work. Then, the question of how much of the outstanding debt PREPA can afford to repay, must take into account the consequences of debt restructuration over the economy.

Both the Debt Restructuring Agreement (RSA)<sup>1</sup> and PREPA Fiscal Plan of June 2019<sup>2</sup> (Fiscal Plan) propose increases in electricity tariff rates for all PREPA's customers. Justifications for those rate increases are not only superficial and based on unjustified, and sometimes rather unrealistic assumptions, but also, they do not take into account their expected consequences on the Puerto Rican economy. This report attempts to make up for some of these limitations in RSA and the Fiscal Plan.

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<sup>1</sup> Financial Oversight and Management Board for Puerto Rico, *Definite Restructuring Support Agreement*, executed on May 3, 2019.

<sup>2</sup> *2019 Fiscal Plan for the Puerto Rico Electric Power Authority*, as certified by the Financial Oversight and Management Board for Puerto Rico on June 2019.

## II. Strategy for the Analysis

The analysis in this report begins by describing the rate increases proposed in both documents (RSA and Fiscal Plan), and proposing an alternative. Then, some economic consequences of all considered increases in rates are evaluated. The economic effects, over a five years period,<sup>3</sup> taken into account are:

1. Computation of the effects of proposed rate increases and the alternative rate increase on production costs of major industrial sectors over a five years period.
2. Expected impact of proposed rates on the inflation rate.
3. Expected economic effects of the proposals on production, and employment.
4. Expected effects on the quantity of electricity consumed or demanded.

## III. The Proposed Debt Restructuring Agreement (RSA)<sup>4</sup>

The RSA contains some key elements, which are:

1. The restructured debt is going to be issued in the form of Securitized Bonds, secured by a Transition Charge (TC) to be imposed on PREPA's electricity sales.
2. Prior to the TC, a Settlement Charge of 1.00 c/kwh was implemented. Afterwards, the TC begins at 2.768 c/kwh at the first year of validity of RSA, and it is going to be periodically increased up to 4.552 c/kwh at year 24 and thereafter. The TC can be increased up to a maximum of 25% to compensate for Contributions In Lieu of Taxes and Subsidies granted by PREPA.<sup>5</sup>
3. The TC is going to be unavoidable to all users of electricity. Since it will be charged before the meter, if a customer decides to generate his own electricity, he still will have to pay the TC.

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<sup>3</sup> The RSA is expected to occur over a 47 years period. It considers periodic increases in the RSA surcharge (defined as Transition Charge) over the years. Given the state of the sciences, it is unreasonable and unrealistic to attempt to predict consequences over a two generations period of time. In consequence the analysis in this report is limited to a 5 years span.

<sup>4</sup> For a more detailed evaluation of the RSA and of an alternative proposal, See Appendix A to this report.

<sup>5</sup> After 2019, the Settlement Charge evolves to become the RSA Transition Charge (TC) over the length of the agreement, i.e., 47 years.

4. Two kinds of bonds will be issued:
  - a. Tranche A Bonds: In the amount of 67.5% of principal amount of outstanding bonds. These bonds will be tax exempt, with 40 years maturity and a 5.25% coupon.
  - b. Tranche B Bonds: In the amount of 10% of principal amount of outstanding bonds. These bonds may or may not be tax exempt, with 47 years maturity and a 7.00% accretion coupon for tax exempted bonds, and 8.75% accretion coupon for non-tax exempted bonds. Tranche B Bonds will begin to be paid after Tranche A Bonds are paid in full. Also, any amounts on such Tranche B Bonds not paid with Transition Charge Revenues imposed prior to the stated final maturity of the Tranche B Bonds shall not be recoverable by Bondholders.<sup>6</sup>

It should be noted that there is no rationale to justify Tranche A and Tranche B principal ratios to outstanding debt. Indeed, the resulting Debt to Total Assets of PREPA, after restructuring the debt is much higher than the corresponding ratios shown by electric power companies in almost all jurisdictions in the US.<sup>7</sup>

As previously mentioned, the proposed RSA establishes that PREPA's restructured debt will be securitized. This includes the implementation of a Transition Charge that will be billed to all PREPA's customers as a specific charge in their monthly bill. The proposed TC in the RSA is going to increase by 64.5% over the maturity life of the securitized bonds. This means that the RSA assumes that PREPA's annual sales (in Gwh) are going to decrease by 64.5% over time.<sup>8</sup> This assumption is totally unfounded. Nobody can forecast electricity consumption in any location over a 40 years period. In consequence, assumptions with regard to electricity demand over a 40 years period will surely result in flawed sales and income estimates. For that reason, it is much more reasonable for the Puerto Rico Energy Bureau to periodically review (every year or every two years) the amount to be imposed as TC.

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<sup>6</sup> It should be noted that, as proposed in the RSA, the interest in Tranche B Bonds is going to be accrued over time, until Tranche A Bonds are paid in full. If it is assumed that they are going to earn an average interest rate of 7.85% [7.85% is the midpoint between the proposed coupon of 7.00% for tax-exempted Tranche B Bonds and 8.75% for non-tax exempted Tranche B Bonds], then the initial principal of \$904.2 for Tranche B Bonds, will grow to become a principal of \$20,226 million (for Tranche B Bonds) by the 40<sup>th</sup> year of the RSA Tranche A Bonds.

<sup>7</sup> See American Public Power Association, *Financial and Operating Ratios of Public Utilities*, Arlington, VA, December 2018.

<sup>8</sup> It should be noted that it would be very difficult for PREPA to engage in its planned privatization of electricity generation, if the outlook is that electricity consumption is going to shrink by 64.5% over the next 40 years, as implicitly assumed in RSA.

As proposed by the RSA, average annual collections from the TC over years 2 to 5 would be \$615.40 million, but estimated annual debt service for the restructured debt is \$367.93 million.<sup>9</sup> There is no explanation for this apparent discrepancy.

#### IV. An Alternative Approach to Restructure PREPA Debt

The RSA does not explain the reasons for restructuring debt in their two kinds of securitized bonds, Tranche A and Tranche B Bonds. It neither provides an explanation for the proportion of outstanding debt to be restructured, nor for the rationality for the amount and structure of the TC. In consequence it is relevant to evaluate these issues and, if necessary, to propose a more sensible alternative.

As a starting point for this analysis, let us begin by evaluating the debt to total assets ratios shown by electric power companies in the United States.<sup>10</sup>

##### Debt to Total Assets Ratios (median values)

###### Power Generation Class (p.3)

No Generation	More than 0 and less than 10%	10% to 50%	50% to 100%
0.230	0.366	0.439	0.489

###### Debt to Total Assets Ratios (median value) (p.17)

More than 100,000 Customers	0.563
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###### Debt to Total Assets Ratios (median value) (p.7)

National Average	0.321
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At present time, in its power generation category, PREPA could be considered in the range of 50% to 100% generation, were the median debt to total assets ratio (D/A ratio) is 0.489. However, PREPA is in the process of privatizing electricity generation, which implies that the utility's goal is to generate no electricity, where the median value for the D/A ratio is 0.230. On the other hand, PREPA is in the category of companies having more than 100,000 customers, where the D/A ratio is 0.563. Given that information, it is reasonable to consider, in a conservative approach, that an affordable D/A ratio for

<sup>9</sup> Estimated using the financial formula in Excel for periodic payments of principal and interest of Tranche A Bonds over a 40 years period (life span of Tranche A Bonds) with zero residual debt.

<sup>10</sup> American Public Power Association, *Financial and Operating Ratios of Public Utilities*, Arlington, VA, December 2018.



PREPA should be 0.563, i.e., the maximum amount of debt that PREPA should pay without compromising its financial and operational position.

The latest available PREPA's Financial Statement is for the year ending June 30, 2016.<sup>11</sup> On such statements, it is stated that PREPA had total assets in the amount of \$8,291.6 million,<sup>12</sup> and that its outstanding long-term debt was \$9,118.2 million.<sup>13</sup> This implies that PREPA's D/A ratio is 1.10.<sup>14</sup> If an affordable D/A ratio of 0.563 is applied to PREPA's total assets, as previously discussed, it can be concluded that PREPA can afford to pay up to \$4,668 million in restructured debt, without compromising its finances and operations. In consequence, a sensible debt restructuring agreement should be to issue securitized bonds equivalent to 51.2% of principal amount of outstanding bonds.<sup>15</sup> These bonds, as proposed in RSA, will be tax exempt, with 40 years maturity and a 5.25% coupon. Annual debt service, under this proposal, will be in the order of \$281.4 million, and an Alternative Transition Charge (ATC) will amount to 1.91 c/kwh. Because it is impossible to predict how electricity consumption will behave over a 40 years period, the Puerto Rico Energy Bureau should periodically – i.e., every year or every two years – revise the amount of the ATC to assure compliance with the debt service. However, it should be noted that PREPA's asset values used for the computation of the ATC are based on the utility 2016 Financial Statements, which are prior to the 2017 hurricanes. Thus, the final value for restructured debt and the ATC should be calculated based on actual asset values, after the occurrence of the two 2017 hurricanes. Hence, the final values for restructured debt and the ATC would be even lower than the ones computed in this report.

Before reaching any conclusion regarding the social and institutional convenience of this report, its economic consequences should be evaluated. This is done in subsequent sections of this report, which also includes economic evaluations of expected consequences of the proposed TC in the RSA, as well as of the rate increases included in PREPA's Fiscal Plan.

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<sup>11</sup> BDO Puerto Rico, P.S.C., *PREPA Independent Auditors' Report, Independent Auditors' Financial Statements, Required Supplementary Information and Supplemental Schedules for the year ending June 30, 2016*, San Juan, PR, December 18, 2018.

<sup>12</sup> *Ibid.* p. 4. It also states that, at June 30, 2016, PREPA had fixed assets valued at \$6,574.0 million.

<sup>13</sup> *Ibid.*, p. 10.

<sup>14</sup> The D/A ratio with respect to total fixed assets is 1.387 at June 30, 2016.

<sup>15</sup> \$4,668 million (the amount of debt that PREPA could afford to pay), divided by \$9,118 million, the amount of outstanding debt as of June 30, 2016, is equal to 0.511954, or 51.2%.

## V. Possible Increases in Electricity Tariff Rates

Up to this moment, two possible increases in electricity tariff rates have been mentioned in this report at some detail: (1) the Transition Charge (TC) proposed in the RSA, and (2) an Alternative Transition Charge (ATC) discussed in the previous section of this report. However, PREPA Fiscal Plan also proposed increases in electricity tariff rates. Increases proposed in the Fiscal Plan can be grouped in two categories: (1) those based on optimistic assumptions, and (2) increases that include optimistic assumption plus some risks, that under close consideration are very likely to happen.

In the case of the ATC, tariff increment in FY2020 is 1.00 c/kwh already enacted in 2019<sup>16</sup> as RSA Settlement Charge, and from FY2021 it is 1.91 c/kwh over the forecasting period.

The TC is specified in the RSA.<sup>17</sup> The amounts established for the TC for FY 2021 to 2024 are reproduced on Table 1, which also includes the maximum Subsidy Charge, which is up to 25% of the TC.<sup>18</sup> Since the TC changes over the life of the RSA, the dollar amount for Subsidy Charge is also subject to periodic increases.

**Table 1**  
**Additional Electricity Tariff Charges from RSA (c/kwh)**

Fiscal Year	Basic Transition Charge (TC)	Subsidy Charge (25% of TC)	Total TC
FY20	1.00		<b>1.00</b>
FY21	2.77	0.69	<b>3.46</b>
FY22	2.77	0.69	<b>3.46</b>
FY23	2.77	0.69	<b>3.46</b>
FY24	2.96	0.74	<b>3.70</b>

The Fiscal Plan also includes some rate increases in electricity tariffs. These increases are supposed to be applied to all categories of customers. The Fiscal Plan considers two

<sup>16</sup> In all cases it will be assumed that the RSA Settlement Charge is in effect over fiscal year 2020. After that year, it evolves to be the RSA Transition Charge.

<sup>17</sup> RSA, Recovery Plan Term Sheet, III Transition Charge.

<sup>18</sup> RSA, Schedule I-A, pp. I-A-4 and I-A-5.

scenarios, one considered risk free, and another with some operational or administrative risks. The main differences among these scenarios are:

1. The risk-free scenario assumes that FEMA is going to fund 90% of the costs of PREPA's grid modernization. The risk scenario assumes that PREPA will only fund 45% of these costs and customers will pay the remainder.
2. Also, the risk-free scenario assumes an ideal dispatch curve for conventional fuel and purchase power. The risk scenario assumes that dispatch continues at present rates.
3. With regard to renewables PPOA, the risk-free scenario assumes a cost of new solar PPO starting in FY21 at  $\approx$  \$63/Mwh. The risk scenario assumes PREPA to be unable to procure solar power below \$100/Mwh PPOA for the period of the fiscal plan.
4. Both scenarios, No-Risk and Risk, assume a surcharge to cover for PREPA Pension Funds, estimated between 1.6 c/kwh for year 2021 and 1.7 c/kwh for year 2022 to 2024

Table 2 summarizes the rates increases proposed in the Fiscal Plan.

**Table 2**

**Additional Electricity Tariff Charges from PREPA Fiscal Plan (c/kwh)**

	Fiscal Plan: No Risks <sup>a</sup>		Fiscal Plan: Additional Risks Charges <sup>b</sup>				
Fiscal Year	PREPA Pension Fund Surcharge	<b>Total Charges: No Risks</b>	PREPA Pension Fund Surcharge	Federal Funding	Conventional Fuel & Power Purchase	Renovable Energy PPOAs	<b>Total Charges: Addition of Risks</b>
2020				0.69	1.26		1.95
2021	1.6	1.6	1.6	1.20	1.28	0.28	4.36
2022	1.6	1.6	1.6	1.74	1.12	0.58	5.04
2023	1.7	1.7	1.7	2.28	1.13	0.83	5.94
2024	1.7	1.7	1.7	2.82	1.08	0.97	6.57

<sup>a</sup>PREPA, Fiscal Plan 2019, As certified by the Financial Oversight and Management Board for Puerto Rico on June 27, 2019, p. 62.

<sup>b</sup>*Ibid.*, pp. 62 and 66.

It should be noted that PREPA's tariff rates vary among different categories of its customers. Industrial, commercial and residential customers are responsible for 98% of total electricity consumption. Thus, it is convenient to determine how tariff rates

would result under possible scenarios.<sup>19</sup> Annual expected rates, under each scenario, are computed adding additional charges corresponding to each scenario to the average tariff paid by each customer category in Fiscal Year 2019.<sup>20 21</sup> In the following pages, tables inform the resulting annual tariffs corresponding to each scenario by customers categories, and the annual per cent change with respect to average tariff paid in FY2019 by each customer category.<sup>22</sup>

<sup>19</sup> Possible scenarios considered are:

1. ATC
2. TC
3. TC + Fiscal Plan with no risks
4. TC + Fiscal Plan including risks

It must be pointed out that PREPA Fiscal Plan indicates, on page 63, indicates that:

“ PREPA’s current rate structure is composed of three primary components – Base Rate, Fuel Adjustment and Purchased Power Adjustment Charges, and CILT & Subsidy rate riders. A fourth component includes RSA settlement charges, which is still pending of approval by the Puerto Rico Energy Board.

▪ Three primary categories of customers make up 98% of PREPA’s revenue from electricity sales: Commercial (53%), Residential (34%) and Industrial (11%)

▪ PREPA approved a permanent rate structure in FY2017 and implemented it in FY2019. This new rate structure eliminated the 11% gross-up of fuel and purchased power adjustment charges, and created direct cost recovery/pass through rate riders in customer’s bills to cover Contributions in lieu of taxes (CILT) and subsidies.

▪ As a new O&M operator comes into place, the rate structure may potentially need to be revised from time to time to reflect changes in operating cost structure as well as incorporate developing trends in rate design.”

<sup>20</sup> Average tariff paid in Fiscal Year 2019 is computed as the 10 months average from July 2018 to April 2019, as estimated as the proportion of Total Revenues in the category to Total Consumption in the corresponding category. Data was obtained from PREPA’s *ae-meta(1)* data, May 2019.

<sup>21</sup> It should be pointed out that the Fiscal Plan, p. 62, says that average electricity tariff for all consumers in FY2019 was 18.8 c/kwh. Computations made for this report results in an average tariff of 21.99 c/kwh for the same fiscal year.

<sup>22</sup> In the next pages, electricity rates increases are considered by PREPA’s principal customers categories. Average rate increases for all customers are presented in the table below, where the average electricity rate paid in FY 2019 was 21.99 c/kwh.

**Table A-1**  
**Required Electricity Tariff Rates Under Different Scenarios**  
**All Customers Average: c/kwh**

Fiscal Year	Alternative TC (ATC)	TC (RSA)	RSA+ Fiscal Plan: No Risks	RSA + Fiscal Plan w/Risks
FY20	22.99	22.99	22.99	24.94
FY21	23.98	25.45	27.05	29.81
FY22	23.98	25.45	27.05	30.49
FY23	23.98	25.45	27.15	31.39
FY24	23.98	25.69	27.39	32.26

Average electricity tariff rate paid by industrial customers in FY2019 = 19.56 c/kwh

**Table 3**  
**Required Electricity Tariff Rates Under Different Scenarios**  
**Industrial Customers: c/kwh**

Fiscal Year	Alternative TC (ATC)	TC (RSA)	RSA + Fiscal Plan: No Risks	RSA + Fiscal Plan w/Risks
FY20	20.56	20.56	20.56	22.51
FY21	21.47	23.02	24.62	27.38
FY22	21.47	23.02	24.62	28.06
FY23	21.47	23.02	24.72	28.96
FY24	21.47	23.26	24.96	29.83

**Table 4**  
**Change in Electricity Tariff Rates Under Different Scenarios**  
**Industrial Customers (%)**

Fiscal Year	Alternative TC (ATC)	TC (RSA)	RSA + Fiscal Plan: No Risks	RSA + Fiscal Plan w/Risks
FY20	5.11%	5.11%	5.11%	15.08%
FY21	9.76%	17.69%	25.87%	39.98%
FY22	9.76%	17.69%	25.87%	43.46%
FY23	9.76%	17.69%	26.38%	48.06%
FY24	9.76%	18.90%	27.59%	52.49%

And the rates increases for all customers, in the four scenarios, are estimated to be as follows:

**Table A-2**  
**Change in Electricity Tariff Rates Under Different Scenarios**  
**All Customers Average (%)**

Fiscal Year	Alternative TC (ATC)	TC (RSA)	RSA+ Fiscal Plan: No Risks	RSA + Fiscal Plan w/Risks
FY20	4.55%	4.55%	4.55%	13.42%
FY21	9.05%	15.73%	23.01%	35.56%
FY22	9.05%	15.73%	23.01%	38.65%
FY23	9.05%	15.73%	23.47%	42.75%
FY24	9.05%	16.81%	24.54%	46.69%

Average electricity tariff rate paid by commercial customers in FY2019 = 22.83 c/kwh

**Table 5**  
**Required Electricity Tariff Rates Under Different Scenarios**  
**Commercial Customers: c/kwh**

Fiscal Year	Alternative TC (ATC)	TC (RSA)	RSA + Fiscal Plan: No Risks	RSA + Fiscal Plan w/Risks
FY20	23.83	23.83	23.83	25.78
FY21	24.74	26.29	27.89	30.65
FY22	24.74	26.29	27.89	31.33
FY23	24.74	26.29	27.99	32.23
FY24	24.74	26.53	28.23	33.10

**Table 6**  
**Change in Electricity Tariff Rates Under Different Scenarios**  
**Commercial Customers (%)**

Fiscal Year	Alternative TC (ATC)	TC (RSA)	RSA + Fiscal Plan: No Risks	RSA + Fiscal Plan w/Risks
FY20	4.37%	4.38%	4.38%	12.92%
FY21	8.37%	15.16%	22.16%	34.25%
FY22	8.37%	15.16%	22.16%	37.23%
FY23	8.37%	15.16%	22.60%	41.17%
FY24	8.37%	16.19%	23.64%	44.97%

Average electricity tariff rate paid by residential in FY2019 = 21.09 c/kwh

**Table 7**  
**Required Electricity Tariff Rates Under Different Scenarios**  
**Residential Customers: c/kwh**

Fiscal Year	Alternative TC (ATC)	TC (RSA)	RSA + Fiscal Plan: No Risks	RSA + Fiscal Plan w/Risks
FY20	22.09	22.09	22.09	24.04
FY21	23.00	24.55	26.15	28.91
FY22	23.00	24.55	26.15	29.59
FY23	23.00	24.55	26.25	30.49
FY24	23.00	24.79	26.49	31.36

**Table 8**  
**Change in Electricity Tariff Rates Under Different Scenarios**  
**Residential Customers (%)**

Fiscal Year	Alternative TC (ATC)	TC (RSA)	RSA + Fiscal	
			Plan: No Risks	RSA + Fiscal Plan w/Risks
FY20	4.74%	4.74%	4.74%	13.99%
FY21	9.06%	16.41%	23.99%	37.08%
FY22	9.06%	16.41%	23.99%	40.30%
FY23	9.06%	16.41%	24.47%	44.57%
FY24	9.06%	17.53%	25.59%	48.68%

From the tables it can be seen that there are significant differences in resulting rates among different scenarios. For example, in the case of residential customers, rate increases go from 4.74% in FY 2020 to 9.06% in FY 2024 in the ATC scenario. In the RSA-TC the rates increase go from 4.74% in FY 2020 to 17.53% in Fiscal Year 2024. When the rate increases proposed in the Fiscal Plan, under the no-risks optimistic assumption, are added to the RSA-TC the rates increase from 4.74% in Fiscal Year 2020 to 25.59% in Fiscal Year 2024. When the rates proposed in the Fiscal Plan with the operational risks assumptions in addition to the RSA-TC, are considered, electricity rates increase from 13.99% in Fiscal Year 2020 48.68% in Fiscal Year 2024. Such an increase in the electricity bill, cannot be taken slightly. A residential electricity rate that increases in almost 50% in four years could seriously promote inequity, worsen the situation of the poor and stimulate increased emigration.

In the case of industrial customers, rate increases go from 5.11% in FY2020 to 9.76% in FY 2024 in the ATC scenario, In the RSA-TC scenario the rates increase go from 5.11% in FY 2020 to 18.90% in FY 2024. Under the Fiscal Plan no-risks optimistic assumption in FY 2020 to 27.59% in FY 2024. In the worst scenario, where operational risks pointed out in the Fiscal Plan are included and added to the RSA-TC scheduled rates,<sup>23</sup> electricity rates increase from 15.08% in FY 2020 to a whopping 52.4% in FY 2024. Such an increase in the electricity bill cannot go unnoticed to manufacturers in Puerto Rico, who probably will review their investment and operation plans, and even the permanence of their manufacturing plants in Puerto Rico.

For that reason, among others, it is pertinent to evaluate and estimate expected economic consequences of proposed electricity rate changes under the different scenarios. That analysis is done in the next sections of this report, beginning with

<sup>23</sup> This worst scenario appears to be a highly probable one.

estimating expected consequences of each scenario on input costs along some relevant industrial sectors.

## VI. Economic Impacts by Major Industrial Sectors

This section of the report informs results of expected economic consequences from proposed electricity rate increases resulting from the previously proposed Alternative Transition Charge, the Puerto Rico Electric Power Authority Debt Restructuring Agreement (RSA), and from related scenarios included in last approved PREPA Fiscal Plan.<sup>24</sup> The analysis is focused on eight major industrial sectors:

- Agriculture
- Mining & Construction
- Manufacturing
- Wholesale & Retail Trade
- Hospitals & Health Serv.
- Electricity & Irrigation Serv.
- Other Services
- Government

To compute effects of rates changes, as presented in the four scenarios under consideration, on the cost of intermediate inputs, the 2013 Input-Output Matrix (I/O Matrix) for Puerto Rico was aggregated into eight sectors. The resulting I/O Matrix is reported on Appendix B. Electricity rate increases were computed in the vector electricity and irrigation services for all sectors, except PREPA's vector, under the assumption that PREPA does not actually pay for the electricity it consumes. The estimates are made for fiscal years 2022 and 2024 in the four scenarios that are considered in this report. Its effects were estimated only for fiscal years 2022 and 2024, because the most relevant rate changes in all scenarios do not take effect until fiscal year 2021.

Table 9 summarizes estimated consequences of the different scenarios analyzed on the costs of intermediate inputs, by industrial sectors, in fiscal years 2022 and 2024. Some important considerations can be inferred from the results in the table.

In the first place, it can be seen that, in all scenarios, the most affected sectors by increases in electricity rates are:

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<sup>24</sup> PREPA Fiscal Plan includes electricity rates increases proposed in RSA, and also other rate increases related to other operational and administrative measures included in the plan.



1. Wholesale and retail trade
2. Government
3. Manufacturing

It should be noted that these sectors are particularly critical for its consequences upon the local economy.

1. Increases in the operating costs in the commerce sector are usually translated to customers, reducing the purchasing power of the general population, and increasing incentives for emigration.
2. In the case of government, it should be remembered that it faces a serious fiscal crisis, with serious restrictions on its spending capacity. An increase in operation costs is going to aggravate its present fiscal crisis.
3. Manufacturing is critical for local economic performance. The Puerto Rican economy is predicated on exporting manufactured goods, and increases in operation costs reduced its (already diminished) capacity to compete in world markets. It should be remembered that employment in manufacturing has been declining for more than a decade.

Construction is another sector that has been stagnant in Puerto Rico for over a decade, with declining employment. Expected increases in input costs are going to promote further adverse effects over the real estate sector of the economy, with the aggravation that electricity rates increase also adversely affects everyday home maintenance and use.

**Table 9**  
**Percent Change in Cost of Intermediate Inputs by Industrial Categories under Considered Scenarios**

Industrial Sectors	Alternative TC		TC (RSA)		RSA TC + Fiscal Plan (No Risks)		RSA TC + Fiscal Plan (Risks Included)	
	FY 2022	FY 2024	FY 2022	FY 2024	FY 2022	FY 2024	FY 2022	FY 2024
Agriculture	0.05%	0.05%	0.09%	0.09%	0.13%	0.09%	0.43%	0.26%
Mining & Construction	0.09%	0.09%	0.17%	0.18%	0.25%	0.28%	0.42%	0.51%
Manufacturing	0.19%	0.19%	0.35%	0.37%	0.51%	0.54%	0.85%	1.03%
Wholesale & Retail Trade	0.22%	0.22%	0.91%	0.98%	1.34%	1.48%	2.25%	2.71%
Hospitals & Health Serv.	0.04%	0.04%	0.17%	0.18%	0.25%	0.28%	0.42%	0.51%
Electricity & Irrigation Serv.	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other Services	0.06%	0.06%	0.26%	0.28%	0.38%	0.42%	0.64%	0.78%
Government	0.15%	0.15%	0.62%	0.66%	0.90%	1.00%	1.51%	1.83%
<b>Overall Average</b>	<b>0.13%</b>	<b>0.13%</b>	<b>0.35%</b>	<b>0.38%</b>	<b>0.52%</b>	<b>0.56%</b>	<b>0.87%</b>	<b>1.05%</b>

Identified increases in inputs costs reduces the ability for local firms to compete, both in the export markets, as well as with imports. This could result in a negative effect on the economy's ability to generate income and employment, that should be carefully considered before making any decision on electricity rates increase, particularly when they are so significant in most of the scenarios considered in this report.

It is also important to observe that all scenarios, except the one that considers the effects of the Alternative Transition Charge proposed in this report, result in a higher proportional increase in input costs in FY2024 than in FY2022. This implies that all considered rate schedules – except the ATC – have the potential to promote a cost push inflation over the local economy. Disruptive effects of inflation on economy and society are well known. Inflation distorts resource allocation in production, creates adverse incentives to investment and saving, tends to increase inequality in income distribution, (making particularly worse-off the persons with fixed income, such as retirees,) and promotes instability in the labor market (promoting labor strikes and unrest) as well as in society.

## VII. Impact on the Consumers Price Index (Inflation)

The next topic on consideration, examined in this section of the report, is the consequences of possible electricity rates increases on inflation. For this analysis, it was used the expenditure weights computed by the Puerto Rico Department of Labor and Human Resources to estimate the Consumer Price Index (CPI).<sup>25</sup> Table 10 reports expected increases in CPI for fiscal years 2022 and 2024 under each of the rate increase scenarios under consideration.

Expected price increases range from a minimum of 0.36% in the case of the ATC for years 2022 and 2024, to a maximum of 2.47% in 2024 in the case of the rates for the RSA TC coupled with the additional rates increases in the Fiscal Plan, including highly probable operational risks. These increases in CPI are additional to normal inflation.

It should be noted that, except in the case of the ATC, in all scenarios expected increases in CPI are higher in FY2024, than in FY2022; i.e., they tend to induce cost push inflation.

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<sup>25</sup> These weights refer to consumers expenses by consumptions categories in year 2006, the latest available information. The weights were computed by the Puerto Rico Department of Labor and Human Resources, with the assistance of the US Bureau of Labor Statistics. Appendix C reproduces the values of the weights used in this report.

**Table 10**

**EXPECTED CHANGE IN THE CONSUMER PRICE INDEX**

EXPENDITURE CATEGORIES	Alternative TC		TC (RSA)		TC (RSA) + Fiscal Plan (No Risks)		TC (RSA) + Fiscal Plan (Risks Included)	
	FY 2022	FY 2024	FY 2022	FY 2024	FY 2022	FY 2024	FY 2022	FY 2024
Apparel	0.01%	0.01%	0.04%	0.04%	0.06%	0.06%	0.10%	0.11%
Education & communications	0.00%	0.00%	0.01%	0.01%	0.02%	0.02%	0.03%	0.04%
Foods & beverages	0.05%	0.05%	0.21%	0.22%	0.30%	0.34%	0.51%	0.62%
Other goods and services	0.02%	0.02%	0.03%	0.03%	0.04%	0.04%	0.06%	0.08%
Housing & housing services								
Electricity	0.26%	0.26%	0.47%	0.50%	0.68%	0.73%	1.14%	1.38%
Health services	0.00%	0.00%	0.01%	0.01%	0.01%	0.02%	0.02%	0.03%
Entertainment	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%	0.02%	0.03%
Transportation	0.02%	0.02%	0.06%	0.07%	0.09%	0.10%	0.16%	0.19%
<b>Total</b>	<b>0.36%</b>	<b>0.36%</b>	<b>0.83%</b>	<b>0.89%</b>	<b>1.22%</b>	<b>1.32%</b>	<b>2.05%</b>	<b>2.47%</b>

According to published statistics, the Puerto Rican has shown fairly price stability over the past 10 years, exhibiting an average inflation rate of 1.11% from fiscal years 2009 to 2018.<sup>26</sup> This situation could change if proposed electricity rate increases are enacted.

Table 11 informs the expected increase in CPI under each scenario as a percentage of historic inflation rate in PR over the last ten years. It can be seen from the table that in all scenarios, except with the ATC, expected increases in inflation caused by proposed electricity rate increases would accelerate inflation in a significant way. In consequence, the only electricity price increase that the economy appears to be able to afford, without significantly accelerating inflation, is the Alternative Transition Charge proposed in this report.

<sup>26</sup> PR Planning Board, *Statistical Appendix to the Economic Report to the Governor 2018*, Table 1.

**Table 11**

**Expected Increase in CPI in Each Scenario as a Percentage of Local Inflation Rate**

Expected Increase in CPI in Each Scenario, as a percentage of Local Inflation Rate	Alternative TC		TC (RSA)		TC (RSA) + Fiscal Plan (No Risks)		TC (RSA) + Fiscal Plan (Risks Included)	
	FY 2022	FY20 24	FY 2022	FY 2024	FY 2022	FY 2024	FY 2022	FY 2024
	33%	33%	75%	80%	110%	119%	184%	223%

### VIII. Expected impacts on production and income

This section of the report examines expected economic impacts of proposed electricity tariff rate increases on Puerto Rico Gross National Product at constant prices (i.e., without inflation). Any increase in rates on electricity is expected to have negative consequences on production and income. All production processes use electricity, so any increase in rates increases the costs of companies and their ability to compete with foreign producers.<sup>27</sup> This impairs the ability of the local economy to export, as well as the capacity of the enterprises that produce for the domestic market to compete with imported products. To evaluate the expected effects of the increases in electricity rates, an equation was estimated for projecting the gross national product at constant prices. The computed parameters and characteristics of this equation are presented in Appendix D to this report.<sup>28</sup>

<sup>27</sup> See Section VI of this report.

<sup>28</sup> The forecasting equation was specified as;

$$GNP_t^{PR} = \beta_0 + \beta_1 PKWH_t + \beta_2 GDP_t^{US} + \beta_3 N_t + \beta_4 r_t u_t$$

Where:

$GNP_t^{PR}$  Gross National Product at constant prices of Puerto Rico in year t, t = 2008 to 2017. Variable Name: GNPR\_PR.

$\beta_i$  Estimated coefficient for the i-th independent variable.

$PKWH_t$  Unit price of electricity for all PREPA consumers in \$/kwh in year t.

$DPI_t$  National Income in Commerce and Services in millions of dollars in year t. t = 2008 to 2017. Variable Name: YN\_COM\_SERV.

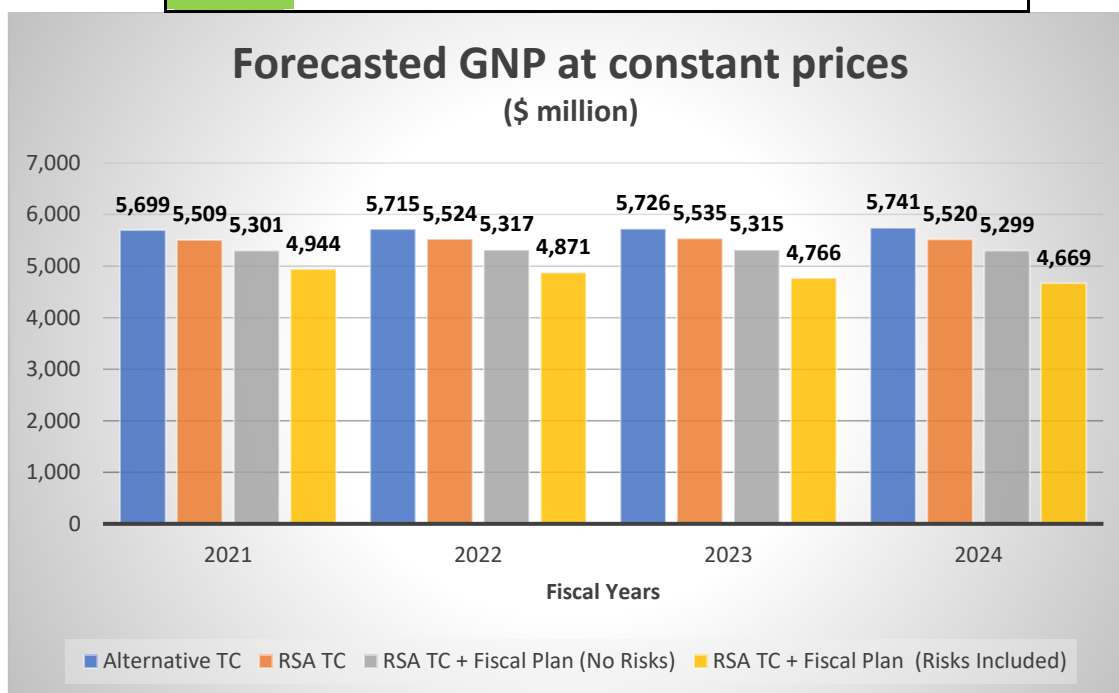
$N_t$  Total population in thousands of persons. t = 2000 to 2017. Variable Name: POP.

Table 12 and Diagram 1 reports forecasted values for GNP at constant prices for each electricity rates increase scenario considered in this report.

**Table 12**

**Forecasted GNP at constant prices (\$ million)**

Fiscal Year	Alternative TC	TC (RSA)	TC (RSA) + Fiscal Plan (No Risks)	TC (RSA) + Fiscal Plan (Risks Included)
2021	5,699	5,509	5,301	4,944
2022	5,715	5,524	5,317	4,871
2023	5,726	5,535	5,315	4,766
2024	5,741	5,520	5,299	4,669



**Diagram 1**

This result, when viewed in context of the 2017 GNP value of \$6,006.8 million, show the real impact of the proposed electricity rate increases on the Puerto Rico economy.

$GDP^{US}$  Gross Domestic Product of the US, at constant prices, in year t. t = 2000 to 2017. Variable Name: GDPR\_US.

$r_t$  Prime interest rate in year t, t = 2000 to 2017. Variable Name: R.

The equation was estimated using the Robust Least Squares procedure (Yohai method).

As it can be seen from Table 12 and Diagram 1,<sup>29</sup> the scenario with the lower negative impact on economic performance (i.e., on GNP at constant prices) is the Alternative Transition Charge (ATC) previously developed in this report. Moreover, it is the only scenario where, all other things constant, some economic growth is registered to happen over time. This is crucial in the case of the Puerto Rican economy, where the local economy has been under a situation of structural contraction, where its performance has been shrinking for more than a decade. All other scenarios not only result in lower values for forecasted GNP at constant prices, but they also show trends for declining GNP over the forecasting period.

**Table 13**

**Percent Difference Between Forecasted GNP and Historic  
FY2017 GNP at constant prices**

Fiscal Year	Alternative TC	TC (RSA)	TC (RSA) + Fiscal Plan (No Risks)	TC (RSA) + Fiscal Plan (Risks Included)
2021	-5.12%	-8.29%	-11.74%	-17.70%
2022	-4.86%	-8.03%	-11.48%	-18.90%
2023	-4.68%	-7.85%	-11.51%	-20.66%
2024	-4.43%	-8.11%	-11.78%	-22.28%

The argument in the previous paragraph can be better appreciated with the help of Table 13. There forecasted values for GNP in each scenario are compared with historic values in fiscal year 2017. FY2017 is the last normal economic year, i.e., before the Island was hit by hurricanes Irma and María. Even in the case of the ATC, which is the scenario with the lowest adverse effect on economic activity and allows for some growth over the forecasting period, forecasted GNP at constant prices for FY 2024 is 4.43% lower than historic GNP at constant prices in FY2017. The situation becomes more negative in the case of the RSA TC, where forecasted GNP at constant prices for FY 2024 is 8.11% less than actual GNP at constant prices in FY 2017. This adverse effect is 83.1% worse than the one forecasted for the ATC scenario. If Fiscal Plan rate increases, under optimistic no risk assumptions, are added to RSA TC, negative effects of proposed rates increases are stronger. In this scenario, forecasted GNP at constant prices for FY 2024 is 11.78% less than the historic value in FY 2017, and 165.8% worse than in the case of ATC for FY 2024. Finally, the scenario where Fiscal Plan with

<sup>29</sup> It should be noted that forecasted values in each scenario for all fiscal years are lower than those assumed on page 59 of the Fiscal Plan. The Fiscal Plan does not explain how its forecasted were computed.

probable risks rate increases are added to the ARS TC, predicts real disaster. In this case, forecasted GNP at constant prices for FY 2024 is 22.28% lower than the historical value in FY 2017, and 402.9% worse than the forecast in the case of the ATC. This analysis strongly suggests that the only electricity rate increase that the local economy can afford is the proposed ATC.

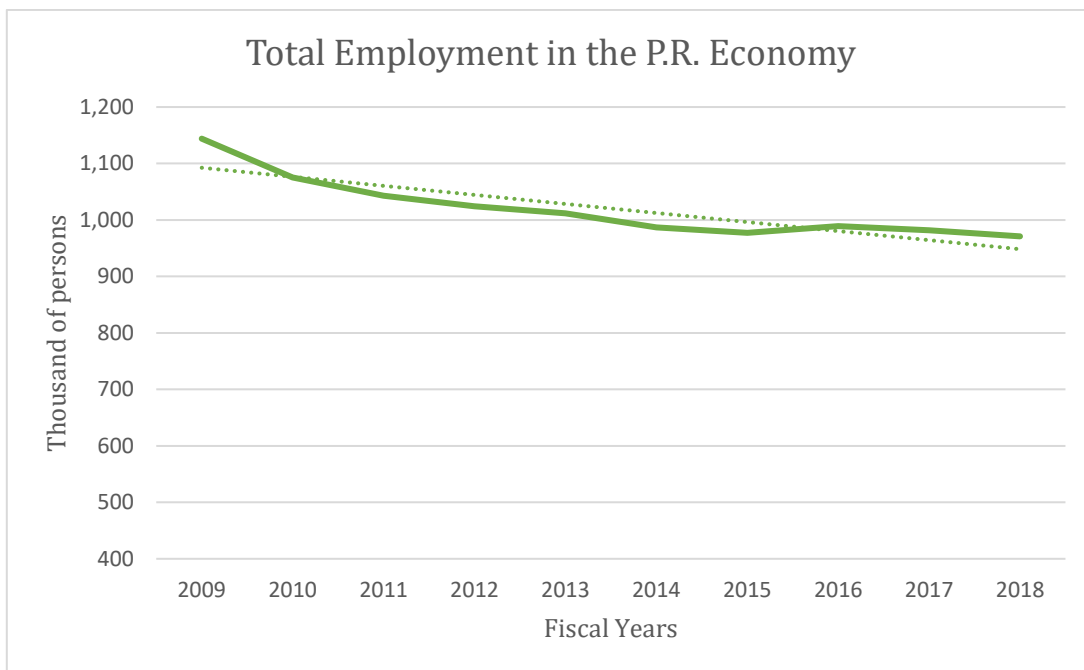
## IX. Employment effects

Once examined the expected effects of tariff rates increases, considered in the different scenarios, on the level of economic activity, it is worth to consider the expected effects of these changes on the level of employment in Puerto Rico. It has been repeatedly reported by the Government, that the rate of unemployment in Puerto Rico has been declining consistently over the past years. This is true, but the reduction in the unemployment rate does not occur as a result of improved economic activity and increased job creation, but by the combined effects of population aging and emigration. In fact, as shown in table 14, the number of persons employed and the size of the labor force have recorded clear reduction trends over the last decade.

**Table 14**  
**Labor Force, Employment, Unemployment and Unemployment Rate (Thousands of persons)**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Labor Force	1,326	1,284	1,245	1,207	1,177	1,153	1,121	1,121	1,109	1,082
Employed	1,144	1,075	1,043	1,024	1,012	987	977	989	982	971
Unemployed	182	209	202	183	165	166	144	132	127	111
Unemployment Rate (%)	13.7	16.3	16.2	15.2	14.0	14.4	12.8	11.8	11.5	10.3

Source: *Statistical Appendix to the Economic Report to the Governor 2018*, Table 32.



Source: *Statistical Appendix to the Economic Report to the Governor 2018*, Table 32.

### **Diagram 2**

Given this situation, additional contractions expected in the level of economic activity, resulting from electricity rates increases, must have adverse impacts on job creation and permanence. Those expected consequences are hereby analyzed for each of the scenarios under consideration.

The first step to estimate the expected effects of the alternative increases in electricity rates on the level of employment, is to estimate the direct requirements of employment per million dollars of GNP at constant prices. Table 15 reports that calculation. The table shows that, on average, between fiscal 2009 to 2018, 161.4 employments were needed for each million dollars of actual production.

Table 16 present the difference, in million of dollar, between actual GNP at constant prices registered in fiscal year 2018 and the value of this variable forecasted for each of the electricity rate increase scenarios under consideration, for fiscal years 2021 to 2024.



**Table 15**

**Direct Employment Requirements per Million Dollars of Real GNP**

Fiscal Year	Real GNP (Millions of \$)	Total Employment (Thousands)	Direct Employment Requirements (per \$ million of Real GNP)
2009	6,784.2	1,144	168.6
2010	6,541.8	1,075	164.3
2011	6,431.7	1,043	162.2
2012	6,466.2	1,024	158.4
2013	6,457.6	1,012	156.7
2014	6,343.9	987	155.6
2015	6,292.2	977	155.3
2016r	6,191.5	989	159.7
2017r	6,006.8	982	163.5
2018p	5,726.5	971	169.6
Mean			161.4

Source: *Statistical Appendix to the Economic Report to the Governor 2018*, Table 1 and author's computations.

**Table 16**

**Difference Between Forecasted GNP and Historic FY2018 GNP at constant prices (\$ million)**

Fiscal Year	Alternative TC	RSA TC	RSA TC + Fiscal Plan (No Risks)	RSA TC + Fiscal Plan (Risks Included)
2021	-27.35	-217.79	-425.07	-782.62
2022	-11.86	-202.29	-409.57	-855.22
2023	-0.66	-191.09	-411.33	-960.62
2024	14.21	-206.83	-427.06	-1,057.97

In Table 17, the direct employment requirement per million dollars in Gross National Product at constant prices is applied to the expected changes in GNP forecasted for each scenario under consideration, to estimate expected effects on the level of employment in the island.

**Table 17**

**Expected Employment Consequences for Each Rate Increase Scenario  
(Number of persons)**

Fiscal Year	Alternative TC	RSA TC	RSA TC + Fiscal Plan (No Risks)	RSA TC + Fiscal Plan (Risks Included)
2021	-4,414	-35,151	-68,606	-126,315
2022	-1,914	-32,650	-66,105	-138,033
2023	-106	-30,843	-66,388	-155,043
2024	2,294	-33,382	-68,928	-170,756

From Table 17 it can be seen that, in the case of the ATC, the economy seems to absorb the increase in electricity rates, and by FY 2024 it is able to generate 2,294 additional jobs, over the employment level of FY 2018. For its part, in the case of the RSA TC, the economy begins to slowly absorbing the effects of the initial rate increase, but, since the RSA TC includes an additional rate increase for FY 2024, total employment again declines in FY 2024, with a total loss of 33,382 jobs in FY 2024, which is equivalent to 3.4% of total employment in FY 2018. If the electricity rate increases proposed by the RSA is compounded with the rate increases proposed in the Fiscal Plan with optimistic assumptions, by FY 2024 the economy is expected to have a net loss of 68,928 jobs, an amount that is equivalent to 7.1% of total employment in FY 2018. In the last scenario, where electricity rate increases in the RSA TC are added to those proposed in the Fiscal Plan, including more realistic risk assumptions, the losses in employment are really significant; by fiscal year 2024, is expected that total employment in the economy is going to be reduced by 170,756 jobs, or 17.6% of total jobs in FY 2018.

The Puerto Rican economy has shown a downward trend in total employment over more than a decade. As a consequence of the structural contraction that has been happening in the local economy, it has been unable to create enough jobs for the population, a situation that has resulted in increased emigration of productive persons and in promoting a more inequitable income distribution. From an economic and social point of view, Puerto Rico must be very careful in adopting measures that have additional adverse effects on employment. Of the four scenarios considered in this report, the ATC is the only one that result in moderate employment loss in the short run and has the capacity to be absorbed by the markets and allow for the economy to be able to generate jobs in the not so long run.

## X. Demand for Electricity

Since the Transition Charges included in the RSA are based on expected PREPA's total sales of electricity, it is pertinent to estimate the demand for electricity, because it determines PREPA's annual sales and, in consequence, the need to adjust, and how

much to adjust, the amounts proposed for the TC and other proposed new charges in the electricity bill. In fact, scheduled increases in Transition Charges are predicated in reductions in electricity sales (and, hence, in paid consumption). To assume that electricity consumption is going to be reduced is reasonable, since it already shows a downward tendency since fiscal 2007, and multiple factors operate for such shrinkage to happen.<sup>30</sup> The issue is to determine which is the reasonable magnitude to be expected for the level of consumption of electricity from PREPA customers over the forecasting period.<sup>31</sup>

To forecast electricity consumption in Puerto Rico, demand equations were estimated for the three most relevant customer categories: (1) residential, (2) commercial, and (3) industrial.<sup>32</sup> These three categories add up to the 98% of total electricity consumption on the island.<sup>33</sup> To forecast total electricity consumption for each fiscal year over the forecasting period, it was aggregated the estimated electricity demand in each category for each fiscal year, and 2% was added to the total obtained to include the consumption of customers categories left out. This procedure implicitly assumes that the main customer categories will continue to be responsible for 98% of total electricity consumption.

Next subsections in the report informs the results obtained from estimated demand equations, as well as the aggregate demand for electricity.

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<sup>30</sup> Among the factors that tend to promote reduction in the consumption of electricity, it can be mentioned, among others:

1. The secular contraction in the economy of Puerto Rico.
2. Emigration.
3. Increases in electricity rates.
4. The availability of more efficient electrical equipment.
5. Private solar power generation.

<sup>31</sup> It must, again, be pointed out that it is not reasonable to attempt to forecast quantities demanded of electricity for a 47 years period. It is simply impossible to try to predict how economic conditions affecting electricity (or any other good or service) consumption will behave over a two generations period of time. This report is limited to, the already indicated, more modest and reasonable forecasting period.

<sup>32</sup> Each demand equation was estimated using the following methods;

1. OLS
2. Stepwise regression
3. If the Durbin-Watson statistic in the OLS showed autoregressive errors, or indetermination, the equation was also estimated through the Durbin-Watson method.
4. Robust Least Squares (Yohai method)
5. Robust Least Squares, adjusted for autoregressive errors through the Cochran-Orcutt method.
6. 2SLS

Results obtained from the six estimation methods were compared, and, the equation with the best statistical fit was selected to be used for the analysis.

<sup>33</sup> *Fiscal Plan, op. cit.*, p. 63.

## Residential Demand for Electricity

The residential demand equation for electricity was specified as:

$$Q_t^{DER} = \beta_0 + \beta_1 PKWH_t + \beta_2 DPI_t + \beta_3 N_t + u_t$$

Where:

$Q_t^{DER}$  Quantity of electricity in Gwh demanded by residential consumers of PREPA at year t, t = 2000 to 2017. Variable Name: C\_ELECT\_RES.

$\beta_i$  Estimated coefficient for the i-th independent variable.

$PKWH_t$  Unit price of electricity for residential consumers in \$/kwh in year t.

$DPI_t$  Disposable Personal Income in millions of dollars in year t. t = 2000 to 2017. Variable Name: YPD.

$N_t$  Total population in thousands of persons. t = 2000 to 2017. Variable Name: POP.

The equation was estimated by the Robust Least Squares Method (Yohai method), and the results, including the statistics and information to evaluate the statistical fit of the equation, are informed in Appendix E, at the end of this report. The selected demand equation for PREPA residential customers was used to forecast consumption under the different scenarios under consideration. Forecasted residential consumption is reported in Table 18.

**Table 18**  
**Quantity of Electricity Demanded by Residential Consumers (Gwh)**

Fiscal Year	ATC	RSA TC	RSA TC +	
			Fiscal Plan: No Risks	RSA TC + Fiscal Plan: w/ Risks
2021	5,230	5,065	4,894	4,599
2022	5,202	5,036	4,865	4,497
2023	5,176	5,010	4,828	4,375
2024	5,191	5,000	4,818	4,298

Table 19 informs the relative difference between each forecasted value and actual consumption registered for residential PREPA customers in Fiscal Year 2017, the last “normal” year, before hurricanes Irma and María.

**Table 19**  
**Quantity of Electricity Demanded by Residential Consumers**  
**Percent Variation with Regard to Quantity Consumed in FY 2017**

Fiscal Year	ATC	RSA TC	RSA TC + Fiscal Plan: No Risks	RSA TC + Fiscal Plan: w/ Risks
2021	-18.17%	-20.77%	-23.44%	-28.06%
2022	-18.62%	-21.21%	-23.89%	-29.64%
2023	-19.03%	-21.62%	-24.46%	-31.56%
2024	-18.79%	-21.78%	-24.62%	-32.77%

From Table 19 it can be seen that all forecasts are consistent with the downward trend registered in electricity consumption in Puerto Rico. It can also be seen that the quantity of electricity demanded varies in a significant way among the various scenarios. The scenario with the smallest reduction in electricity consumption is the one with the ATC proposed in this report, which also shows a slight increase in electricity consumption by FY 2024. All other scenarios show larger decline in the quantity of electricity demanded by residential customers and no improvement by FY 2024. This is an important issue to be taken into account by policy markets, particularly because PREPA has plans to privatize electricity generation, and it will be very difficult to privatize electric generation if it is expected that electricity consumption is going to continue diminishing over time in a significant and consistent way.

### Commercial Demand for Electricity

The commercial demand equation for electricity was specified as:

$$Q_t^{DEC} = \beta_0 + \beta_1 PKWH_t + \beta_2 NI_t^{C+S} + \beta_3 N_t + u_t$$

Where:

$Q_t^{DEC}$  Quantity of electricity in Gwh demanded by commercial consumers of PREPA at year t, t = 2008 to 2017. Variable Name: C\_ELECT\_C.

$\beta_i$  Estimated coefficient for the i-th independent variable.

$PKWH_t$  Unit price of electricity for commercial consumers in \$/kwh in year t.

$DPI_t$  National Income in Commerce and Services in millions of dollars in year t. t = 2008 to 2017. Variable Name: YN\_COM\_SERV.

$N_t$  Total population in thousands of persons. t = 2008 to 2017. Variable Name: POP.

The equation was estimated by the Two Stages Least Squares procedure, and the results, including the statistics and information to evaluate the statistical fit of the equation, are informed in Appendix F to this report. The selected demand equation for PREPA commercial customers was used to forecast consumption under the different scenarios under consideration. Forecasted commercial consumption is reported in Table 20.

**Table 20**  
**Quantity of Electricity Demanded by Commercial Consumers**  
**(Gwh)**

Fiscal Year	ATC	RSA TC	RSA TC + Fiscal Plan: No Risks	RSA TC + Fiscal Plan: w/ Risks
2021	7,544.19	7,539.07	7,533.78	7,524.66
2022	7,481.95	7,476.83	7,471.54	7,460.17
2023	7,419.72	7,414.59	7,408.97	7,394.96
2024	7,373.04	7,367.12	7,361.50	7,345.41

Consistent with what done in the case of residential customer, Table 21 informs the relative difference between each forecasted value and actual consumption registered for commercial PREPA customers in Fiscal Year 2017.

**Table 21**  
**Quantity of Electricity Demanded by Commercial Consumers**  
**Percent Variation with Regard to Quantity Consumed in FY 2017**

Fiscal Year	ATC	RSA TC	RSA TC + Fiscal Plan: No Risks	RSA TC + Fiscal Plan: w/ Risks
2021	-5.62%	-5.68%	-5.75%	-5.86%
2022	-6.39%	-6.46%	-6.52%	-6.67%
2023	-7.17%	-7.24%	-7.31%	-7.48%
2024	-7.76%	-7.83%	-7.90%	-8.10%

As expected, the price elasticity of demand for commercial customers is more inelastic than for other customer categories. In consequence, the variation of forecasted values for commercial electricity consumption are much lower than in other cases, both with regard to quantity consumed in fiscal year 2017, as well as among the different scenarios considered. It should be noted that, for this equation, the only independent

variable that shows statistical significance is population; hence, as long as the population continues declining on the island, the lower the quantity electricity consumed by commercial customers.<sup>34</sup>

## Industrial Demand for Electricity

The industrial demand equation for electricity was specified as:

$$Q_t^{DEC} = \beta_0 + \beta_1 PKWH_t + \beta_2 NI_t^{C+S} + \beta_3 N_t + u_t$$

Where:

$Q_t^{DEC}$  Quantity of electricity in Gwh demanded by commercial consumers of PREPA at year t, t = 2008 to 2017. Variable Name: C\_ELECT\_C.

$\beta_i$  Estimated coefficient for the i-th independent variable.

$PKWH_t$  Unit price of electricity for commercial consumers in \$/kwh in year t.

$DPI_t$  National Income in Commerce and Services in millions of dollars in year t. t = 2008 to 2017. Variable Name: YN\_COM\_SERV.

$N_t$  Total population in thousands of persons. t = 2008 to 2017. Variable Name: POP.

The equation was estimated by the Robust Least Squares Method (Yohai method), and the results, including the statistics and information to evaluate the statistical fit of the equation, are informed in Appendix F, at the end of this report. The selected demand equation for PREPA industrial customers was used to forecast consumption under the different scenarios under consideration. Forecasted residential consumption is reported in Table 22.

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<sup>34</sup> It should be remembered that population decline is largely caused by emigration, which, in turn depends on the level of economic activity. Thus, to reverse the migration trend it is necessary to reverse the structural economic contraction that Puerto Rico has been suffering for over a decade.

**Table 22**

**Quantity Demanded of Electricity by Industrial Customers under Different Scenarios (Gwh)**

Fiscal Year	ATC	RSA TC	RSA + Fiscal Plan (No Risks)	RSA + Fiscal Plan (Risks Included)
2021	1,785	1,739	1,691	1,609
2022	1,693	1,647	1,600	1,497
2023	1,597	1,551	1,500	1,374
2024	1,492	1,439	1,388	1,243

As done in the two previous cases, here again it is computed the variation between forecasted values and actual consumption of industrial customers in FY 2017, before the island was hit by hurricanes Irma and María. Resulting estimates are reported in Table 23.

**Table 23**

**Quantity of Electricity Demanded by Industrial Consumers Percent Variation with Regard to Quantity Consumed in FY 2017**

Fiscal Year	ATC	RSA TC	RSA TC + Fiscal Plan: No Risks	RSA TC + Fiscal Plan: w/ Risks
2021	-18.40%	-20.50%	-22.68%	-26.43%
2022	-22.58%	-24.68%	-26.85%	-31.53%
2023	-26.98%	-29.08%	-31.39%	-37.15%
2024	-31.79%	-34.22%	-36.53%	-43.14%

Industrial customers show the highest response to considered electricity rate increases, among the three categories of customers under consideration. This appears to happen for two reasons: (1) industrial customers have a higher price-elasticity of demand than other categories of consumers,<sup>35</sup> and (2) many of them also have the choice to relocate their productive activities out of Puerto Rico, and electricity rate increases provide an incentive to relocation. It should also be noted that, for industrial

<sup>35</sup> Price-elasticity of demand depends, among other things to the ability of the consumer to substitute goods or services subject to price increases. Industrial customers tend to have a higher capacity to substitute PREPA's electricity for electricity generated in their own facilities than other customer categories.



customer, the ratio between electricity tariff rates in Puerto Rico, as compared to US corresponding rates, results in the highest increase, under all scenarios considered.<sup>36</sup>

### Total Demand for Electricity

Residential, commercial and industrial customers consume 98% of total energy consumed on the island. To estimate total demand, under the different scenarios, total consumption of these three customers categories was adjusted by 98%.<sup>37</sup> The resulting estimates of total electricity consumption, for each scenario, are reported in Table 24.

<sup>36</sup>

**Table A-3**

**Ratios Between Electricity Tariff Rates in Each Scenario by Customer Categories to Median Tariff Rates in US for Electric Power Utilities with More than 100,000 Customers**

Fiscal Year	Alternative TC (ATC)	RSA-TC	RSA+ Fiscal Plan: No Risks	RSA + Fiscal Plan w/Risks
<b>RESIDENTIAL CUSTOMERS</b>				
FY21	2.0	2.2	2.3	2.5
FY22	2.0	2.2	2.3	2.6
FY23	2.0	2.2	2.3	2.7
FY24	2.0	2.2	2.3	2.8
<b>COMMERCIAL CUSTOMERS</b>				
FY21	2.6	2.7	2.9	3.2
FY22	2.6	2.7	2.9	3.2
FY23	2.6	2.7	2.9	3.3
FY24	2.6	2.7	2.9	3.4
<b>INDUSTRIAL CUSTOMERS</b>				
FY21	2.8	2.8	2.8	3.0
FY22	2.9	3.1	3.3	3.7
FY23	2.9	3.1	3.3	3.8
FY24	2.9	3.1	3.3	3.9

Source: American Public Power Association, *Financial and Public Utility Ratios of Public Power Utilities*, Arlington, VA, December 2018, pp. 15 and 16; and computations by the author.

Tables 5.6.A and 5.6.B. of U.S. Energy Information Administration, *Electric Power Monthly with Data for April 2019*, June 2019 were considered for the analysis. Data from the American Public Power Association was preferred to maintain information source consistency in the report.

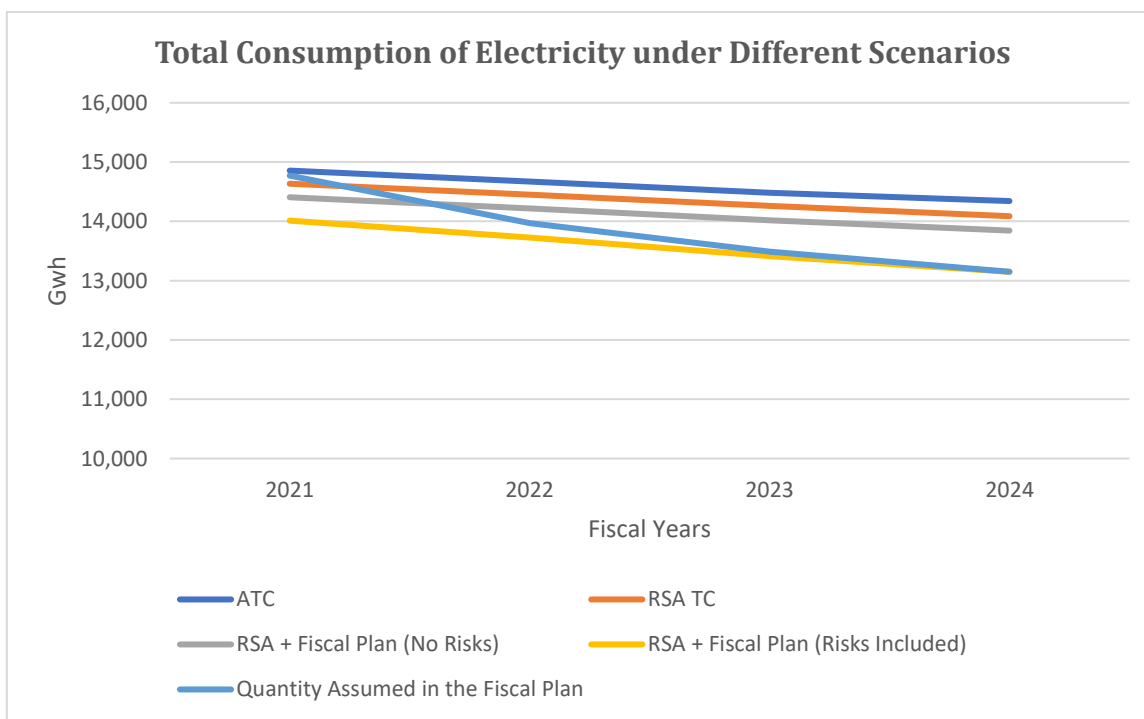
<sup>37</sup> On page 23 of this report it was explained that to forecast total electricity consumption for each fiscal year over the forecasting period, it was aggregated the estimated electricity demand in each category for each fiscal year, and 2% was added to the total obtained to include the consumption of customers categories left out. This procedure implicitly assumes that the main customer categories will continue to be responsible for 98% of total electricity consumption.

**Table 24**

**Total Consumption of Electricity Demanded under Different Scenarios (Gwh)**

Fiscal Year	ATC	RSA TC	RSA + Fiscal Plan (No Risks)	RSA + Fiscal Plan (Risks Included)	Quantity Assumed in the Fiscal Plan
2021	14,856	14,635	14,407	14,013	14,772
2022	14,670	14,449	14,221	13,730	13,972
2023	14,482	14,261	14,018	13,413	13,491
2024	14,343	14,087	13,845	13,149	13,150

The table shows that the expected electricity consumption, over the forecasted period, is higher in the ATC scenario, while the scenario that results with the lowest electricity consumption is the one that includes the TC in the RSA plus Fiscal Plan risks. As indicated earlier, the proposed TC in the RSA is going to increase by 64.5% over the maturity life of securitized bonds. This means that the RSA assumes that PREPA’s annual sales (in Gwh) are going to decrease by 64.5%.



**Diagram 3**

Estimates in Table 24 tend to indicate that future electricity consumption could be underestimated by the RSA and the Fiscal Plan. The consequences that arises from the underestimating expected future demand for electricity are important. Two serious probable consequences are:

1. The Transition Charge schedule in the RSA depends upon expected future consumption of electricity over a very long period of time. As stated before, it is unreasonable to try forecast electricity consumption over such an extended period of time – as well as a TC schedule. But if there is a tendency to underestimate future consumption, then the TC rates in the RSA schedule will be overestimated. For these reasons, it is of outmost importance that, instead of defining a 40 years schedule of Transition Charges, to provide for periodic reviews of the TC. The Puerto Rico Energy Bureau is the most competent institution to undergo the task of these periodic TC reviews.
2. PREPA is in the process of privatizing generation of electric power. If consumption of electricity is not properly forecasted, it will be very difficult for PREPA and the private enterprises to be involved in the process to negotiate a reasonable privatization process. If future electricity consumption is underestimated, private companies may not be interested to negotiate privatization accords, or may want rates and clauses in their contracts to provide for minimum revenues to guarantee their profitability. If electricity consumption is under forecasted, such clauses can result in windfall gains for the companies and losses for PREPA.

## XI. Conclusions

From the analysis developed in this report, the following conclusions can be derived:

1. The RSA devotes a lot of effort to describe in detail its scope and content, as well as to develop detailed measures to assure that bondholders will get the payments agreed under it. But the RSA never justifies its rationale, i.e., why the proposed ratio of restructured debt to outstanding debt, which is the reason to have the two proposed tranches for the bonds to be issued under the restructured debt, and why the interest payments of Tranche B Bonds will be accrued over time, in a way where at the end of 40 years the nominal value of Tranche B Bonds is going to be in the neighborhood of \$20,226 million.
2. There is no any justification for the proposed schedule of the volumetric Transition Charge, included in the RSA. Moreover, this schedule has the implicit assumption that PREPA's electricity are going to decline by 64.5% over time, which completely speculative.
3. Furthermore, the RSA does not devote a single line to consider the impacts that it is expected to have on the Puerto Rico's economy, nor it considers how negative impacts can be mitigated.

4. This report shows that, when the TC in the RSA is added to additional surcharges proposed in the last PREPA's Fiscal Plan, the overall rate increases are significant and very problematic for the economy to afford.
5. An Alternative proposal to restructure PREPA's outstanding debt is developed in this report, with a corresponding Alternative Transition Charge (ATC).
6. When economic consequences of electricity tariff rates increases are evaluated for the different scenarios included in this report, it was found that the most affected sectors on the costs of intermediate inputs are:
  - a. Wholesale and retail trade
  - b. Government
  - c. ManufacturingSuch results tend to imply that proposed rate changes could have serious negative consequences on the economy.
7. When the consequences of the proposed rate increases on the general price level were analyzed, it was found that in all scenarios considered, except in the case of the proposed Alternative Transition Charge, there is a real possibility of cost-push inflation in the economy, with the disruptions it usually causes on resource allocation, diminished production, increased inequality in the distribution of income, and social instability.
8. It was also found that all proposed rate increases tend to significantly reduce the levels of economic activity over time, a much serious outlook for an economy that has been suffering from continuous economic contraction over more than a decade. The only scenario where the economy appears to be able to absorb the rate increase and begins to recover by fiscal year 2024, is the one that considers the Alternative Transition Charge.
9. Consequently, all rate increase scenarios result in substantial reductions in employment levels. It should be noted that, notwithstanding optimistic government statements, official statistics document that total employment shrinkage that has been occurring on the island for over a decade continues. In this respect, again, the only scenario where the economy appears to be able to absorb the rate increase and begins to recover by fiscal year 2024, is the one where the only rate increase is the proposed Alternative Transition Charge.
10. This report also forecasts electricity consumption for all the four scenarios and compares the outcomes with consumption assumed in the Fiscal Plan. The main conclusion is that the RSA and the Fiscal Plan appear to underestimate expected future consumption of electricity. If this happen, it posits serious problems:
  - a. The Transition Charge schedule in the RSA depends upon expected future consumption of electricity. If such consumption is underestimated, then

the scheduled TC is going to overcharge electricity customers. In consequence, instead of providing a TC schedule in an RSA, what should be done is to provide for periodic reviews of the TC by a competent and independent entity, such as the Puerto Rico Energy Bureau.

- b. PREPA is in the process of privatizing generation of electric power. If consumption of electricity is not properly forecasted, it will be very difficult for PREPA and private enterprises to be involved in the process to negotiate sensible privatization accords.

To summarize, the Puerto Rican economy does not appear to be able to afford electricity tariff rates increases proposed in the RSA, much less when these increases are coupled with those proposed in PREPA Fiscal Plan. Instead, the RSA should be carefully reviewed and justified; and PREPA's operations and management must be profoundly reformed to end situations of inefficiency, waste, and other undesirable events, as they have been frequently denounced by local media, as well as in many audit reports issued by the Puerto Rico Comptroller Office over more than two decades.

## Appendix A: Evaluation of the RSA

A Preliminary Evaluation of Proposed PREPA Debt  
Restructuring Agreement

RAMÓN J. CAO GARCÍA PH.D.

## A Preliminary Evaluation of Proposed PREPA Debt Restructuring Agreement

Ramón J. Cao García, Ph.D.  
August 17, 2019

### Description and implications of the proposed PREPA Debt Restructuring Agreement

It is pertinent to evaluate the proposed PREPA Debt Restructuring Agreement (RSA) in some detail. As a principle, we should repay as much of PREPA's debt as it is possible. The question is: how much is possible without compromising future operation of the Authority? This question must be answered because it is the core for avoiding future financial and operational crisis in PREPA.

The RSA contains some key elements that should be evaluated. They are:

5. The restructured debt is going to be issued in the form of Securitization Bonds, secured by a Transition Charge (TC).
6. The TC will begin at 2.768 c/kwh at the first year of validity of RSA, and it is going to be periodically increased up to 4.552 c/kwh at year 24 and thereafter. The TC can be increased up to a maximum of 25% to compensate for Contributions In Lieu of Taxes and Subsidies granted by PREPA.
7. Two kinds of bonds will be issued:
  - a. Tranche A Bonds: In the amount of 67.5% of principal amount of outstanding bonds. These bonds will be tax exempt, with 40 years maturity and a 5.25% coupon.
  - b. Tranche B Bonds: In the amount of 10% of principal amount of outstanding bonds. These bonds may or may not be tax exempt, with 47 years maturity and a 7.00% accretion coupon for tax exempted bonds, and 8.75% accretion coupon for non-tax exempted bonds. Tranche B Bonds will begin to be paid after Tranche A Bonds are paid in full. Also, any amounts on such Tranche B Bonds not paid with Transition Charge Revenues imposed prior to the stated final maturity of the Tranche B Bonds shall not be recoverable by Bondholders.

When RSA is evaluated, it is clearly reasonable that restructured debt to be issued in the form of Securitization Bonds, just to give bondholders assurances for payment of the restructured debt. But the structure proposed for the TC it is not justified, and some important questions arise:

1. The proposed TC is going to increase by 64.5% over the maturity life of the securitized bonds. Since the yearly amount of the debt service is not going to increase over that period of time, it implies an assumption that PREPA's annual sales (in Gwh) are going to decrease by 64.5% over time. This is a totally unfounded assumption. Nobody can forecast electricity consumption in Puerto Rico – or, by that matter, in any other jurisdiction – over a 40 years period. It is true that electricity consumption has been showing a downward trend over recent years, but nobody can predict for how long this trend will continue, or how it will change over an extended period of time. For that reason, it is much more reasonable for the Puerto Rico Energy Bureau to periodically review (every year or every two years) the amount to be imposed as TC.
2. As proposed by RSA, average annual collections from the TC over years 2 to 5 of RSA would be \$615.40 million, but estimated annual debt service for the restructured debt is \$367.93 million.<sup>38</sup> It appears to be that proposed TC over that period is excessive. This is another reason for allowing the Energy Bureau to periodically review and decide the proper amount to be charged to electricity consumers as TC.
3. The RSA proposes to restructure PREPA outstanding debt into 67.5% of Tranche A Bonds, plus 10.0% in Tranche B Bonds. There is no explanation about how the RSA came to those percentages, or how the restructured debt compares to the situation in similar public utilities, or how the RSA is going to impact PREPA finances and operation; furthermore, no analysis is provided with regard of how it will impact the local economy. These are relevant issues that should also be addressed.

Let us consider the Debt to Total Asset Ratios for electric utilities, as reported by the American Public Power Association.<sup>39</sup>

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<sup>38</sup> Value computed through Excel financial formula.

<sup>39</sup> American Public Power Association, *Financial and Operating Ratios of Public Utilities*, Arlington, VA, December 2018.



**Debt to Total Assets Ratios (median values)**

Power Generation Class (p.3)			
No Generation	More than 0 and less than 10%	10% to 50%	50% to 100%
0.230	0.366	0.439	0.489

**Debt to Total Assets Ratios (median value) (p.17)**

More than 100,000 Customers	0.563
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**Debt to Total Assets Ratios (median value) (p.7)**

National Average	0.321
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At this moment, PREPA is in the power generation category of 50% to 100%, where the median debt to total assets ratio (D/A ratio) is 0.489, but PREPA is in the process of privatizing electricity generation, which implies that at the utility's goal is to generate no electricity, where the median value for the D/A ratio is 0.230. On the other hand, PREPA is in the category of companies having more than 100,000 customers, where the D/A ratio is 0.563. Given that information, it is reasonable to consider that an affordable D/A ratio for PREPA is 0.563, i.e., the maximum amount of debt that PREPA should pay without compromising its financial and operational position.

The latest available PREPA's Financial Statement is for the year ending June 30, 2016.<sup>40</sup> There it is stated that PREPA had total assets in the amount of \$8,291.6 million at June 30, 2016,<sup>41</sup> and that its outstanding long-term debt was \$9,118.2 million.<sup>42</sup> This implies that PREPA's D/A ratio is 1.10.<sup>43</sup> If an affordable D/A ratio of 0.563 is applied to PREPA's total assets, it can be concluded that PREPA can afford to pay up to \$4,668 million in restructured debt, without compromising its finances and operations. In consequence, a sensible debt restructuring agreement should be to issue securitized bonds equivalent to 51.2% of principal

<sup>40</sup> BDO Puerto Rico, P.S.C., *PREPA Independent Auditors' Report, Independent Auditors' Financial Statements, Required Supplementary Information and Supplemental Schedules for the year ending June 30, 2018*, San Juan, PR, December 18, 2018.

<sup>41</sup> *Ibid.* p. 4. It also states that, at June 30, 2016, PREPA had fixed assets valued at \$6,574.0 million.

<sup>42</sup> *Ibid.*, p. 10.

<sup>43</sup> The D/A ratio with respect to total fixed assets is 1.387 at June 30, 2016.

amount of outstanding bonds.<sup>44</sup> These bonds, as proposed in RSA, will be tax exempt, with 40 years maturity and a 5.25% coupon. Annual debt service, under this proposal, will be in the order of \$281.4 million, and an Alternative Transition Charge (ATC) will amount to 1.91 c/kwh. Because it is impossible to predict how electricity consumption will behave over a 40 years period, the Puerto Rico Energy Board should periodically – i.e., every year or every two years – revise the amount of the ATC to assure compliance with the debt service. However, it should be noted that PREPA’s asset values used for the computation of the ATC are based on the utility 2016 Financial Statements, which are prior to the 2017 hurricanes. Thus, the final value for restructured debt and the ATC should be calculated based on actual asset values, after passing of the 2017 hurricanes. Hence, the final values for restructured debt and the ATC would be even lower than the ones computed in this report.

4. Under this proposal, there is no need for Tranche B Bonds.
5. It should be noted that, as proposed, the interest in Tranche B Bonds is going to be accrued over time, until Tranche A Bonds are paid in full. If it is assumed that they are going to earn an average interest rate of 7.85%,<sup>45</sup> then the initial principal of \$904.2 for Tranche B Bonds, will grow to become a Tranche B Bonds principal of \$20,226 million by the 40<sup>th</sup> year of the RSA.

## Evaluation of the outlined Alternative Debt Restructuring Agreement

### Electricity Consumption

Since the proposed ATC is lower than the TC proposed in the RSA, it should be expected that the ATC is going to have a smaller impact on electricity consumption than the TC proposed in the RSA. To validate this hypothesis, demand equations for electricity were estimated for PREPA’s main customers categories, and total quantity demanded for fiscal years 2020 to 2024 were forecasted. The table below compares the resulting forecasts with those reported in PREPA’s Fiscal Plan, for the same fiscal years.<sup>46</sup>

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<sup>44</sup> \$4,668 million (the amount of debt that PREPA could afford to pay), divided by \$9,118 million, the amount of outstanding debt as of June 30, 2016, is equal to 0.511954, or 51.2%.

<sup>45</sup> 7.85% is the midpoint between the proposed coupon of 7.00% for tax-exempted Tranche B Bonds and 8.75% for non-tax exempted Tranche B Bonds.

<sup>46</sup> 2019 Fiscal Plan for the Puerto Rico Electric Power Authority As certified by the Financial Oversight and Management Board for Puerto Rico on June 27, 2019, p. 54.

**Forecasted PREPA Electricity  
Sales: Fiscal Plan and Alternative  
TC**

Fiscal Year	PREPA Sales (Fiscal Plan) Gwh	PREPA Sales Alternative TC Gwh
2020	15,832	15,277
2021	14,772	14,959
2022	13,972	14,815
2023	13,491	14,667
2024	13,150	14,565

From the table, it can be seen that electricity consumption tends to be higher under the ATC than what is forecasted in the Fiscal Plan, except in the case of FY2020. For example, in FY2024 it is expected that electricity consumption under ATC is going to be 10.8% higher than the value forecasted in the Fiscal Plan. Higher electricity consumption not only results in higher sales revenues, but it also provides better financial and operational stability to the Utility.<sup>47</sup>

Expected consequences on general economic activity

Electricity consumption is an indicator of the general level of economic activity. All production and market activities use electricity; normally, if other factors remain unchanged and electricity consumption declines, it is because of reduced general economic activity. To evaluate expected consequences of the ATC and the TC proposed in the RSA, an equation to forecast Gross National Product (GNP) at constant prices (i.e., without inflation) was estimated and used to forecast expected GNP at constant prices under the ATC and the TC proposed in the RSA.<sup>48</sup> The table below compares the results obtained.

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<sup>47</sup> Also, it would be very difficult for PREPA to engage in its planned privatization of electricity generation, if the outlook is that electricity consumption is going to shrink by 64.5% over the next 40 years, as implicitly assumed in RSA.

<sup>48</sup> Assumptions in the forecast include:

1. Total population is expected to continue declining, as assumed on page 59 of PREPA Fiscal Plan.
2. Extraordinary federal transfers for reconstruction after hurricanes Irma and María are not included. This because there is uncertainty about how much, when and under what conditions

**Comparison of ATC and TC in RSA on the Level of Economic Activity**

Forecasted Real GNP (\$million)			Change from Real GNP at FY2018 (\$million)		Change from Real GNP at FY2018 (%)	
Fiscal Year	GNP - AT C	GNP - TC in RSA	GNP - ATC	GNP - TC in RSA	GNP - ATC	GNP - TC in RSA
2020	5,948	5,819	222	92	3.9%	1.6%
2021	5,957	5,301	230	-425	4.0%	-7.4%
2022	5,972	5,524	246	-202	4.3%	-3.5%
2023	5,984	5,535	257	-191	4.5%	-3.3%
2024	5,999	5,519	272	-207	4.8%	-3.6%

As shown in the table, adopting the ATC is expected to do not have a significant impact on GNP at constant prices, while the TC proposed in RSA tends to further contract the level of economic activity, which has been steadily declining for over a decade.

**Expected consequences over employment**

The number of persons employed is determined by the level of economic activity. From fiscal years 2009 to 2018, on the average, it was required to employ 161.4 persons per million dollars of GNP at constant prices. Since, from the table on the previous page, it was seen that the ATC does not have any negative material effect on the level of economic activity, it neither is expected to have a negative effect on total employment. The TC proposed by the RSA, on the other hand, does have an expected significant impact on GNP at constant prices, and, in consequence, is expected to also have a negative effect on total employment. The table below quantifies the expected consequences of the TC in the RSA over employment for fiscal years 2012 to 2024.

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these transfers are going to happen. It should also be noted that, two years after the hurricanes, extraordinary transfers do not show any economic impact on the performance of local economy.

- Fuel prices at assumed to level over the forecasting period.

**Expected Employment Loss from  
Implementing the TC in RSA**

Fiscal Year	Employment Loss (persons)	Percent Loss of Employment with regard to FY2018
2021	-68,606	-7.1%
2022	-32,650	-3.4%
2023	-30,843	-3.2%
2024	-33,461	-3.4%

From the table it can be seen that implementing the proposed TC in the RSA, would result in a serious loss of employment, with serious adverse socioeconomic consequences:

1. Increased emigration of person in productive ages and with labor skills in demand.
2. Proportional increase in the old age population, further modifying the structure of aggregate demand for goods and services.
3. Increased pauperization in society.
4. Increased demand for social welfare services to a government that continues facing a fiscal crisis.
5. Shortages of professional in some specialized areas. This creates bottlenecks that generates adverse incentives to investment.

**Summary and conclusions**

As a principle, we should repay as much of PREPA’s debt as it is possible. The questions are: how much is possible without compromising future operation of the Authority?, and how the proposed Debt Restructuring Agreement impacts PREPA’s future operational capacity and the local economy. These questions must be answered because it is the core for avoiding future financial and operational crisis in PREPA. This paper addresses these questions.

As stated earlier in this report, the TC proposed in the RSA is going to increase by 64.5% over the maturity life of the securitized bonds. The RSA assumes that PREPA’s annual

sales (in Gwh) are going to decrease by 64.5% over time. This assumption is totally unfounded. Nobody can forecast electricity consumption in Puerto Rico – or, by that matter, in any other jurisdiction – over a 40 years period. In consequence, assumptions with regard to electricity demand over a 40 years period will surely result in flawed sales and income estimates. For that reason, it is much more reasonable for the Puerto Rico Energy Bureau to periodically review (every year or every two years) the amount to be imposed as TC.

As proposed by RSA, average annual collections from the TC over years 2 to 5 of RSA would be \$615.40 million, but estimated annual debt service for the restructured debt is \$367.93 million.

The RSA proposes that PREPA outstanding debt to be restructured to 67.5% in Tranche A Bonds, plus 10.0% in Tranche B Bonds. There is no explanation about how the RSA came to those percentages, or how the restructured debt compares to the situation in similar public utilities, or how the RSA is going to impact PREPA finances and operation. Additionally, no analysis is provided with regard of how the restructured debt payment will impact the local economy. These are relevant issues that should also be addressed.

When the financial data from electric power utilities in the USA is analyzed, it is reasonable to consider that an affordable D/A ratio for PREPA is 0.563. Given that PREPA had total assets in the amount of \$8,291.6 million at June 30, 2016, and that its outstanding long-term debt was \$9,118.2 million; then, applying the D/A ratio of 0.563, a sensible debt restructuring agreement should be to issue securitized bonds equivalent to 51.2% of principal amount of outstanding bonds. These bonds, as proposed in RSA, will be tax exempt, with 40 years maturity and a 5.25% coupon. Annual debt service, under this proposal, will be in the order of \$281.4 million, and an Alternative Transition Charge (ATC) will amount to 1.91 c/kwh. Because it is impossible to predict how electricity consumption will behave over a 40 years period, the Puerto Rico Energy Board should periodically – i.e., every year or every two years – revise the amount of the ATC to assure compliance with the debt service.

It should be noted that PREPA's asset values used for the computation of the ATC are based on the utility 2016 Financial Statements, which are prior to the 2017 hurricanes. Thus, the final value for restructured debt and the ATC should be calculated based on actual asset values, after passing of the 2017 hurricanes. Hence, the final values for restructured debt and the ATC would be even lower than the ones computed in this report.

Under this proposal, there is no need for Tranche B Bonds.

When expected consequences of ATC are compared with those of the TC proposed in the RSA, it was found that electricity consumption tends to be higher under the ATC than what is forecasted in the Fiscal Plan, except in the case of FY2020. For example, in

FY2024 it is expected that electricity consumption under ATC is going to be 10.8% higher than the value forecasted in the Fiscal Plan. Higher electricity consumption not only results in higher sales revenues, but it also provides better financial and operational stability to the Utility. Also, adopting the ATC is expected to do not have a significant impact on GNP at constant prices, while the TC proposed in RSA tends to further contract the level of economic activity, which has been steadily declining for over a decade. Also, since the ATC does not have any negative material effect on the level of economic activity, it neither is expected to have a negative effect on total employment. The TC proposed by the RSA, on the other hand, does have an expected significant impact on GNP at constant prices, and, in consequence, is expected to also have a negative effect on total employment. It is estimated that implementing the TC proposed in the RSA would reduce total employment in Puerto Rico by 17.1% over fiscal years 2021 to 2024.

Before concluding this report, it is important to point out that PREPA's Fiscal Plan of June 2019 proposes additional charges to electricity tariffs. The Fiscal Plan provides very limited justifications for such proposals, advances unjustified assumptions and does not provide any analysis of the impacts of such proposals upon the demand for electricity and their expected economic. A research is in progress to consider some key issues not taken into account by the Fiscal Plan.

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## Appendix B: Puerto Rico 2013 Input/Output Matrix Condensed to Eight Sectors

### PUERTO RICO 2013 INPUT-OUTPUT MATRIX

#### Eight Sectors Transaction Matrix

(\$ thousands)

	Agriculture	Mining & Construction	Manufacture	Wholesale & Retail Trade	Hospitals & Health Serv	Electricity & Irrigation Serv	Other Services	Government	Total Intermediate
Agriculture	357805	41461	918559	51857	4200	61	203026	40624	1617593
Mining & Construction	7196	80702	716221	307442	64383	0	1433170	73292	2682406
Manufacturing	340202	1591546	19722328	801313	1137327	312320	4520069	1606847	30031952
Wholesale & Retail Trade	153090	194928	5201743	0	268781	1053	1362585	306350	7488530
Hospitals & Health Serv.	0	4	1	8	384304	605	9052	337663	731637
Electricity & Irrigation Serv.	4935	34253	563710	369360	33155	218094	490493	144920	1858920
Other Services	26173	1014027	1554122	4539432	1026312	51487	20054734	976664	29242951
Government	589	74772	109184	55006	4562	0	374472	80688	699273
Intermediate Inputs	889990	3031693	28785868	6124418	2923024	583620	28447601	3567048	74353262
Output	2128681	6656157	92152048	14915553	6993656	2354114	56935704	13746171	
I/O Ratio	0.4181	0.4555	0.3124	0.4106	0.4180	0.2479	0.4996	0.2595	

Source: PR Planning Board and computations by the author.



## Appendix C: Relevant Weights Used to Compute the Consumer Price Index

### EXPENDITURE WEIGHTS IN CPI

	Weights (Dec. 2006)
Apparel	4.24%
Education & communications	5.10%
Foods & beverages	22.78%
Other goods and services	9.79%
Housing & housing services	25.09%
Electricity	2.84%
Health services	5.47%
Entertainment	3.27%
Transportation	24.25%

## Appendix D: Regression Equation Used to Forecast GNP at constant prices

Dependent Variable: GNPR\_PR  
 Method: Robust Least Squares  
 Date: 07/27/19 Time: 07:51  
 Sample: 2000 2017  
 Included observations: 18  
 Method: MM-estimation  
 S settings: tuning=1.547645, breakdown=0.5, trials=200, subsmpl=5,  
 refine=2, compare=5  
 M settings: weight=Bisquare, tuning=4.684  
 Random number generator: rng=kn, seed=78871573  
 Huber Type I Standard Errors & Covariance

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	4254.805	2458.985	1.730309	0.0836
GDPR_US	0.121369	0.042667	2.844606	0.0044
POP	0.571799	0.483347	1.182999	0.2368
PWKH_REV	-12954.93	3022.620	-4.285993	0.0000
R	67.80919	23.26501	2.914643	0.0036

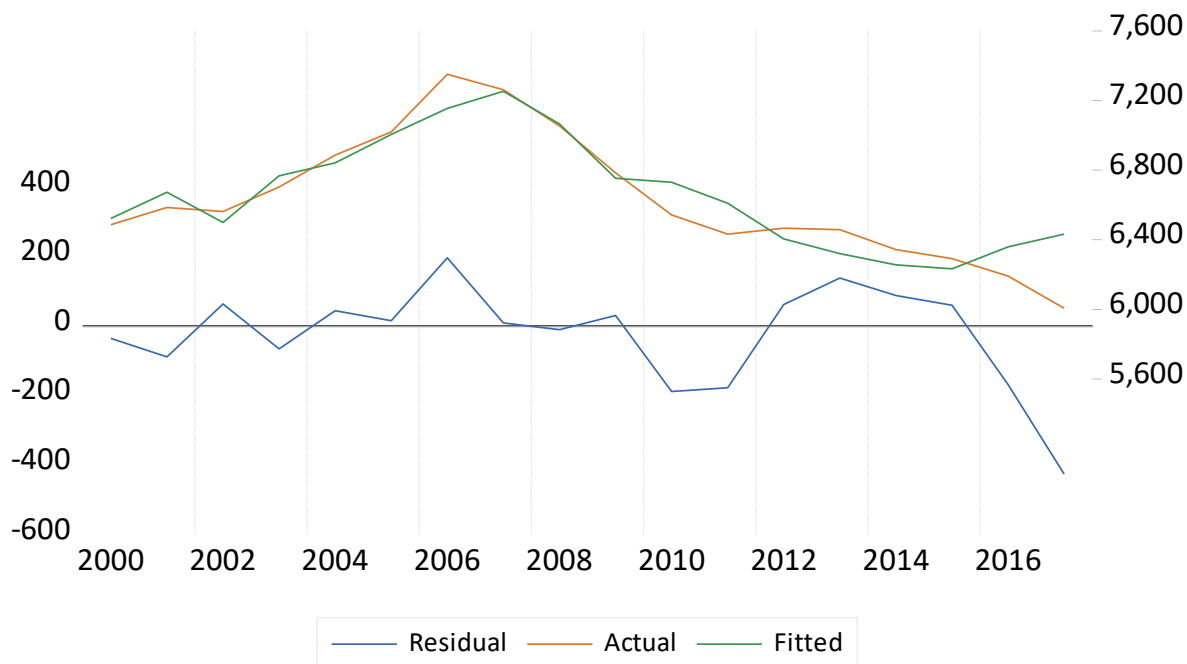
### Robust Statistics

R-squared	0.646910	Adjusted R-squared	0.538267
Rw-squared	0.903572	Adjust Rw-squared	0.903572
Akaike info criterion	32.30184	Schwarz criterion	37.47129
Deviance	243797.2	Scale	102.9122
Rn-squared statistic	64.11395	Prob(Rn-squared stat.)	0.000000

### Non-robust Statistics

Mean dependent var	6634.756	S.D. dependent var	363.9220
S.E. of regression	168.3897	Sum squared resid	368616.2

obs	Actual	Fitted	Residual	Residual Plot
2000	6487.10	6522.44	-35.3379	* .
2001	6585.10	6673.40	-88.3030	* .
2002	6562.60	6499.70	62.8995	. *
2003	6702.70	6768.10	-65.3976	* .
2004	6886.20	6842.32	43.8789	. *
2005	7019.60	7004.56	15.0376	*
2006	7350.60	7154.93	195.666	. *
2007	7261.60	7253.03	8.57402	*
2008	7054.20	7064.74	-10.5399	*
2009	6784.20	6753.74	30.4615	. *
2010	6541.80	6730.09	-188.286	* .
2011	6431.70	6609.23	-177.533	* .
2012	6466.20	6404.61	61.5895	. *
2013	6457.60	6320.07	137.532	. *
2014	6343.90	6256.57	87.3285	. *
2015	6292.20	6232.40	59.7954	. *
2016	6191.50	6359.59	-168.090	* .
2017	6006.80	6431.83	-425.034	* .



## Appendix E: Demand Equation for PREPA's Residential Customers

Dependent Variable: C\_ELECT\_RES  
 Method: Robust Least Squares  
 Date: 08/08/19 Time: 09:35  
 Sample: 2000 2017  
 Included observations: 18  
 Method: MM-estimation  
 S settings: tuning=1.547645, breakdown=0.5, trials=200, subsmpl=4,  
 refine=2, compare=5  
 M settings: weight=Bisquare, tuning=4.684  
 Random number generator: rng=kn, seed=765258960  
 Huber Type I Standard Errors & Covariance

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-10699.11	2210.875	-4.839311	0.0000
PKWH	-10689.75	2557.885	-4.179137	0.0000
YPD	0.095363	0.018656	5.111700	0.0000
POP	3.910486	0.473498	8.258721	0.0000

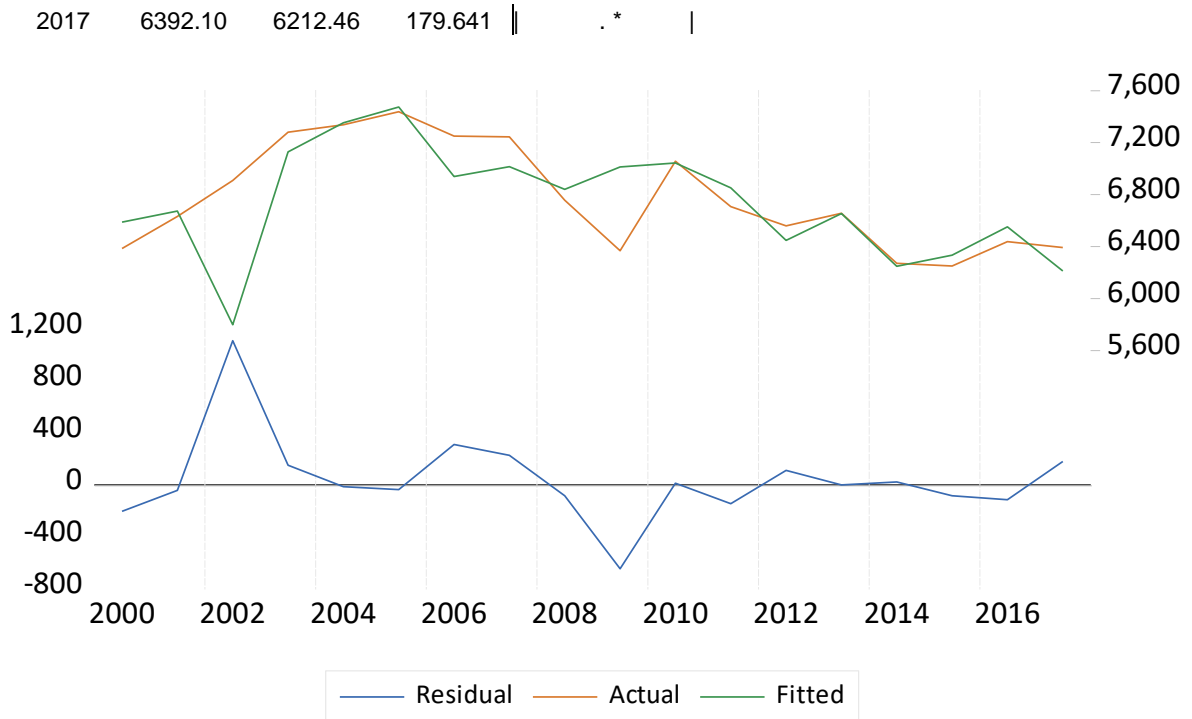
### Robust Statistics

R-squared	0.566199	Adjusted R-squared	0.473242
Rw-squared	0.830297	Adjust Rw-squared	0.830297
Akaike info criterion	23.16494	Schwarz criterion	30.91312
Deviance	908863.8	Scale	216.7158
Rn-squared statistic	71.41569	Prob(Rn-squared stat.)	0.000000

### Non-robust Statistics

Mean dependent var	6774.022	S.D. dependent var	402.1188
S.E. of regression	374.0134	Sum squared resid	1958404.

obs	Actual	Fitted	Residual	Residual Plot
2000	6385.00	6587.82	-202.815	* .
2001	6631.70	6672.64	-40.9408	*
2002	6909.50	5799.43	1110.07	. *
2003	7280.50	7128.29	152.207	. *
2004	7338.10	7351.61	-13.5115	*
2005	7437.90	7474.44	-36.5387	*
2006	7250.30	6938.25	312.045	. *
2007	7243.60	7015.67	227.929	. *
2008	6757.10	6840.81	-83.7119	*
2009	6367.50	7012.42	-644.917	* .
2010	7056.80	7043.08	13.7236	*
2011	6707.50	6851.90	-144.403	* .
2012	6559.60	6447.28	112.323	. *
2013	6655.70	6655.44	0.25521	*
2014	6270.80	6247.95	22.8530	*
2015	6249.70	6333.57	-83.8740	* .
2016	6439.00	6552.63	-113.633	* .

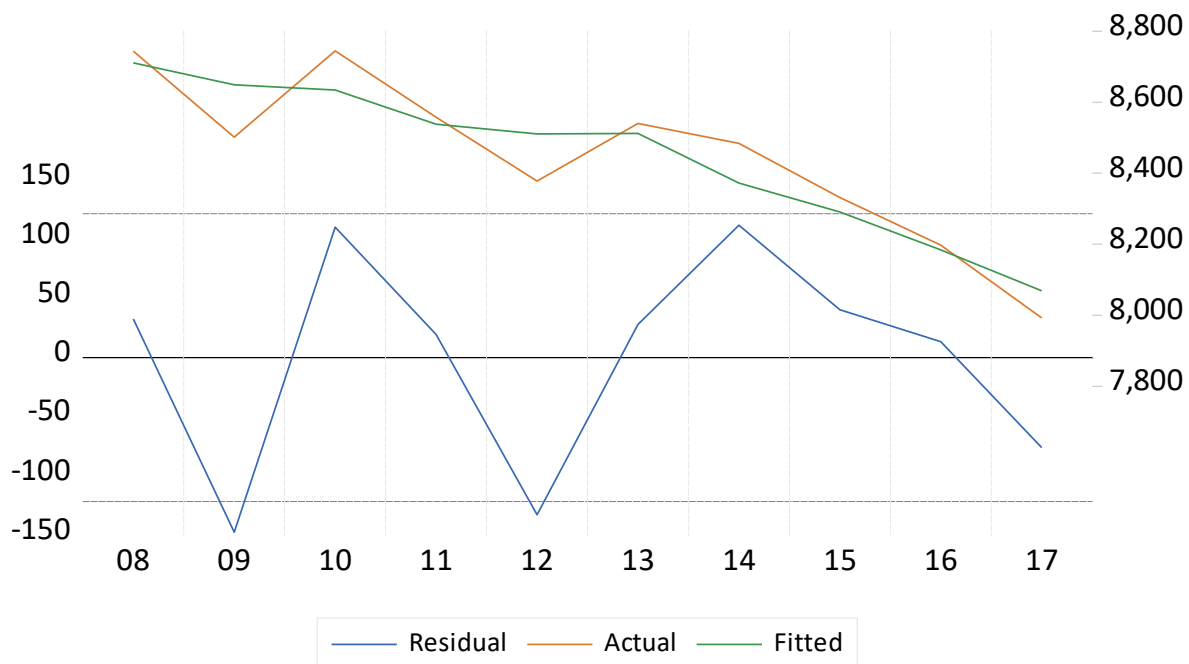


## Appendix F: Demand Equation for PREPA's Commercial Customers

Dependent Variable: C\_ELECT\_C  
 Method: Two-Stage Least Squares  
 Date: 08/08/19 Time: 13:03  
 Sample: 2008 2017  
 Included observations: 10  
 Convergence achieved after 12 iterations  
 Instrument specification: GNPR\_PR GDPR\_US INFLACION  
 Constant added to instrument list  
 Lagged dependent variable & regressors added to instrument list

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2214.728	1912.499	1.158028	0.2992
PKWH	-330.5224	1124.040	-0.294049	0.7805
YN_COM_SERV	0.032966	0.052484	0.628120	0.5575
POP	1.555937	0.298206	5.217654	0.0034
AR(1)	-0.250861	0.454331	-0.552155	0.6046
R-squared	0.848789	Mean dependent var		8447.070
Adjusted R-squared	0.727820	S.D. dependent var		232.9500
S.E. of regression	121.5321	Sum squared resid		73850.22
Durbin-Watson stat	2.396170	J-statistic		1.572128
Instrument rank	8	Prob(J-statistic)		0.665726
Inverted AR Roots	-0.25			

obs	Actual	Fitted	Residual	Residual Plot
2008	8743.70	8711.00	32.7001	.   *   .
2009	8501.30	8648.77	-147.473	*.     .
2010	8744.20	8634.07	110.129	.     *.
2011	8557.90	8538.28	19.6225	.     *   .
2012	8378.10	8510.88	-132.784	*.     .
2013	8540.10	8512.09	28.0093	.     *   .
2014	8483.80	8371.94	111.857	.     *   .
2015	8331.30	8290.86	40.4389	.     *   .
2016	8197.70	8184.21	13.4854	.     *   .
2017	7992.60	8068.59	-75.9859	.   *     .



## Appendix G: Demand Equation for PREPA's Industrial Customers

Dependent Variable: CELECT\_M  
 Method: Robust Least Squares  
 Date: 08/12/19 Time: 12:47  
 Sample: 2000 2017  
 Included observations: 18  
 Method: MM-estimation  
 S settings: tuning=1.547645, breakdown=0.5, trials=200, subsmpl=4,  
 refine=2, compare=5  
 M settings: weight=Bisquare, tuning=4.684  
 Random number generator: rng=kn, seed=2069320706  
 Huber Type I Standard Errors & Covariance

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	8123.459	1378.982	5.890911	0.0000
PKWH_M	-2971.362	4569.783	-0.650220	0.5156
GDPR_US	-0.220162	0.170870	-1.288475	0.1976
YN_MANUF	-0.029515	0.050646	-0.582760	0.5601

### Robust Statistics

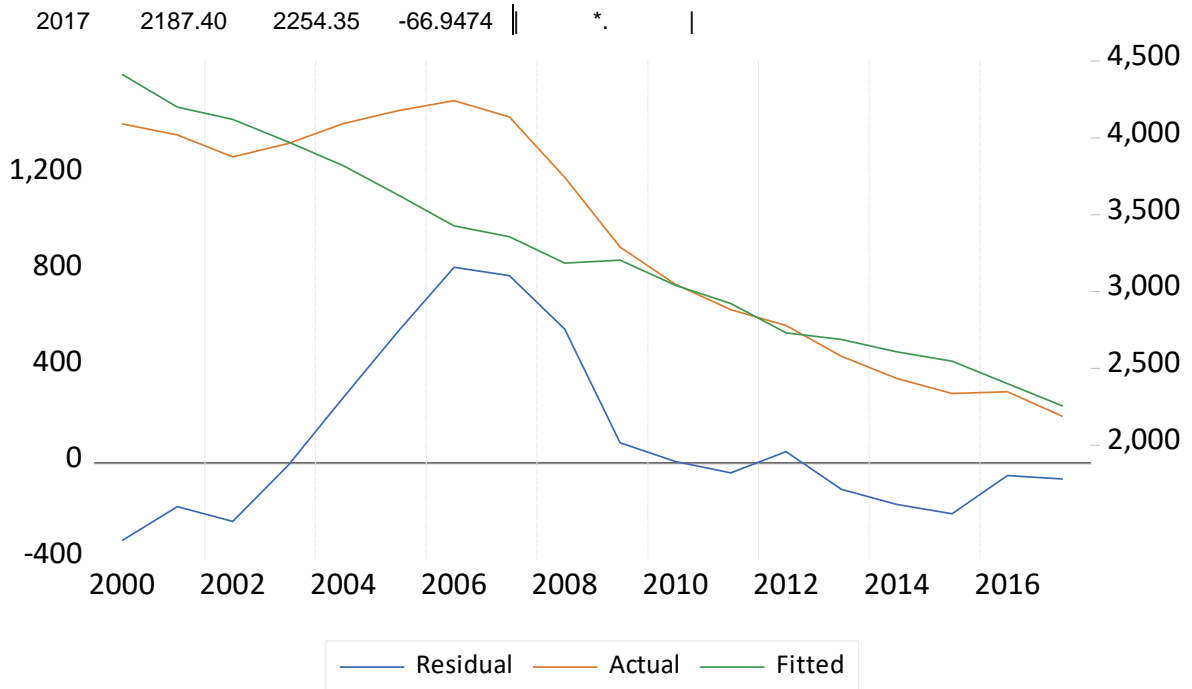
R-squared	0.576868	Adjusted R-squared	0.486197
Rw-squared	0.880527	Adjust Rw-squared	0.880527
Akaike info criterion	36.87444	Schwarz criterion	40.43760
Deviance	1520756.	Scale	229.4882
Rn-squared statistic	37.84651	Prob(Rn-squared stat.)	0.000000

### Non-robust Statistics

Mean dependent var	3345.428	S.D. dependent var	763.6260
S.E. of regression	402.0701	Sum squared resid	2263245.

obs	Actual	Fitted	Residual	Residual Plot
2000	4090.60	4414.01	-323.414	* .
2001	4018.70	4200.32	-181.621	* .
2002	3876.40	4119.19	-242.788	* .
2003	3963.40	3973.70	-10.3015	* .
2004	4092.10	3819.14	272.955	. *
2005	4177.40	3626.57	550.828	. *
2006	4241.80	3426.48	815.323	. *
2007	4136.30	3356.26	780.044	. *
2008	3742.60	3185.15	557.451	. *
2009	3288.40	3204.18	84.2192	. *
2010	3047.20	3041.02	6.18385	* .
2011	2881.10	2922.12	-41.0164	* .
2012	2778.60	2731.75	46.8546	. *
2013	2578.20	2688.24	-110.043	* .
2014	2434.30	2606.92	-172.618	* .
2015	2335.70	2546.79	-211.093	* .
2016	2347.50	2400.07	-52.5726	* .





## Appendix H: General Assumptions Used in Estimating Demand Equations for Electricity and Forecasting Consumption

1. Electricity prices: Actual prices until FY 2019 were obtained by dividing PREPA's Total Revenues by Total Consumption in each tariff category (residential, commercial and industrial). Expected future prices were estimated by tariff category adding the corresponding increase in price for each scenario to the average price in FY 2019.
2. Population: For FY 2000 to 2018 it was used actual population values as reported by PR Planning Board, *Statistical Appendix to the Economic Report to the Governor, 2018, and previous issues of the report*. For years after FY 2018, Population estimated were taken from PREPA's Fiscal Plan, p. 59.
3. Disposable Personal Income: For FY 2000 to 2018 it was used the actual Disposable Personal Income values as reported by PR Planning Board, *Statistical Appendix to the Economic Report to the Governor, 2018, and previous issues of the report*. For years after FY 2018, annual values were estimated by adding the average growth rate registered from fiscal years 2008 to 2018.
4. National Income of Commerce and Services: For FY 2000 to 2018 there were added actual values of National Income (or Net Income) for all categories in commerce and services, as reported by PR Planning Board, *Statistical Appendix to the Economic Report to the Governor, 2018, and previous issues of the report*. For years after FY 2018, annual values were estimated by adding the average growth rate registered from fiscal years 2008 to 2018.
5. National Income of Manufacturing: For FY 2000 to 2018 it was used the actual values of National Income (or Net Income) in manufacturing, as reported by PR Planning Board, *Statistical Appendix to the Economic Report to the Governor, 2018, and previous issues of the report*. For years after FY 2018, annual values were estimated by adding the average growth rate registered from fiscal years 2008 to 2018.
6. Gross Domestic Product in the US: For years 2000 to 2018 it was used actual values of Gross Domestic Product in the US, as reported by the Federal Reserve Bank of Saint Louis in its website FRED. For years after 2018, the forecasts of the Congress Budget Office were used.

# Economic Impact of PREPA Restructuring Debt Agreement on the Consumers-Residential Electricity -in Puerto Rico

JUNE 14, 2019



José Israel Alameda Lozada Ph.D.  
Economist and UPR Professor



## EXECUTIVE SUMMARY

### **Economic Impact of PREPA Restructuring Debt Agreement on the Consumers-Residential -in Puerto Rico.**

#### **José I. Alameda Lozada Ph.D.**

This technical report is on behalf SOMOS, Inc., prepared by the economist José I. Alameda Lozada Ph.D., professor at the University of Puerto Rico. The main task of this report was to assess the economic impact over the consumers of Puerto Rico regarding the Restructuring Agreement of PREPA with the bondholders (May, 2019). Local consumers have been concerned about the transition charges (TC) because it will hike the cost-per-kWh, over a 50-year horizon. The TC starts at 2021 by 2.768 cent per kWh to residential, industrial and commerce sectors. This TC will be increased until a 4.552 cents by 2043 and hence after until debt services will be totally paid off.

#### **Our main conclusions are:**

- 1) The econometric models yielded outstanding results and consistent estimates. The model results forecasted a cost-per-kWh of 26 to 27 cents at the long-run, even before the setting of TC. Following EIA, at February, 2019, current cent-per-kWh are 21.85 for Residential, 22.35 for Commercial and 20.14 for Industrial.
- 2) The results also yielded that demand of residential energy will fall 65.2%; while cost-per-kWh will increased by 18.6% (without a TC); and revenues to PREPA from residential-clients will also fall by 58.7%. This conclusion is explained by a decreasing level of income, and population size in Puerto Rico, but also, higher level of energy prices.
- 3) The total level of expenditures from residential clients over the period 2019 to 2068 amounted to \$49.9 billion or \$1,018 million per year.

If the TC were imposed, the results found supported the following conclusions:

- 1) The total demand of residential energy will further fall down by 2.65%. The total decrease of the demand of kWh is estimated by 5.168 billion of kWh.
- 2) Nonetheless, the level of net expenditures will be hiked from \$49.9 billion to \$55.6 billion, for an absolute changes of \$5.585 billion.
- 3) The per year level of net expenditures rose from \$1,018 million to \$1,135 million, or an absolute change of 116.3 million per year.
- 4) This net expenditures would be divided into: (a) lower demand of energy and thereby, less revenues to PREPA, and; (b) a significant amount of cash flows targeted to bondholders. The value of (a) is negative, while (b) is positive.
- 5) The transition charges imply higher levels of cost-per-kWh for resident-clients and, then, lower revenues to PREPA. PREPA's revenues will loss \$1,340 million or \$27.35 million per year.
- 6) Otherwise, transition charges will take away from the consumers' pockets \$6.925 billion or \$141.33 million per year.
- 7) The expenditures hikes will never elevate PREPA's operational revenues because there are not belonging to such category, rather to a different pocket designed to bondholders.
- 8) The average of transition charge per family was \$172.00 per year and the median value \$181.00 per year.

Regarding PREPA's CEO claims of new plants fueling LGN, this report simulates several scenarios of cost-per-kWh with TC, but also with cost savings. The cost savings simulation were minus 1, 1.5, 2.0 and 2.5 cents. The results were as follow:

1) The total level of expenditures for the overall period without TC amounted \$49.9, with TC reached to \$55.6 billion. Now considering 1 cent of saving, the expenditures will fall to \$54.1 billion; with 1.5 cents, \$51.5 billion; with 2.0 cents, \$50.8 billion, and with 2.5 cents, \$50.1 billion.

2) On per year base, the total expenditures without TC amounted \$1,018 million; with TC, \$1,135 million, and increased of \$116.3 million per year. Then, if considering cost savings, then, one cent saving, \$1,103 million per year; 1.5 cent saving, \$1,052 million; 2.0 cents per year, \$1,037 million, and finally, 2.5 cents, \$1,022 million.

3) The main conclusion pointed out that even considering cost savings from gas conversion on several oil fired plants, the cost saving will not enough to circumvent a higher level of consumer expenditures due to the setting of transition charge.

**END.**

## 1. Introduction

The Puerto Rico Electric Power Authority (henceafter PREPA) and the Ad Hoc Group of Uninsured Bondholders, have reached a tentative agreement with bond insurer of Assured Guaranty aimed to pursuing a restructure of total debt of \$8 billion. The tentative agreement filed by PREPA through the Financial Oversight & Management Board and Fiscal Agency (**FOMC**) and Financial Advisory Authority (**AAFAF**), seeking to extend the deadlines of a lawsuit brought by several monoline bond insurers to put PREPA into receivership. The Plan was unveiled at May 3, 2019 but discussion and disagreement have been raised in Puerto Rico before a final solution at the end of July, 2019.

One of the main issue of this Restructuring Agreement is the impact over the economic sectors, say consumers, industry and commerce. Their concern is the higher level of cost of electrical energy due to a given transition charges (TC) over a 50- year horizon timeframe (See Graph 1). The TC starts at 2021 by 2.768 cent per kWh to residential, industry and commerce sectors. This TC will be increased until reached 4.552 cents by 2043 and hence after until paid totally the clauses of the Agreement. Following EIA, the information of Puerto Rico at February, 2019, the current cent-per-kWh is 21.85 for Residential, 22.35 for Commercial and 20.14 for Industrial<sup>1</sup>.

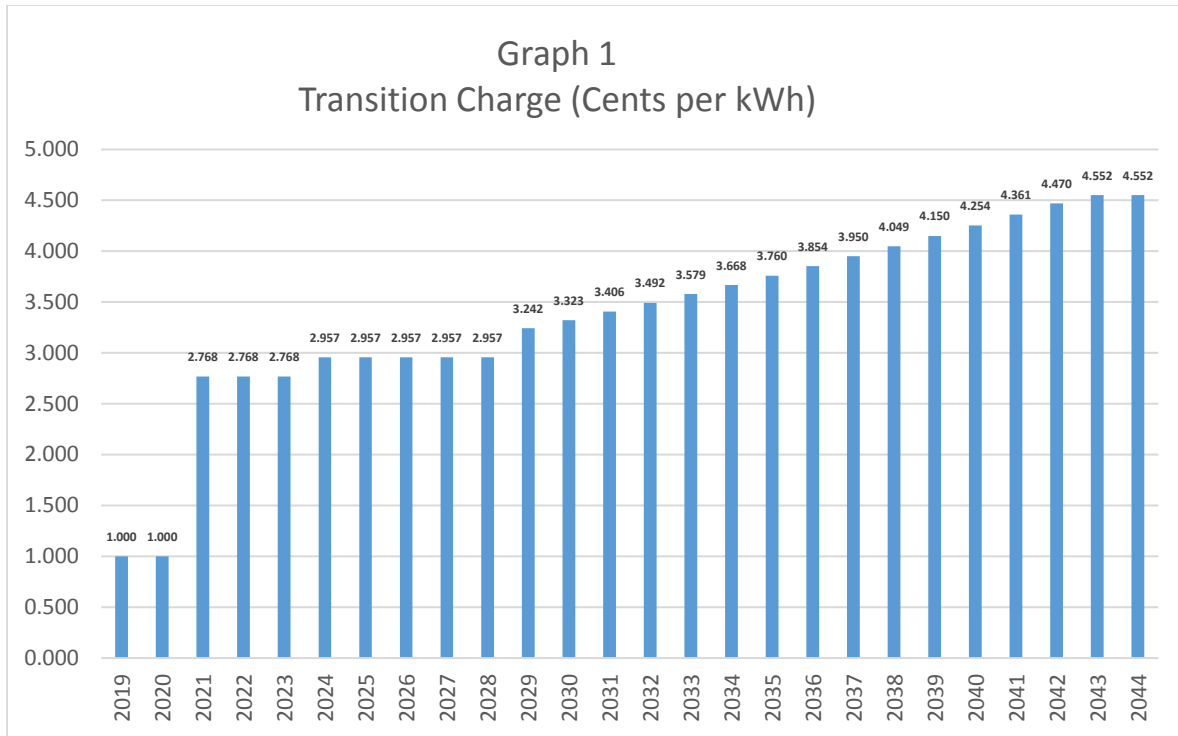
In spite of PREPA's CEO and Government Officers have claimed that some current PREPA's oil fired plants will be converted to natural gas driving down the cost of kWh by 1 to 3 cents; this proposal have not been supported by any study or internal report.

Thereby, the main purpose of this technical report is threefold:

- (1) Forecast the cost of kWh with and without transition charges (TC)
- (2) Examining the impact over the consumer sector, say, residential electricity consumption over the 50-year ahead;
- (3) And, estimate the additional expenditures of consumers regarding the energy bills over 50-year forwarded.

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<sup>1</sup> Energy Information Administration (EIA). Puerto Rico Territory, Energy Profile, Quick Facts. <https://www.eia.gov/state/print.php?sid=RQ>.



Source: PREPA Debt Agreement

## 2. The profile of residential energy consumption

There are three main categories of electricity consumption; residential, commerce and industrial. Other can be found on agriculture, public lights and so on. Table depicts the three main electricity consumers or clients: (a) residential, (b) commerce and (c) industrial.

As can be seen, total consumption has been fallen to 17 billion of kWh by 2019 from 20 billion at the mid-2000s. The residential consumption has been around 6 to 7 billion of kWh. Commercial consumption overpassed residential because it amounted over 8 billion of kWhs; and industrial over 2 billion. By 2019, residential accounted for 38% of total consumption, while commerce did so by 47%, and industrial, 13%. Others accounted for 2.4%.

**Table 1**

**Consumption of Electricity by Category: Residential, Commercial and Industrial**

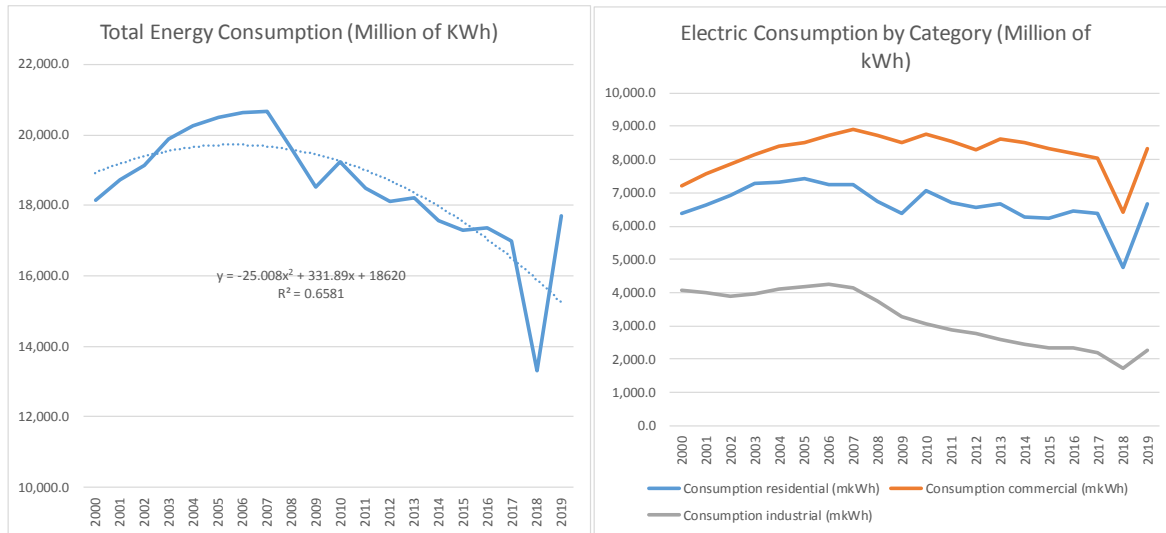
Fiscal Years	Consumption residential (mkWh)	Consumption commercial (mkWh)	Consumption industrial (mkWh)	Other (mkWh)	total (mkWh)
2000	6,385.0	7,206.4	4,090.6	462.7	18,144.7
2001	6,631.7	7,583.0	4,018.7	490.0	18,723.4
2002	6,909.5	7,865.4	3,876.4	478.6	19,129.9
2003	7,280.5	8,166.8	3,963.4	476.6	19,887.3
2004	7,338.1	8,400.1	4,092.1	429.9	20,260.2
2005	7,437.9	8,498.6	4,177.4	393.6	20,507.5
2006	7,250.3	8,734.6	4,241.8	393.8	20,620.5
2007	7,243.6	8,909.4	4,136.3	382.3	20,671.6
2008	6,757.1	8,743.5	3,742.6	358.3	19,601.5
2009	6,367.5	8,498.0	3,288.4	361.9	18,515.8
2010	7,056.8	8,759.1	3,047.2	371.8	19,234.9
2011	6,707.5	8,551.2	2,881.1	361.6	18,501.4
2012	6,559.6	8,300.0	2,778.6	474.3	18,112.5
2013	6,655.7	8,635.4	2,578.2	351.9	18,221.2
2014	6,270.8	8,497.3	2,434.3	358.5	17,560.9
2015	6,249.7	8,331.1	2,335.7	363.5	17,280.0
2016	6,439.0	8,186.8	2,347.5	375.8	17,349.1
2017	6,392.1	8,036.7	2,187.4	379.6	16,995.8
2018	4,764.5	6,427.6	1,745.7	363.7	13,301.5
2019	6,676.0	8,329.1	2,280.9	416.6	17,702.6

Fiscal Years	Consumption residential (mkWh)	Consumption commercial (mkWh)	Consumption industrial (mkWh)	Other (mkWh)	total (mkWh)
2000	35.2%	39.7%	22.5%	2.6%	100.0%
2001	35.4%	40.5%	21.5%	2.6%	100.0%
2002	36.1%	41.1%	20.3%	2.5%	100.0%
2003	36.6%	41.1%	19.9%	2.4%	100.0%
2004	36.2%	41.5%	20.2%	2.1%	100.0%
2005	36.3%	41.4%	20.4%	1.9%	100.0%
2006	35.2%	42.4%	20.6%	1.9%	100.0%
2007	35.0%	43.1%	20.0%	1.8%	100.0%
2008	34.5%	44.6%	19.1%	1.8%	100.0%
2009	34.4%	45.9%	17.8%	2.0%	100.0%
2010	36.7%	45.5%	15.8%	1.9%	100.0%
2011	36.3%	46.2%	15.6%	2.0%	100.0%
2012	36.2%	45.8%	15.3%	2.6%	100.0%
2013	36.5%	47.4%	14.1%	1.9%	100.0%
2014	35.7%	48.4%	13.9%	2.0%	100.0%
2015	36.2%	48.2%	13.5%	2.1%	100.0%
2016	37.1%	47.2%	13.5%	2.2%	100.0%
2017	37.6%	47.3%	12.9%	2.2%	100.0%
2018	35.8%	48.3%	13.1%	2.7%	100.0%
2019	37.7%	47.0%	12.9%	2.4%	100.0%

Source: PREPA, <http://energia.pr.gov/datos/consumo-total-en-millones-de-kwh/>

**Graph 1 and 2.**



Source: PREPA, <http://energia.pr.gov/datos/consumo-total-en-millones-de-kwh/>



In term of PREPA’s gross revenues, the picture is so similar to kWh’s consumption. Total revenues have been fallen since 2012, when revenues amounted \$5 billion. In 2019, revenues were \$3.9 billion, for a decline of \$1.1 billion, or 22%. In term of residential revenues to PREPA, the decline was to \$1.4 billion (2019) from \$1.76 billion at 2012, a drop of 20%. Meanwhile, both commercial and industrial revenues to PREPA depicted declining trends since 2012; the first by 22.8% and the later, by 34.2%.

**Table 2**

**Consumption of Electricity by Category: Residential, Commercial and Industrial**

Fiscal Years	Residential	Commercial	Industrial	Other	Total Revenues
2000	\$633	\$879	\$392	\$80	\$1,985
2001	\$782	\$1,026	\$436	\$87	\$2,331
2002	\$726	\$969	\$382	\$85	\$2,162
2003	\$868	\$1,117	\$432	\$91	\$2,509
2004	\$898	\$1,171	\$444	\$87	\$2,600
2005	\$1,066	\$1,351	\$529	\$92	\$3,038
2006	\$1,285	\$1,657	\$663	\$104	\$3,709
2007	\$1,272	\$1,666	\$631	\$102	\$3,671
2008	\$1,499	\$2,015	\$721	\$116	\$4,351
2009	\$1,374	\$1,897	\$602	\$113	\$3,986
2010	\$1,514	\$1,960	\$564	\$116	\$4,154
2011	\$1,579	\$2,107	\$596	\$123	\$4,406
2012	\$1,757	\$2,464	\$678	\$133	\$5,031
2013	\$1,667	\$2,417	\$602	\$134	\$4,821
2014	\$1,634	\$2,302	\$563	\$135	\$4,635
2015	\$1,469	\$2,014	\$481	\$126	\$4,090
2016	\$1,165	\$1,570	\$369	\$109	\$3,213
2017	\$1,255	\$1,668	\$389	\$121	\$3,434
2018	\$1,072	\$1,475	\$352	\$123	\$3,021
2019	\$1,408	\$1,901	\$446	\$138	\$3,893

Fiscal Years	Residential	Commercial	Industrial	Other	Total Revenues
2000	31.9%	44.3%	19.7%	4.1%	100.0%
2001	33.5%	44.0%	18.7%	3.7%	100.0%
2002	33.6%	44.8%	17.7%	3.9%	100.0%
2003	34.6%	44.5%	17.2%	3.6%	100.0%
2004	34.5%	45.0%	17.1%	3.4%	100.0%
2005	35.1%	44.5%	17.4%	3.0%	100.0%
2006	34.6%	44.7%	17.9%	2.8%	100.0%
2007	34.7%	45.4%	17.2%	2.8%	100.0%
2008	34.4%	46.3%	16.6%	2.7%	100.0%
2009	34.5%	47.6%	15.1%	2.8%	100.0%
2010	36.5%	47.2%	13.6%	2.8%	100.0%
2011	35.8%	47.8%	13.5%	2.8%	100.0%
2012	34.9%	49.0%	13.5%	2.6%	100.0%
2013	34.6%	50.1%	12.5%	2.8%	100.0%
2014	35.3%	49.7%	12.1%	2.9%	100.0%
2015	35.9%	49.2%	11.8%	3.1%	100.0%
2016	36.3%	48.9%	11.5%	3.4%	100.0%
2017	36.6%	48.6%	11.3%	3.5%	100.0%
2018	35.5%	48.8%	11.6%	4.1%	100.0%
2019	36.2%	48.8%	11.5%	3.5%	100.0%

Source: PREPA, <http://energia.pr.gov/datos/consumo-total-en-millones-de-kwh/>

**3. Forecasting the cost –per-kWh, excluding TC**

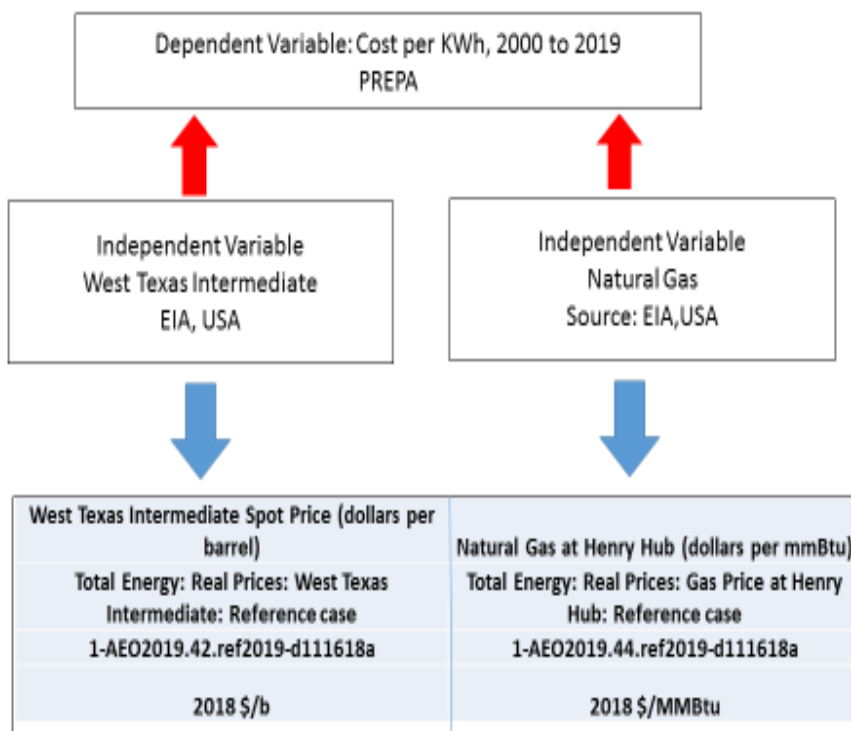
The first step relies upon the estimation of cost per kWh with and without the TC. The time frame considered is from historical 2000 to 2019 and forecasting for 2020 to 2068 (50- years ahead). The regression basic equation is:

$\text{Cost –per- kWh (cents)} = f(\text{West-Texas Intermediate (2018 price), Henry Hubb Gas price (2018 prices) and Trend value}).$
---

The equation will be performed converting variable at **natural logarithm**<sup>2</sup>.

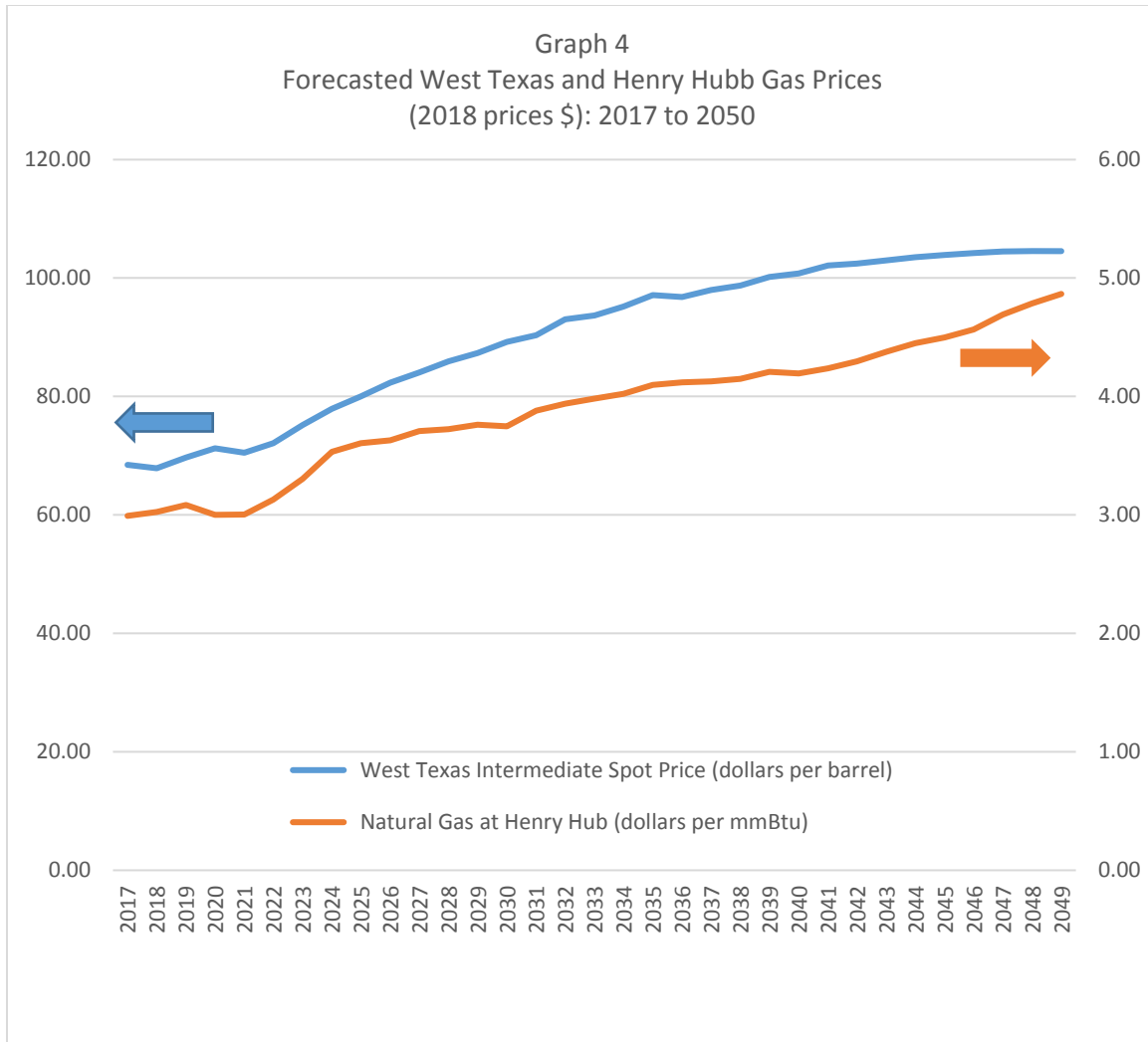
The independent variables are sourced from **Energy Information Administration** (<https://www.eia.gov/outlooks/aeo/pdf/aeo2019.pdf>; <https://www.eia.gov/outlooks/aeo/>); while the dependent variable is from PREPA-Estadísticas (<https://www2.aeepr.com/aees/estadisticas.asp>).

At 2018, PREPA's net generation was mainly based upon oil derived fuels by 70% and natural gas by a 30%, thereby, the cost equation has to take on account such fuel inputs mix. Notwithstanding, at the future, this mix will be bias toward natural gas. Then the model will be as follow:



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<sup>2</sup> The **natural logarithm** of a number its **logarithm** to the base of the mathematical constant e; such e is an irrational and transcendental number approximately equal to 2.718281828459. ...



Source: EIA, **Report Annual Energy Outlook 2019**, January 2019,  
<https://www.eia.gov/outlooks/aeo/>

The equation will be tested on four statistical time series procedures:

**Four Regression Methods (using E-Views)**

- Regression Ordinary Least Square (OLS)
- Cointegration Fully Modify OLS
- Cointegration Dynamic OLS
- Cointegration Canonical

The equation of cost shall be tested as follow:

***Cost per kWh residential (cents)*** =  $f$ (West-Texas Intermediate (2018 price), Henry Hubb Gas price (2018 prices) and Trend value).

Unfortunately, we omitted a deepness discussion of the statistical features of the variety of cointegration models and the traditional Ordinary Least Squares (OLS). However, several authors have claimed that cointegration, either DOLS or FMOLS are superior to the OLS: (1) OLS estimates are super-consistent, but the t-statistic obtained without stationary or  $I(0)$  terms are only approximately normal (see Arize, Malindretos and Ghosh (2015) in International Review of Economics and Finance. Also, see Arize, Osang and Slottje (2000) in ***Journal of Business & Economic Statistics***)<sup>3</sup> FMOLS is a non-parametric approach used to dealing with serial correlation. Dynamic OLS (DOLS) is an alternative (parametric) approach in which lags and leads are introduced to cope with the problem irrespectively of the order of integration and the existence or absence of cointegration. Either DOLS or FMOLS are usually preferred to the OLS estimator because they take care of small sample bias but also the endogeneity bias by taking the leads and lags of the first-differenced regressors.

The different results are shown at the following slides. These results meant different scenarios about the future cost of kWh. Therefore, in order to simplify the analysis, we found an average or mean value (See Graph x & J).

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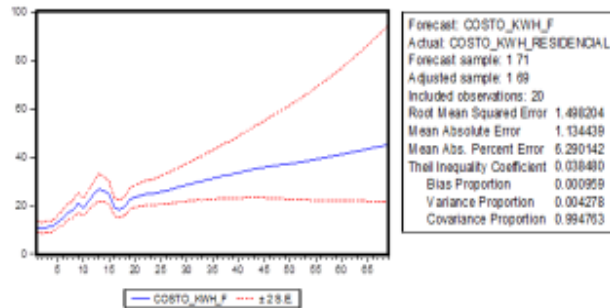
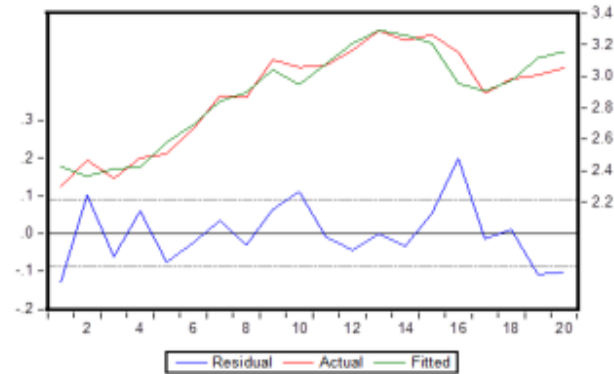
<sup>3</sup> Purchasing power parity-symmetry and proportionality: Evidence from 116 countries, Augustine C. Arize, John Malindretos, Dilip Ghosh, Pages 69-85. Exchange-Rate Volatility and Foreign Trade: Evidence From Thirteen LDC's, at Journal of Business and Economic Statistics 18(1):10-17 · February 2000 with 2,536 Reads Kirikkaleli, D. (2016). Interlinkage between economic, financial, and political risks in the Balkan countries: Evidence from a panel cointegration. Eastern European Economics, 54(3), 208-227. Vedat Yorucu, V., & Bahramian, P. (2015). Price modelling of natural gas for the EU-12 countries: Evidence from panel cointegration. Journal of Natural Gas Science and Engineering, 24, 464-472. Yorucu, V., & Kirikkaleli, D. (2017). Empirical Modeling of Education Expenditures for Balkans: Evidence from Panel FMOLS and DOLS Estimations. Revista de Cercetare si Interventie Sociala, 56.

### Using OLS-Forecasting cost per KWh

Dependent Variable: LOG(COSTO\_KWH\_RESIDENCIAL\*100)  
Method: Least Squares  
Date: 06/02/19 Time: 13:03  
Sample (adjusted): 2000 2020  
Included observations: 20 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.770842	0.204462	2.770194	0.0017
TREND	0.010330	0.008801	1.568886	0.1325
LOG(WEST_TKXAD)	0.579455	0.071655	0.032601	0.9800
LOG(HENRY_HUBB)	-0.207348	0.094980	-2.457642	0.0258

R-squared	0.533091	Mean dependent var	2.888726
Adjusted R-squared	0.520446	S.D. dependent var	0.261467
S.E. of regression	0.089205	Akaike info criterion	-1.838909
Sum squared resid	0.127320	Schwarz criterion	-1.635763
Log likelihood	22.18909	Hannan-Quinn criter.	-1.780284
F-statistic	74.27679	Double-White stat.	1.903807
Prob(F-statistic)	0.000000		



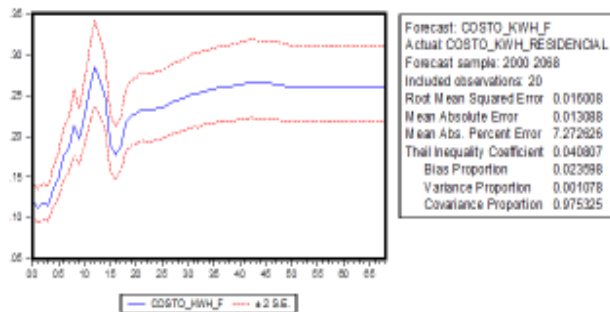
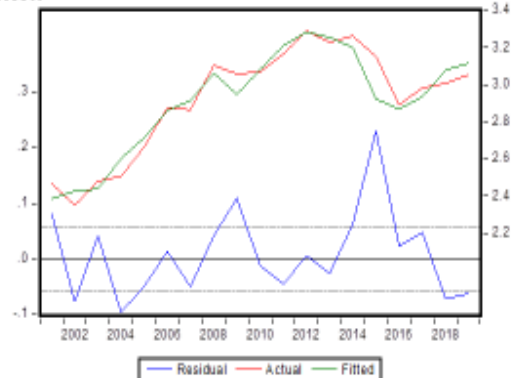
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### Using Cointegration FMOLS-Forecasting cost per KWh

Dependent Variable: LOG(COSTO\_KWH\_RESIDENCIAL\*100)  
Method: Fully Modified Least Squares (FMOLS)  
Date: 06/02/19 Time: 13:11  
Sample (adjusted): 2001 2019  
Included observations: 19 after adjustments  
Cointegrating equation determined: C  
Long-run covariance estimate (Bartlett kernel, Newey-West fixed bandwidth = 3.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(WEST_TKXAS)	0.645503	0.039511	16.33748	0.0000
LOG(HENRY_HUBB)	-0.281288	0.040528	-4.463409	0.0000
C	0.702963	0.165530	4.246750	0.0006

R-squared	0.323816	Mean dependent var	2.519877
Adjusted R-squared	0.314293	S.D. dependent var	0.281941
S.E. of regression	0.085468	Sum squared resid	0.116876
Durbin-Watson stat	1.743143	Long-run variance	0.020181



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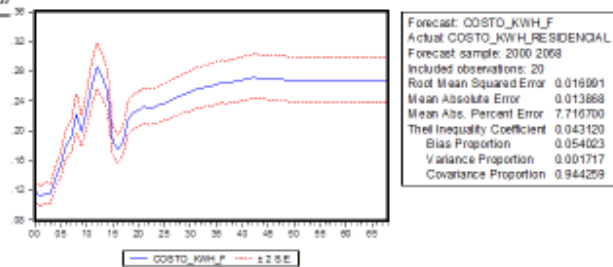
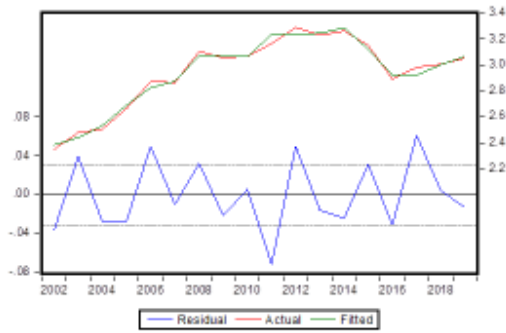
### Using Cointegration DOLS-Forecasting cost per KWh

Dependent Variable: LOG(COSTO\_KWH\_RESIDENCIAL\*100)  
 Method: Dynamic Least Squares (DOLS)  
 Date: 06/02/19 Time: 13:16  
 Sample (adjusted): 2002 2019  
 Included observations: 18 after adjustments  
 Cointegrating equation deterministic: C  
 Fixed leads and lags specification (lead=1, lag=2)  
 Long-run variance estimate (Bartlett kernel, Newey-West fixed bandwidth = 3.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(WEST_Texas)	0.666819	0.037578	17.74492	0.0000
LOG(HENRY_HUBB)	-0.248152	0.027451	-9.039775	0.0000
Constant	0.574955	0.364572	3.493635	0.0068

R-squared	0.982787	Mean dependent var	2.945046
Adjusted R-squared	0.967487	S.D. dependent var	0.278386
S.E. of regression	0.050197	Sum squared resid	0.022678
Durbin-Watson stat	3.03474	Long-run variance	0.000057



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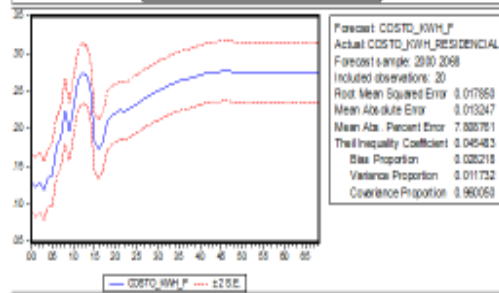
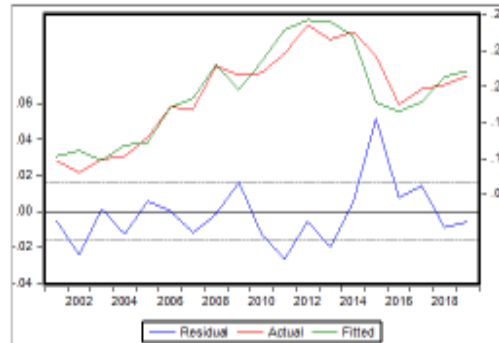
### Using Cointegration Canonical-Forecasting cost per KWh

Dependent Variable: COSTO\_KWH\_RESIDENCIAL  
 Method: Canonical Cointegrating Regression (CCR)  
 Date: 06/07/19 Time: 22:36  
 Sample (adjusted): 2001 2019  
 Included observations: 19 after adjustments  
 Cointegrating equation deterministic: C  
 Long-run covariance estimate (Bartlett kernel, Newey-West fixed bandwidth = 3.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
WEST_Texas	0.002045	0.000154	13.24828	0.00000
HENRY_HUBB	-0.009997	0.00215	-4.650291	0.00030
C	0.109204	0.014287	7.643524	0.00000

R-squared	0.881258	Mean dependent var	0.19251
Adjusted R-squared	0.866416	S.D. dependent var	0.05092
S.E. of regression	0.018612	Sum squared resid	0.00594
Durbin-Watson stat	1.640991	Long-run variance	0.00026



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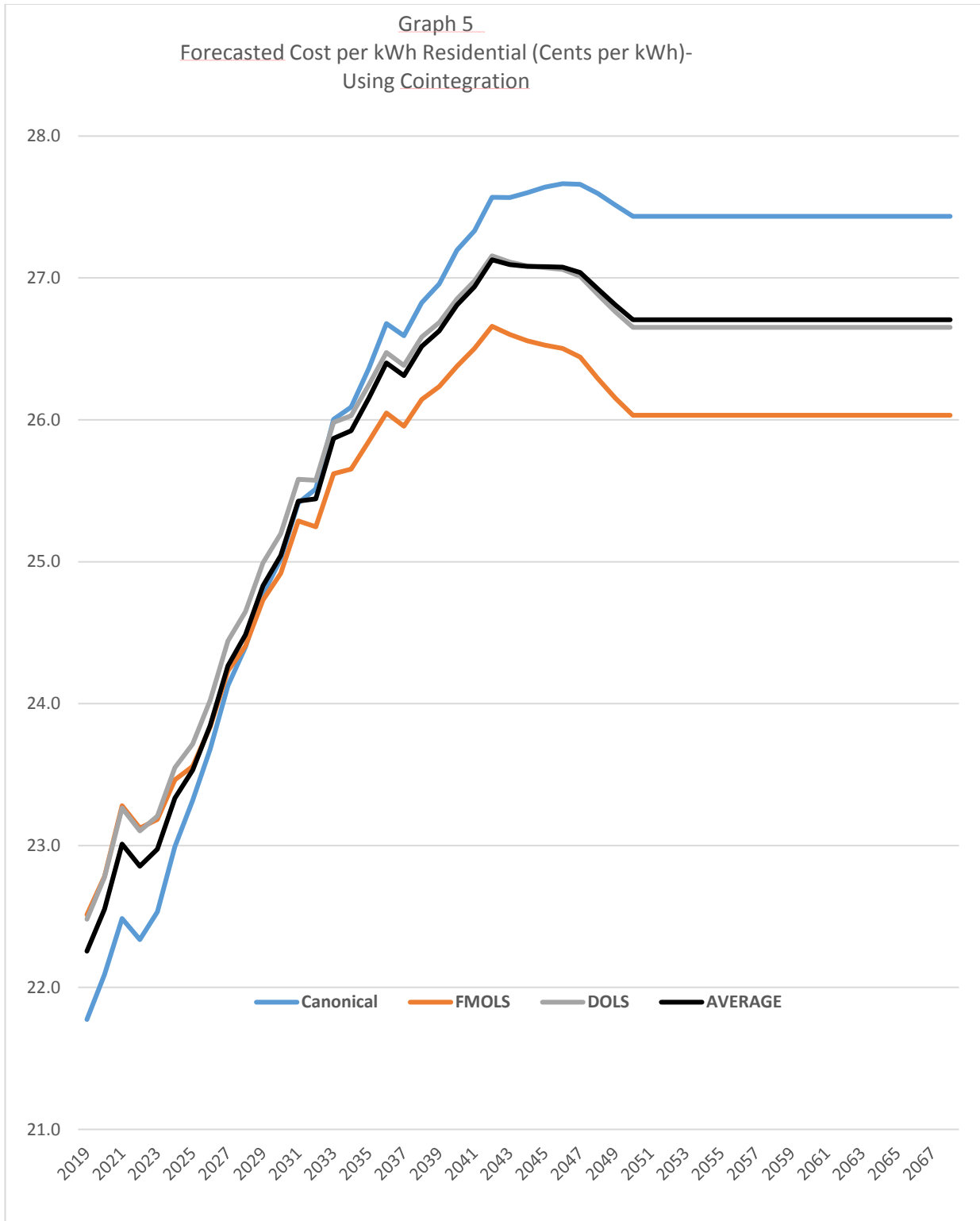
Therefore, the cost per kWh forecasted are shown at **Table 3**. We discarded OLS results given the huge values of forecasted standard error at a 40- year horizon. The cointegration results shown consistent estimates of the cost of kWh for residential category. The **Table 3** also provided the average as well as the median value per year.

**Table 3**

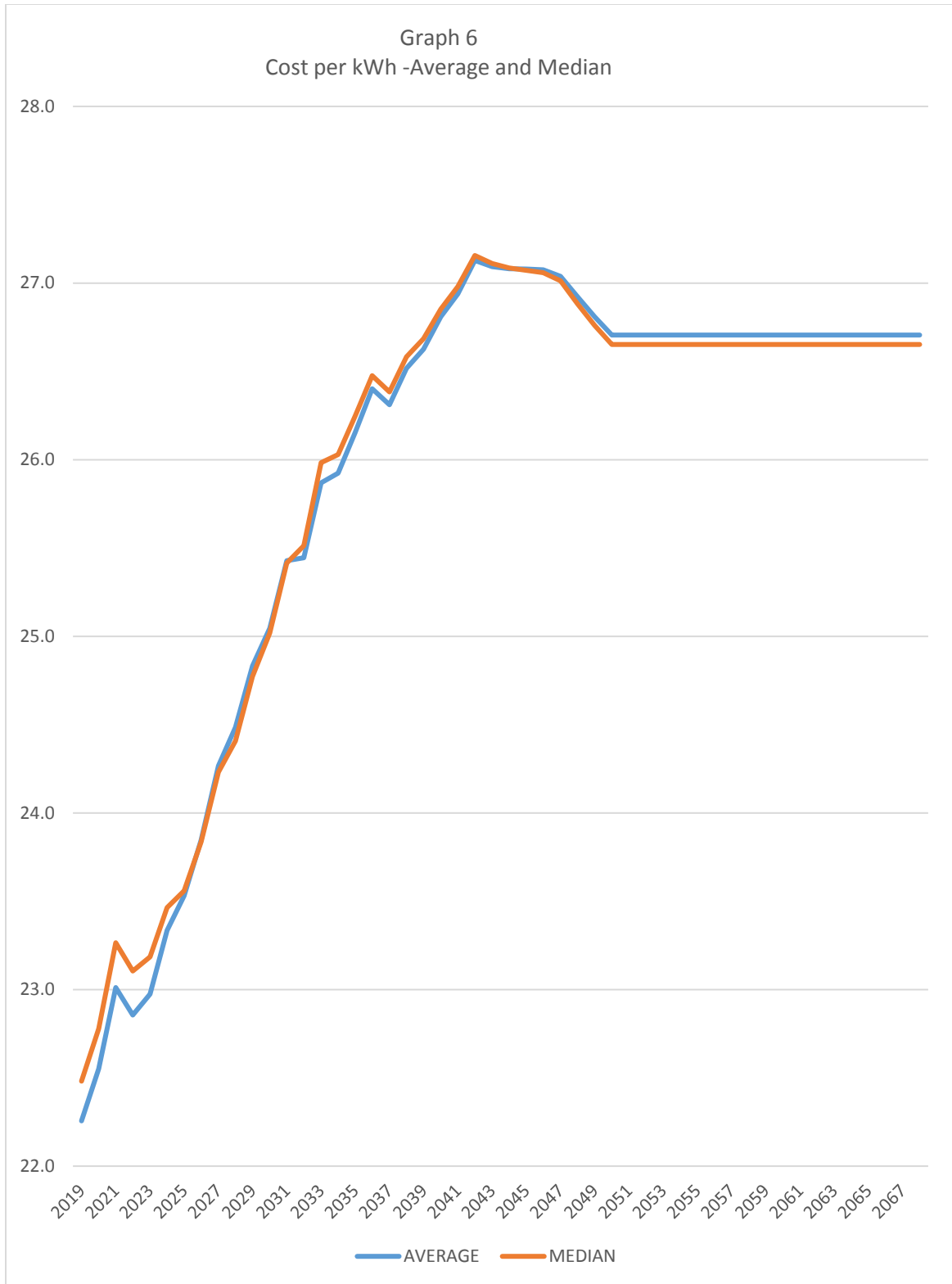
Forecasting Cost-per-kWh: 2019 to 2068.

	Forecasted Cost perKWh residential Using Cointegration					
	Canonical	FMOLS	DOLS	AVERAGE	MEDIAN	
1	2019	21.8	22.5	22.5	22.3	22.5
2	2020	22.1	22.8	22.8	22.6	22.8
3	2021	22.5	23.3	23.3	23.0	23.3
4	2022	22.3	23.1	23.1	22.9	23.1
5	2023	22.5	23.2	23.2	23.0	23.2
6	2024	23.0	23.5	23.5	23.3	23.5
7	2025	23.3	23.6	23.7	23.5	23.6
8	2026	23.7	23.8	24.0	23.8	23.8
9	2027	24.1	24.2	24.4	24.3	24.2
10	2028	24.4	24.4	24.6	24.5	24.4
11	2029	24.8	24.7	25.0	24.8	24.8
12	2030	25.0	24.9	25.2	25.0	25.0
13	2031	25.4	25.3	25.6	25.4	25.4
14	2032	25.5	25.2	25.6	25.4	25.5
15	2033	26.0	25.6	26.0	25.9	26.0
16	2034	26.1	25.7	26.0	25.9	26.0
17	2035	26.4	25.9	26.2	26.2	26.2
18	2036	26.7	26.0	26.5	26.4	26.5
19	2037	26.6	26.0	26.4	26.3	26.4
20	2038	26.8	26.1	26.6	26.5	26.6
21	2039	27.0	26.2	26.7	26.6	26.7
22	2040	27.2	26.4	26.9	26.8	26.9
23	2041	27.3	26.5	27.0	26.9	27.0
24	2042	27.6	26.7	27.2	27.1	27.2
25	2043	27.6	26.6	27.1	27.1	27.1
26	2044	27.6	26.6	27.1	27.1	27.1
27	2045	27.6	26.5	27.1	27.1	27.1
28	2046	27.7	26.5	27.1	27.1	27.1
29	2047	27.7	26.4	27.0	27.0	27.0
30	2048	27.6	26.3	26.9	26.9	26.9
31	2049	27.5	26.2	26.8	26.8	26.8
32	2050	27.4	26.0	26.7	26.7	26.7
33	2051	27.4	26.0	26.7	26.7	26.7
34	2052	27.4	26.0	26.7	26.7	26.7
35	2053	27.4	26.0	26.7	26.7	26.7
36	2054	27.4	26.0	26.7	26.7	26.7
37	2055	27.4	26.0	26.7	26.7	26.7
38	2056	27.4	26.0	26.7	26.7	26.7
39	2057	27.4	26.0	26.7	26.7	26.7
40	2058	27.4	26.0	26.7	26.7	26.7
41	2059	27.4	26.0	26.7	26.7	26.7
42	2060	27.4	26.0	26.7	26.7	26.7
43	2061	27.4	26.0	26.7	26.7	26.7
44	2062	27.4	26.0	26.7	26.7	26.7
45	2063	27.4	26.0	26.7	26.7	26.7
46	2064	27.4	26.0	26.7	26.7	26.7
47	2065	27.4	26.0	26.7	26.7	26.7
48	2066	27.4	26.0	26.7	26.7	26.7
49	2067	27.4	26.0	26.7	26.7	26.7
50	2068	27.4	26.0	26.7	26.7	26.7

Source: calculation from author.







#### 4. The demand for residential energy at the long-run.

The demand equation is based upon the determinant variables of the level of population, the income or nominal GNP and the cost-per-kWh. The dependent variable is the consumption of residential electricity by PREPA's clients of that category. We have any estimation for the demands of industrial and commercial, although we may realize that changes in intermediate prices or final purchases prices could burden over the consumers.

The equation to be tested:

**Residential consumption of PREPA (kWh) =  $f$ [Population Level, Cost per kWh (cents of a dollar (\$)), and GNP nominal].**

Information from residential consumption of PREPA (kWh) is based upon the data base of PREPA by fiscal year. Population level (thousand) from Planning Board and forecast from International Data Base, U.S. Census<sup>4</sup>; and nominal GNP (million \$) is from the Commonwealth Planning Board with author forecasting. The cost-per-kWh is the median value per year.

The equation yielded the following outcome:

Dependent Variable: LOG(CONSUMO\_RESIDENCIAL\_\_MKW)

Method: Fully Modified Least Squares (FMOLS)

Sample (adjusted): 2001 2019

Included observations: 19 after adjustments

Cointegrating equation deterministics: C

Long-run covariance estimate (Bartlett kernel, Newey-West fixed bandwidth = 3.0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(POPULATION)	1.619757	0.321355	5.040402	0.0001**
LOG(GNPN)	0.526169	0.204611	2.571553	0.0213*
LOG(COSTMEDIAN)	-0.20496	0.082218	-2.49287	0.0249*
Constant	-9.68201	4.402455	-2.19923	0.044

\*\* Significant at 99%

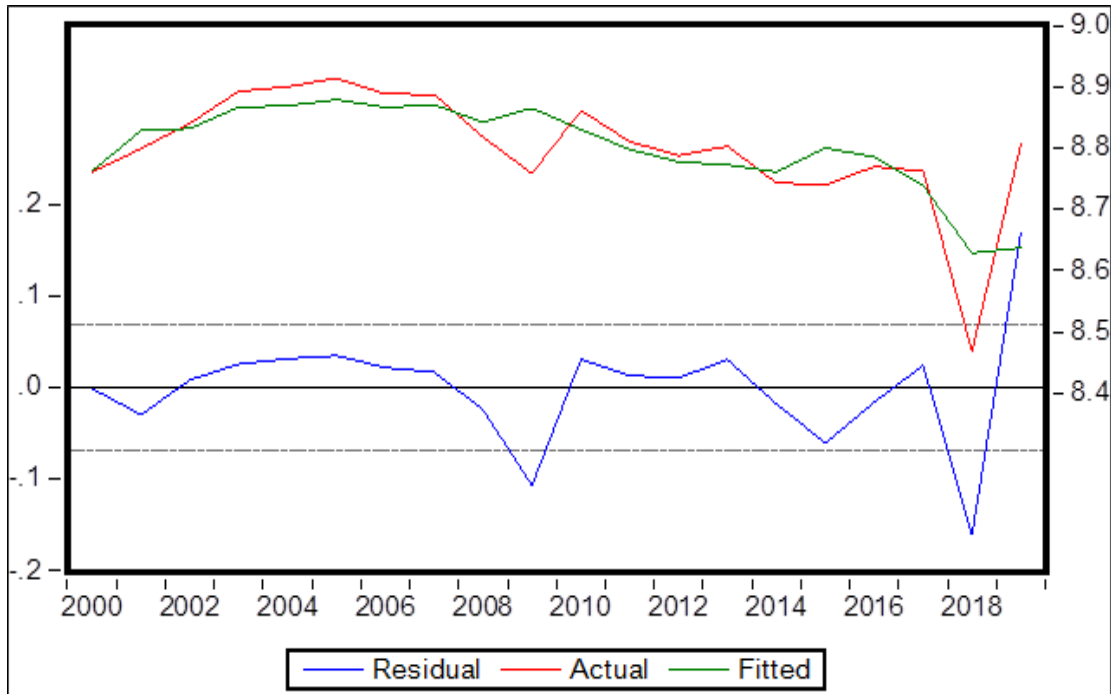
\*Significant at 95%

R-squared	0.541345	Mean dependent var	8.803113
Adjusted R-squared	0.449614	S.D. dependent var	0.098235
S.E. of regression	0.072878	Sum squared resid	0.079669
Durbin-Watson stat	2.25979	Long-run variance	0.001985

<sup>4</sup> <https://www.census.gov/data-tools/demo/idb/region.php?N=%20Results%20&T=13&A=separate&RT=0&Y=2019&R=-1&C=RO>

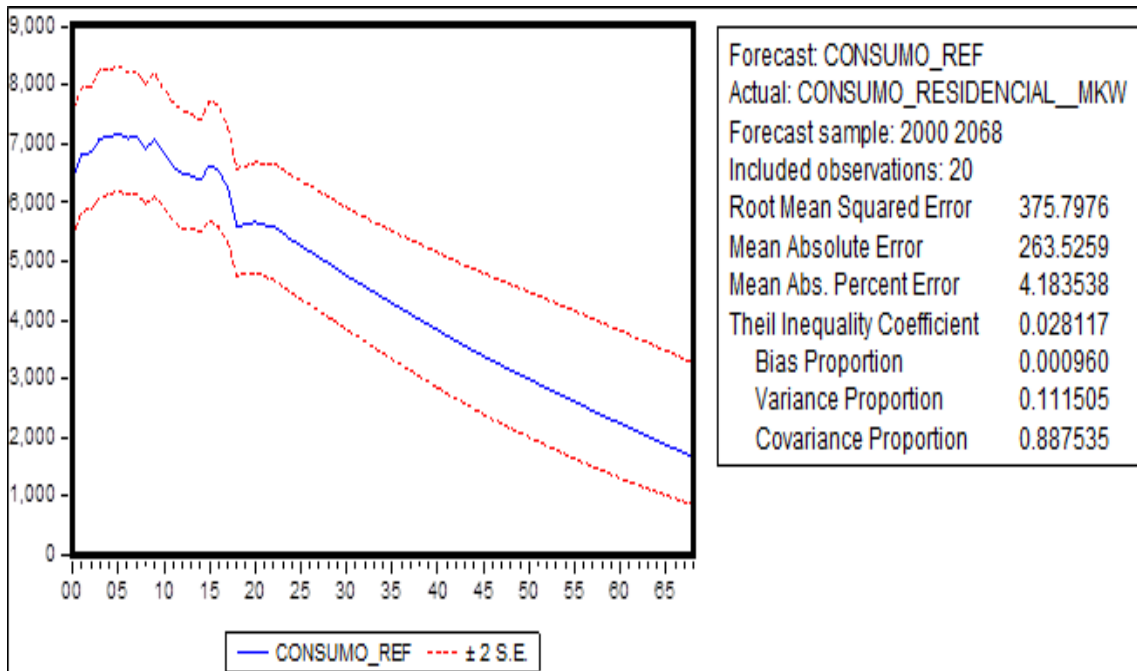
**Graph**

**Actual vs Fitted Values and Residuals**



**Graph**

**Forecast Values Chart**



The equation is been tested using cointegration Fully Modified OLS (FMOLS). Each regression coefficients are elasticity values of the dependent variable relative to each independent variables. For instance, the demand-price elasticity is -0.205, implies an inelastic value; that an increase (decrease) of 5% in the cost-per-kWh, the consumption will fall down (increase) by 1%.

In term of population, each 1.0% of increase (decrease) of population level, the consumption in kWh will move *in tandem* by 1.62%. This result gave us a negative aspect of population decline trend since the mid-2010s in Puerto Rico, because a lower level of population has led to the shrinking-pattern on overall sales in Puerto Rico, including energy.

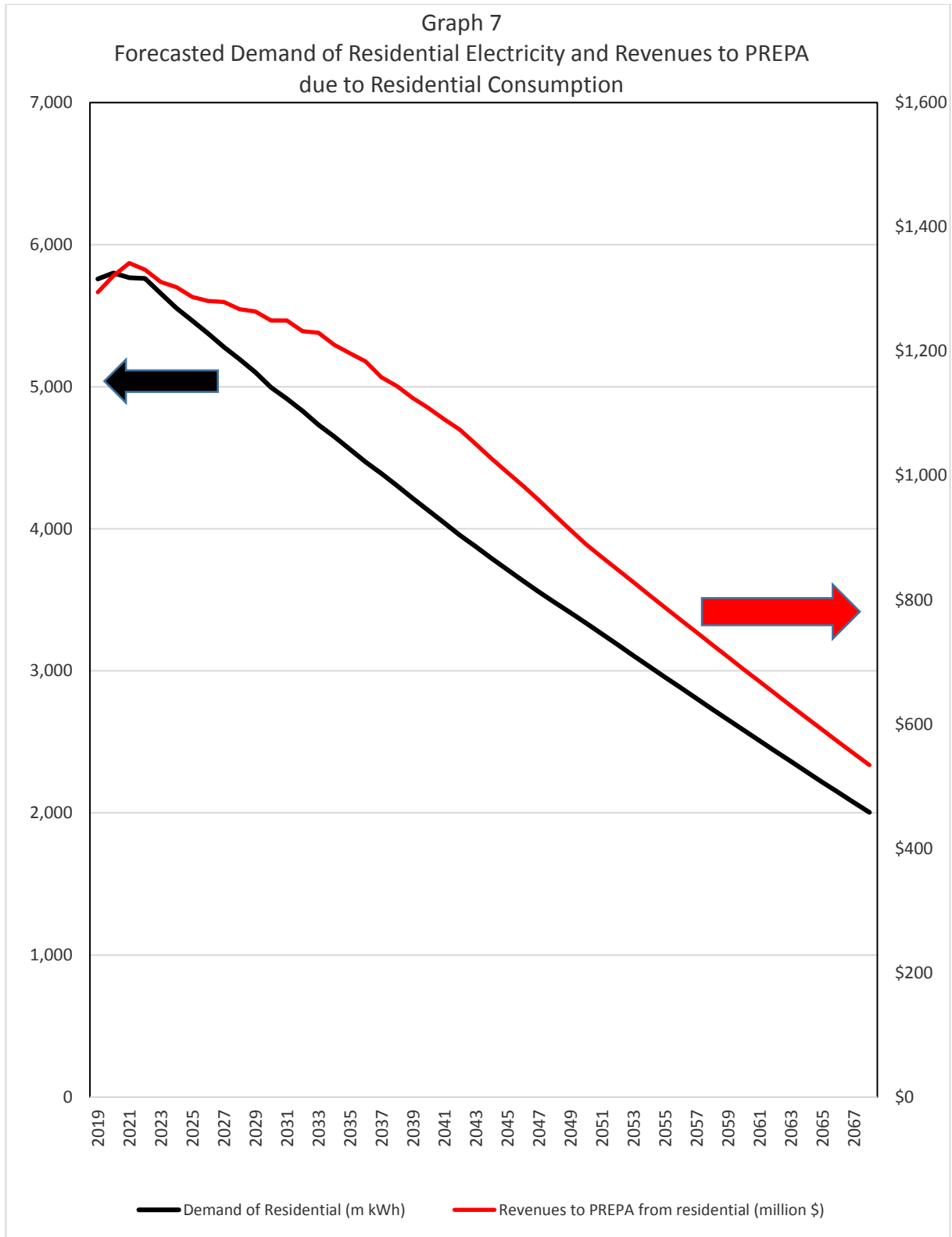
The elasticity value of consumption relative to GNP nominal is also found as positive correlated, the value is 0.526. It means that a 10% increase (decrease) of nominal GNP leads to an also increase (decrease) of 5.3% in the consumption of electricity at kWh level. Therefore, given the weaknesses of local economy coupled with its darkness forecast, the consumption of energy seems that she is also entering in a *black hole*.

Then, given the forecasting values of demand and the cost-per-kWh, it is also plausible to forecast revenues to PREPA from residential category. By 2019, the revenues of PREPA from residential consumption was \$1.4 billion. However, due to a falling consumption but an increasing trends in the level of cost-per-kWh, the revenues of PREPA will also fall down. As can be seen, the PREPA expected revenues will decrease due to the fallen demand, rather than a price increases.

Table 4

Demand of Energy for Residential, cost-per-kWh and Revenues for PREPA.

Fiscal Years	Demand of Residential (m kWh)	Cost per kWh (Cents \$)	Revenues to PREPA from residential (million \$)
2019	5,759	22.48	\$1,295
2020	5,801	22.78	\$1,321
2021	5,767	23.27	\$1,342
2022	5,762	23.10	\$1,331
2023	5,656	23.18	\$1,311
2024	5,553	23.46	\$1,303
2025	5,465	23.56	\$1,287
2026	5,374	23.84	\$1,281
2027	5,279	24.23	\$1,279
2028	5,194	24.41	\$1,268
2029	5,101	24.77	\$1,264
2030	4,994	25.02	\$1,249
2031	4,916	25.41	\$1,249
2032	4,830	25.51	\$1,232
2033	4,733	25.98	\$1,230
2034	4,650	26.03	\$1,210
2035	4,560	26.25	\$1,197
2036	4,471	26.48	\$1,184
2037	4,390	26.38	\$1,158
2038	4,302	26.58	\$1,144
2039	4,215	26.69	\$1,125
2040	4,129	26.85	\$1,109
2041	4,042	26.98	\$1,091
2042	3,954	27.16	\$1,074
2043	3,875	27.11	\$1,051
2044	3,793	27.09	\$1,027
2045	3,714	27.07	\$1,005
2046	3,635	27.06	\$984
2047	3,557	27.01	\$961
2048	3,484	26.88	\$936
2049	3,410	26.76	\$913
2050	3,337	26.65	\$889
2051	3,261	26.65	\$869
2052	3,184	26.65	\$849
2053	3,108	26.65	\$828
2054	3,033	26.65	\$808
2055	2,957	26.65	\$788
2056	2,882	26.65	\$768
2057	2,807	26.65	\$748
2058	2,732	26.65	\$728
2059	2,657	26.65	\$708
2060	2,583	26.65	\$688
2061	2,509	26.65	\$669
2062	2,436	26.65	\$649
2063	2,363	26.65	\$630
2064	2,290	26.65	\$610
2065	2,218	26.65	\$591
2066	2,146	26.65	\$572
2067	2,075	26.65	\$553
2068	2,004	26.65	\$534
<b>2019-2068</b>	<b>-3,755</b>	<b>4.1705</b>	<b>-\$760.6</b>
<i>% Changes</i>	<i>-65.2%</i>	<i>18.6%</i>	<i>-58.7%</i>



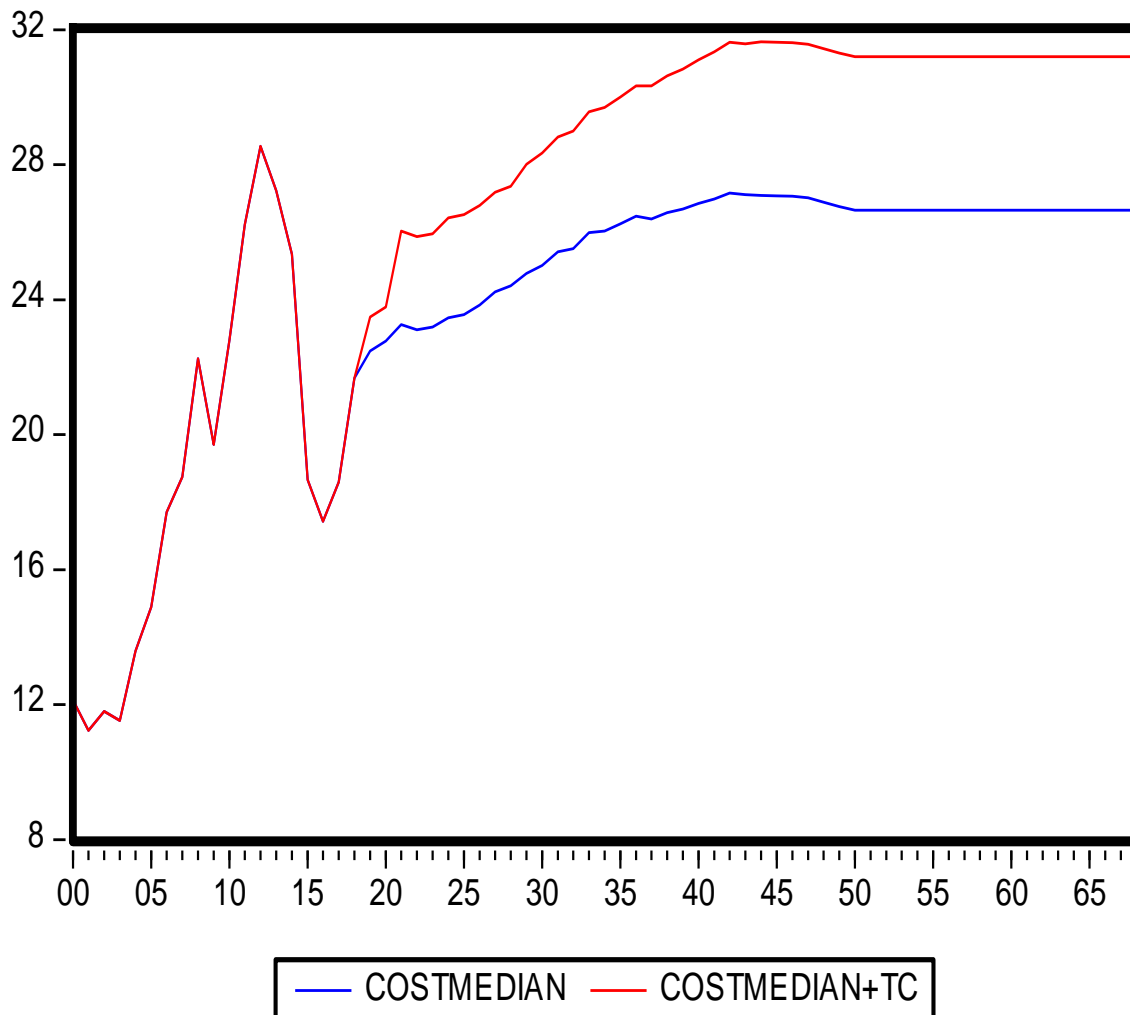
Source:

### 5. The demand of residential energy and the effects of transition charges (TC).

The following sections shall incorporate at the independent variable cost-per-kWh, those expected hikes on the electricity rates proposed by the debt restructuring plan. Such analysis pursues the impact on consumers' demand of residential electricity and thereby, the effect over the revenues collected by PREPA. As can be seen, **Graph 8** portrays the secular forecasted behavior of the cost-per-kWh with and without the TC. Clearly, the TC structure is not responding to any operational cost structure of PREPA, but rather to surcharges aimed to pay a new structure of debt services.

Graph 8

Cost-per-kWh with and without transition charge: 2000 to 2068



Source:

**Table 5** calculates the impact of the TC throughout the parameter values of the equation of demand for residential electricity (page 13). Then, introducing the new structure of TC, we re-estimate the forecasted values of the consumption of electricity per year until 2068, *other things been equal (ceteris paribus)*. Column A and column B, represent the demands of residential electricity with and without the new structure of cost-per-kWh. **For the period 2019 to 2068, the consumption median value per year due to the new structure of energy rates meant a -3.1%, or -119.0 million of kWh per year, almost 10 million of kWhs per month lower (See Column C).**

Yet the most significant outcome is that PREPA will loss revenues again, this time because the increases of cost-per-kWh with the TC coupled with the declining trends in the population size of Puerto Rico. **The first round of revenue losses amounted \$761 million (\$15.5 million yearly); but PREPA will further lost revenues again by \$580 million (\$11.8 million per year) due to the inception of TC, year by year. Then, total revenues losses per year is \$27.3 million, or \$1,340 million for the overall period.**

	Revenue losses (Millions \$)
	(2019-2068)
Due to forecasting trends (without TC)	-\$760.6
With TC	-\$1,340.1
<b>Net Increase (Decrease)</b>	<b>-\$579.6</b>

On the other hand, the TC will mean an addition of \$6,925 million from residential payments (See Column E). These flows of money will not belong to the current PREPA's cash-flows since they will directed toward the bondholders; nonetheless, they will paid off by consumers, adding costs to the lifestyle of local residents. The net total expenditures from residential is \$5,585 million.

Then, how much would be the TC per family in Puerto Rico?. Using the number of persons per family of 2.8 (Planning Board, FY 2018), we estimate the number of families in Puerto Rico for the period 2009 to 2068. Then, the average of TC per family was \$172.00 and the median value \$181.00.



Table 5

Demand and PREPA revenues losses due to Transition Charges: 2019 to 2068.

Fiscal Years	Col A. Demand of Residential (m kWh) a/	Col B. New Demand Residential (m kWh) b/	Col. C = Col. A less Col. B Demand losses due to TC Million kWh c/	Col D = cent kWh x Col.C Revenues losses to PREPA Million \$ d/	Col E. Total Cost of TC (Million \$) e/	Col F = Col.D + Col. E Incremental Gross Expenditures
2019	5,759	5,759	0	\$0	\$0	\$0
2020	5,801	5,801	0	\$0	\$0	\$0
2021	5,767	5,636	-131	-\$31	\$156	\$125
2022	5,762	5,630	-132	-\$31	\$156	\$125
2023	5,656	5,527	-129	-\$30	\$153	\$123
2024	5,553	5,419	-133	-\$31	\$160	\$129
2025	5,465	5,334	-131	-\$31	\$158	\$127
2026	5,374	5,247	-127	-\$30	\$155	\$125
2027	5,279	5,156	-123	-\$30	\$152	\$123
2028	5,194	5,074	-120	-\$29	\$150	\$121
2029	5,101	4,974	-127	-\$31	\$161	\$130
2030	4,994	4,868	-126	-\$32	\$162	\$130
2031	4,916	4,791	-125	-\$32	\$163	\$131
2032	4,830	4,705	-125	-\$32	\$164	\$132
2033	4,733	4,610	-124	-\$32	\$165	\$133
2034	4,650	4,526	-124	-\$32	\$166	\$134
2035	4,560	4,437	-123	-\$32	\$167	\$134
2036	4,471	4,348	-123	-\$33	\$168	\$135
2037	4,390	4,266	-124	-\$33	\$169	\$136
2038	4,302	4,179	-123	-\$33	\$169	\$136
2039	4,215	4,092	-123	-\$33	\$170	\$137
2040	4,129	4,007	-123	-\$33	\$170	\$138
2041	4,042	3,920	-122	-\$33	\$171	\$138
2042	3,954	3,832	-122	-\$33	\$171	\$138
2043	3,875	3,756	-119	-\$32	\$168	\$136
2044	3,793	3,674	-119	-\$32	\$167	\$135
2045	3,714	3,597	-116	-\$32	\$164	\$132
2046	3,635	3,521	-114	-\$31	\$160	\$129
2047	3,557	3,445	-112	-\$30	\$157	\$127
2048	3,484	3,374	-110	-\$30	\$154	\$124
2049	3,410	3,302	-108	-\$29	\$150	\$121
2050	3,337	3,231	-106	-\$28	\$147	\$119
2051	3,261	3,157	-104	-\$28	\$144	\$116
2052	3,184	3,083	-101	-\$27	\$140	\$113
2053	3,108	3,010	-99	-\$26	\$137	\$111
2054	3,033	2,936	-96	-\$26	\$134	\$108
2055	2,957	2,863	-94	-\$25	\$130	\$105
2056	2,882	2,790	-92	-\$24	\$127	\$103
2057	2,807	2,717	-89	-\$24	\$124	\$100
2058	2,732	2,645	-87	-\$23	\$120	\$97
2059	2,657	2,573	-85	-\$23	\$117	\$95
2060	2,583	2,501	-82	-\$22	\$114	\$92
2061	2,509	2,429	-80	-\$21	\$111	\$89
2062	2,436	2,358	-77	-\$21	\$107	\$87
2063	2,363	2,288	-75	-\$20	\$104	\$84
2064	2,290	2,217	-73	-\$19	\$101	\$82
2065	2,218	2,147	-71	-\$19	\$98	\$79
2066	2,146	2,078	-68	-\$18	\$95	\$76
2067	2,075	2,009	-66	-\$18	\$91	\$74
2068	2,004	1,940	-64	-\$17	\$88	\$71
2009-2068	194,946	189,778	-5,168	-\$1,340	\$6,925	\$5,585
Median x year	3,834	3,715	-119	-\$29.9	\$153.3	\$123.5

a/ Without transition charge (TC); b/ with TC c/ difference col. B less Col. A; d/ cents-per-kWh x changes on demand e/ cost-per-kWh with TC times new demand (Col. B)

Source:

Table 6

Transition Charges per family: 2019 to 2068

Fiscal Years	Population (000)	Families (000)	TC per family (\$)
2019	3,240	1,157	\$0
2020	3,189	1,139	\$0
2021	3,141	1,122	\$139
2022	3,096	1,106	\$141
2023	3,054	1,091	\$140
2024	3,016	1,077	\$149
2025	2,980	1,064	\$148
2026	2,946	1,052	\$147
2027	2,912	1,040	\$147
2028	2,878	1,028	\$146
2029	2,844	1,016	\$159
2030	2,803	1,001	\$162
2031	2,774	991	\$165
2032	2,738	978	\$168
2033	2,703	965	\$171
2034	2,667	953	\$174
2035	2,631	940	\$178
2036	2,595	927	\$181
2037	2,558	914	\$184
2038	2,522	901	\$188
2039	2,485	888	\$191
2040	2,449	875	\$195
2041	2,412	861	\$198
2042	2,375	848	\$202
2043	2,339	835	\$201
2044	2,302	822	\$203
2045	2,266	809	\$202
2046	2,230	796	\$201
2047	2,194	784	\$200
2048	2,159	771	\$199
2049	2,124	759	\$198
2050	2,089	746	\$197
2051	2,054	734	\$196
2052	2,019	721	\$195
2053	1,984	709	\$193
2054	1,949	696	\$192
2055	1,914	684	\$191
2056	1,879	671	\$189
2057	1,844	659	\$188
2058	1,809	646	\$186
2059	1,774	634	\$185
2060	1,739	621	\$183
2061	1,704	609	\$182
2062	1,669	596	\$180
2063	1,634	584	\$178
2064	1,599	571	\$177
2065	1,564	559	\$175
2066	1,529	546	\$173
2067	1,494	534	\$171
2068	1,459	521	\$170
<b>Average</b>			<b>\$172</b>
<b>Median</b>			<b>\$181</b>

Source: Statistical Appendix of Economic Report to the Governor of Puerto Rico.  
<https://jp.pr.gov/Econom%3%ADa/Ap%3%AAndice>, and authors' calculations.

## 6. PREPA's Plan of Gas Conversion and Cost Savings

Supporters of the PREPA's Restructuring Agreement, including local Governmental Officers, have consistently argued that the increases on the rate imposed by TC will be fully mitigated by operational savings due gas conversion plans. Nonetheless, the **Institute of Energy Economics and Financial Analysts (IEEFA)**, has stated that .....*it is unclear whether this natural gas project will produce the promised savings, let alone move Puerto Rico to its stated goal of depending on renewables*<sup>5</sup>. The plan starts on two units from San Juan (named as units 5 & 6), through a 5-year contract with New Fortress Energy, which will supply gas and convert the units to burn gas, as well as develop liquified natural gas (LNG) import infrastructure in San Juan.

IEEFA states that of .....*official savings estimates vary widely and are contradicted by PREPA's own data. In a filing with the Securities and Exchange Commission last November, New Fortress Energy estimated that the project would generate \$285 million in annual savings. PREPA has variously estimated that the project will save \$1.2 billion over 5 years (\$240 million per year) and \$150 million per year.*

An information from PREPA but not supported by any evidence, claims the following cost savings:

San Juan plants (units 5 & 6).....	1.4 cents
Mayaguez .....	0.4 cents
Palo Seco .....	1.2 to 2.0 cents
Sum .....	3.0 to 3.8 cents

Nonetheless, PREPA has never provided any evidence, technical report, documentation, etc., that supported such type of savings; neither any other documents about the needed infrastructure facilities, Gas Ports, Pipelines, and so, in order to facilitates the credibility of such savings.

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<sup>5</sup> IEEFA Puerto Rico: Bad gas deal hurts PREPA chances for a turnaround, If no fuel savings on latest contract, then when ? .  
<http://ieefa.org/ieefa-puerto-rico-bad-gas-deal-hurts-prepa-chances-for-a-turnaround/>. See also  
<https://newsismybusiness.com/op-ed-rossello-ignores-facts-misleads-public-about-prepa-debt-deal-ieefa-says/>.

### **6.A. Scenarios of demand of residential electricity under cost savings**

**Table 7** shown the demand of residential electricity with and without transition charges. Clearly, if TC is been imposed, the long-run demand of energy will go down due to the well-known microeconomic concept as **Law of demand**. Quantity consumed will fall by 2.5%, given rates increased. The Table 7 provides scenarios also under different cost savings at a given energy rates which include the TC. Four scenarios are considered: saving of 1 cent; 1.5 cents; 2.00 cents and 2.50 cents per kWh. As can be seen, if cost savings are higher, cost rates are lower and the demands of energy are higher, and viceversa. Notwithstanding, the evidence shown at **Table 7** supports the even with elevated cost-savings, the demand of energy will be lower that without TC.

### **6.B. Scenarios of net expenditures under cost savings**

**Table 8** shown the flows of net expenditures of residential electricity with and without transition charges. Clearly, if TC is been imposed, the long-run net expenditures will go up, to \$55.5 billion from \$49.9 billion; an increase of \$5.6 billion; or +11.2%. Yearly, the net expenditures per year will go up from \$1,018 million to \$1,132 million. Given cost-savings (if any), expenditures will be lower but never reached the original level with any TC (**See Graph 9**).

Table 7

The demand of energy and the cost -saving scenarios by PREPA (millions of kWh).

Year	Without TC	With full TC	Cost Saving +Full TC		Cent per kWh	
			-1.00	-1.50	-2.00	-2.50
2019	5,759	5,759	5,759	5,759	5,759	5,759
2020	5,801	5,801	5,801	5,801	5,801	5,801
2021	5,767	5,636	5,681	5,705	5,729	5,754
2022	5,762	5,630	5,675	5,699	5,723	5,748
2023	5,656	5,527	5,571	5,595	5,618	5,643
2024	5,553	5,419	5,462	5,485	5,507	5,531
2025	5,465	5,334	5,376	5,398	5,420	5,443
2026	5,374	5,247	5,288	5,309	5,331	5,353
2027	5,279	5,156	5,196	5,216	5,237	5,259
2028	5,194	5,074	5,113	5,133	5,153	5,174
2029	5,101	4,974	5,012	5,031	5,051	5,071
2030	4,994	4,868	4,904	4,923	4,942	4,961
2031	4,916	4,791	4,826	4,844	4,862	4,881
2032	4,830	4,705	4,739	4,757	4,774	4,793
2033	4,733	4,610	4,642	4,659	4,676	4,694
2034	4,650	4,526	4,558	4,574	4,591	4,608
2035	4,560	4,437	4,468	4,484	4,500	4,517
2036	4,471	4,348	4,378	4,393	4,409	4,425
2037	4,390	4,266	4,296	4,311	4,326	4,342
2038	4,302	4,179	4,207	4,222	4,237	4,252
2039	4,215	4,092	4,120	4,134	4,149	4,164
2040	4,129	4,007	4,033	4,047	4,061	4,076
2041	4,042	3,920	3,946	3,959	3,973	3,987
2042	3,954	3,832	3,857	3,870	3,884	3,897
2043	3,875	3,756	3,781	3,793	3,806	3,820
2044	3,793	3,674	3,699	3,711	3,724	3,737
2045	3,714	3,597	3,621	3,633	3,646	3,659
2046	3,635	3,521	3,544	3,556	3,568	3,581
2047	3,557	3,445	3,468	3,479	3,491	3,504
2048	3,484	3,374	3,396	3,408	3,419	3,431
2049	3,410	3,302	3,324	3,336	3,347	3,359
2050	3,337	3,231	3,252	3,264	3,275	3,287
2051	3,261	3,157	3,178	3,189	3,200	3,211
2052	3,184	3,083	3,104	3,114	3,125	3,136
2053	3,108	3,010	3,030	3,040	3,051	3,062
2054	3,033	2,936	2,956	2,966	2,976	2,987
2055	2,957	2,863	2,882	2,892	2,902	2,912
2056	2,882	2,790	2,809	2,818	2,828	2,838
2057	2,807	2,717	2,736	2,745	2,755	2,764
2058	2,732	2,645	2,663	2,672	2,681	2,691
2059	2,657	2,573	2,590	2,599	2,608	2,617
2060	2,583	2,501	2,518	2,526	2,535	2,544
2061	2,509	2,429	2,446	2,454	2,463	2,471
2062	2,436	2,358	2,374	2,382	2,391	2,399
2063	2,363	2,288	2,303	2,311	2,319	2,327
2064	2,290	2,217	2,232	2,240	2,248	2,256
2065	2,218	2,147	2,162	2,169	2,177	2,184
2066	2,146	2,078	2,092	2,099	2,106	2,114
2067	2,075	2,009	2,022	2,029	2,036	2,044
2068	2,004	1,940	1,953	1,960	1,967	1,974
<b>2019-2068</b>	<b>194,946</b>	<b>189,778</b>	<b>191,041</b>	<b>191,694</b>	<b>192,360</b>	<b>193,041</b>
<b>Changes</b>		<b>-4,937</b>	<b>-3,645</b>	<b>-3,030</b>	<b>-2,402</b>	<b>-1,760</b>
<b>Per Year</b>	<b>3,683</b>	<b>3,582</b>	<b>3,609</b>	<b>3,621</b>	<b>3,634</b>	<b>3,647</b>

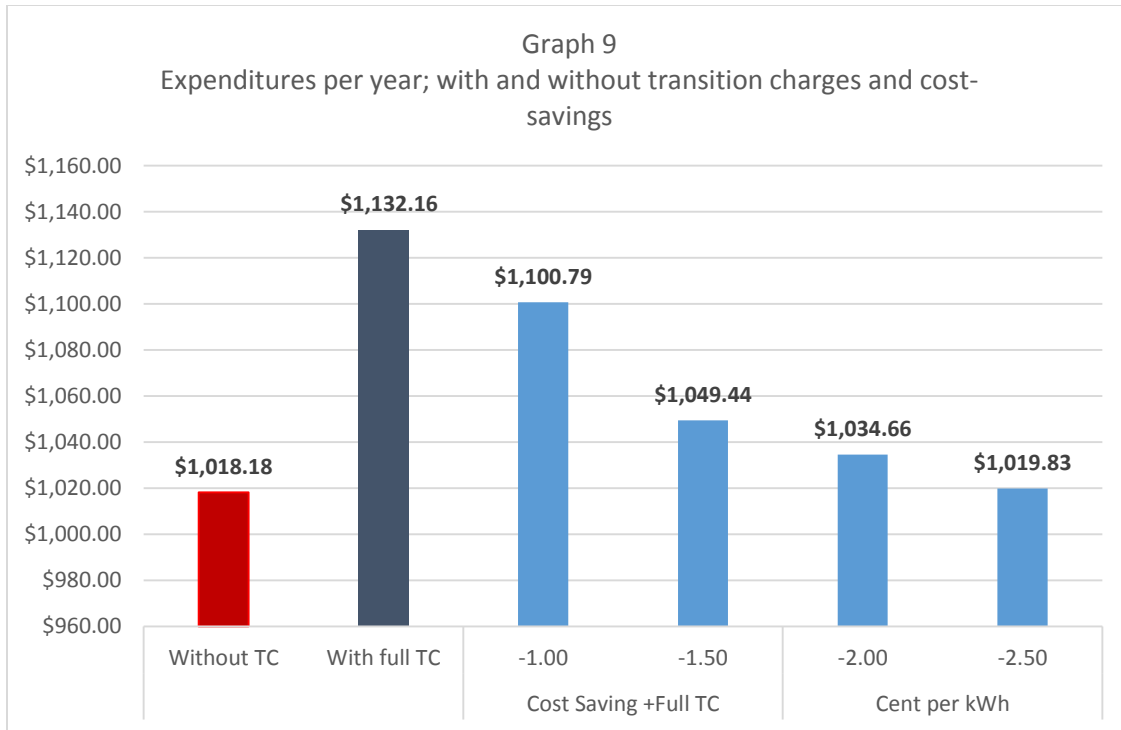
Source: calculation from the authors.

Table 8

Expenditures by consumers (millions of \$)

Year	Without TC	With full TC	Cost Saving +Full TC		Cent per kWh	
			-1.00	-1.50	-2.00	-2.50
2019	\$1,295	\$1,295	\$1,237	\$1,237	\$1,237	\$1,237
2020	\$1,321	\$1,321	\$1,263	\$1,263	\$1,263	\$1,263
2021	\$1,342	\$1,467	\$1,422	\$1,343	\$1,320	\$1,297
2022	\$1,331	\$1,457	\$1,412	\$1,332	\$1,309	\$1,286
2023	\$1,311	\$1,434	\$1,390	\$1,312	\$1,290	\$1,267
2024	\$1,303	\$1,432	\$1,389	\$1,312	\$1,290	\$1,268
2025	\$1,287	\$1,414	\$1,372	\$1,296	\$1,275	\$1,253
2026	\$1,281	\$1,406	\$1,364	\$1,290	\$1,268	\$1,247
2027	\$1,279	\$1,402	\$1,361	\$1,288	\$1,267	\$1,246
2028	\$1,268	\$1,388	\$1,348	\$1,276	\$1,256	\$1,235
2029	\$1,264	\$1,394	\$1,354	\$1,284	\$1,263	\$1,243
2030	\$1,249	\$1,380	\$1,341	\$1,272	\$1,252	\$1,232
2031	\$1,249	\$1,381	\$1,343	\$1,275	\$1,255	\$1,236
2032	\$1,232	\$1,364	\$1,327	\$1,260	\$1,241	\$1,222
2033	\$1,230	\$1,363	\$1,326	\$1,261	\$1,242	\$1,223
2034	\$1,210	\$1,344	\$1,308	\$1,244	\$1,226	\$1,207
2035	\$1,197	\$1,331	\$1,296	\$1,233	\$1,215	\$1,197
2036	\$1,184	\$1,319	\$1,284	\$1,223	\$1,205	\$1,187
2037	\$1,158	\$1,294	\$1,260	\$1,200	\$1,183	\$1,165
2038	\$1,144	\$1,280	\$1,247	\$1,188	\$1,171	\$1,154
2039	\$1,125	\$1,262	\$1,229	\$1,171	\$1,155	\$1,138
2040	\$1,109	\$1,246	\$1,214	\$1,158	\$1,142	\$1,125
2041	\$1,091	\$1,228	\$1,197	\$1,142	\$1,126	\$1,110
2042	\$1,074	\$1,212	\$1,181	\$1,127	\$1,112	\$1,096
2043	\$1,051	\$1,186	\$1,156	\$1,103	\$1,088	\$1,073
2044	\$1,027	\$1,162	\$1,133	\$1,081	\$1,066	\$1,051
2045	\$1,005	\$1,138	\$1,109	\$1,058	\$1,044	\$1,029
2046	\$984	\$1,113	\$1,085	\$1,035	\$1,021	\$1,007
2047	\$961	\$1,087	\$1,060	\$1,011	\$997	\$983
2048	\$936	\$1,060	\$1,034	\$986	\$972	\$959
2049	\$913	\$1,034	\$1,008	\$961	\$948	\$934
2050	\$889	\$1,008	\$982	\$937	\$924	\$910
2051	\$869	\$985	\$960	\$915	\$903	\$890
2052	\$849	\$962	\$937	\$894	\$881	\$869
2053	\$828	\$939	\$915	\$873	\$860	\$848
2054	\$808	\$916	\$893	\$851	\$839	\$827
2055	\$788	\$893	\$871	\$830	\$819	\$807
2056	\$768	\$871	\$848	\$809	\$798	\$786
2057	\$748	\$848	\$826	\$788	\$777	\$766
2058	\$728	\$825	\$804	\$767	\$756	\$745
2059	\$708	\$803	\$782	\$746	\$736	\$725
2060	\$688	\$780	\$760	\$725	\$715	\$705
2061	\$669	\$758	\$739	\$704	\$695	\$685
2062	\$649	\$736	\$717	\$684	\$674	\$665
2063	\$630	\$714	\$696	\$663	\$654	\$645
2064	\$610	\$692	\$674	\$643	\$634	\$625
2065	\$591	\$670	\$653	\$623	\$614	\$605
2066	\$572	\$648	\$632	\$602	\$594	\$586
2067	\$553	\$627	\$611	\$582	\$574	\$566
2068	\$534	\$606	\$590	\$563	\$555	\$547
<b>Total</b>	<b>\$49,891</b>	<b>\$55,476</b>	<b>\$53,939</b>	<b>\$51,422</b>	<b>\$50,698</b>	<b>\$49,972</b>
<b>Per Year</b>	<b>\$1,018.18</b>	<b>\$1,132.16</b>	<b>\$1,100.79</b>	<b>\$1,049.44</b>	<b>\$1,034.66</b>	<b>\$1,019.83</b>
<b>Change</b>		<b>\$113.98</b>	<b>\$82.60</b>	<b>\$31.25</b>	<b>\$16.48</b>	<b>\$1.64</b>

Source: calculations from authors.



## 7. Conclusions

This report was commissioned by SOMOS, Inc. to the economist José I. Alameda Lozada Ph.D., professor at the University of Puerto Rico. The main goal of the report relies upon the assessment of the economic impact over the consumers of Puerto Rico concerning the Restructuring Agreement of PREPA with the bondholders (May, 2019).

Local consumers have been concerned about the transition charges (TC) because it will hike the cost-per-kWh, over a 50-year horizon. The TC starts at 2021 by 2.768 cent per kWh to residential, industry and commerce sectors. This TC will be increased until reached 4.552 cents by 2043 and hence after until debt services will be paid off according to the statements of the Agreement.

There were three main purposes of this technical report:

- Forecast the cost of kWh with and without transition charges.
- Examining the impact over the consumer sector, say, residential electricity consumption over the 50 years ahead;
- And, estimate the additional expenditures of consumers regarding the energy bills over 50- year ahead.

**The main conclusions are:**

- 1) Even before setting the transition charge (TC), the cost-per-kWh will probably increase at 50- year ahead, because main cost inputs such as real (2018 prices) West Texas Intermediate and Henry Hubb gas real prices (2018 prices) portrayed an ever increasing upward trends.
- 2) In order to forecast the cost-per-kWh for resident category, we used the intellectual capability of an econometric modelling based upon the E-Views Version 8.0 software, and under the procedures of regression-cointegration.
- 3) The econometric models yielded outstanding results and consistent estimates. The cost-per-kWh pointed value of 26 to 27 cents at the long-run, even without the TC setting. Following EIA, at February, 2019, current cent-per-kWh are 21.85 for Residential, 22.35 for Commercial and 20.14 for Industrial.
- 4) The projected cost-per-kWh, as well as nominal GNP and population size, were also incorporate into the statistical estimation of demand of residential energy for PREPA's clients. The results yielded that from 2019 to 2068, the demand of residential energy will fall 65.2%; while cost-per-kWh will increased by 18.6% (without a TC); and revenues to PREPA from residential-clients will also fell by 58.7%. This conclusion is explained by a decreasing level of income, and population size in Puerto Rico, but also, higher level of energy prices.
- 5) The total level of expenditures from residential clients over the period 2019 to 2068 amounted to \$49.9 billion, or \$1,018 million per year.

Now, if the TC were imposed, the results are the following:

- 1) The total demand of residential energy will further fall down by 2.65%. The total decrease of the demand of kWh is estimated by 5.168 billion of kWh.
- 2) Nonetheless, the level of net expenditures will be hiked from \$49.9 billion to \$55.6 billion, for an absolute changes of \$5.585 billion.
- 3) The per year level of net expenditures rose from \$1,018 million to \$1,135 million, or an absolute change of 116.3 million per year.
- 4) This net expenditures would be divided into: (a) lower demand of energy and thereby, less revenues to PREPA, and; (b) a significant amount of cash flows targeted to bondholders. The value of (a) is negative, while (b) is positive.



- 5) The transition charges imply higher levels of cost-per-kWh for resident-clients and, then, lower revenues to PREPA. Our estimate is a revenue loss for PREPA of \$1,340 million or \$27.35 million per year.
- 6) Otherwise, transition charges will take away from the consumers' pockets \$6.925 billion or \$141.33 million per year.
- 7) This hikes on expenditures will be never reached PREPA's operational revenues because there are not belonging to such category, rather to a different pocket designed to bondholders.
- 8) The average of transition charge per family was \$172.00 per year and the median value \$181.00 per year.

Regarding PREPA's CEO claims of new plants fueling LGN, this report simulates several scenarios of cost-per-kWh with TC, but also with cost saving. The cost saving simulation were minus 1, 1.5, 2.0 and 2.5 cents. The results were as follow:

- 1) The total level of expenditures for the overall period without TC amounted \$49.9, with TC reached to \$55.6 billion. Now considering 1 cent of saving, the expenditures will fall to \$54.1 billion; with 1.5 cents, \$51.5 billion; with 2.0 cents, \$50.8 billion, and with 2.5 cents, \$50.1 billion.
- 2) On per year base, the total expenditures without TC is \$1,018 million; with TC, \$1,135 million, and increased of \$116.3 million per year. Then, if considering cost savings, then, one cent saving, \$1,103 million per year; 1.5 cent saving, \$1,052 million; 2.0 cents per year, \$1,037 million, and finally, 2.0 cents, \$1,022 million.
- 3) **The main conclusion pointed out that even considering cost saving from gas conversion on several oil fired plants, the cost saving will not enough to circumvent a higher level of consumer expenditures due to the setting of transition charge.**

**END**

Appendix  
Cost-per-kWh; with and without TC and cost-savings

Year	Cents-per-kWh		Cost Saving +Full TC		Cent per kWh	
	Without TC	With full TC	-1.00	-1.50	-2.00	-2.50
2019	22.48	23.48	22.48	22.48	22.48	22.48
2020	22.78	23.78	22.78	22.78	22.78	22.78
2021	23.27	26.03	25.03	23.53	23.03	22.53
2022	23.10	25.87	24.87	23.37	22.87	22.37
2023	23.18	25.95	24.95	23.45	22.95	22.45
2024	23.46	26.42	25.42	23.92	23.42	22.92
2025	23.56	26.52	25.52	24.02	23.52	23.02
2026	23.84	26.79	25.79	24.29	23.79	23.29
2027	24.23	27.19	26.19	24.69	24.19	23.69
2028	24.41	27.36	26.36	24.86	24.36	23.86
2029	24.77	28.01	27.01	25.51	25.01	24.51
2030	25.02	28.34	27.34	25.84	25.34	24.84
2031	25.41	28.82	27.82	26.32	25.82	25.32
2032	25.51	28.99	27.99	26.49	25.99	25.49
2033	25.98	29.56	28.56	27.06	26.56	26.06
2034	26.03	29.70	28.70	27.20	26.70	26.20
2035	26.25	30.01	29.01	27.51	27.01	26.51
2036	26.48	30.33	29.33	27.83	27.33	26.83
2037	26.38	30.33	29.33	27.83	27.33	26.83
2038	26.58	30.63	29.63	28.13	27.63	27.13
2039	26.69	30.84	29.84	28.34	27.84	27.34
2040	26.85	31.11	30.11	28.61	28.11	27.61
2041	26.98	31.34	30.34	28.84	28.34	27.84
2042	27.16	31.63	30.63	29.13	28.63	28.13
2043	27.11	31.58	30.58	29.08	28.58	28.08
2044	27.09	31.64	30.64	29.14	28.64	28.14
2045	27.07	31.62	30.62	29.12	28.62	28.12
2046	27.06	31.61	30.61	29.11	28.61	28.11
2047	27.01	31.56	30.56	29.06	28.56	28.06
2048	26.88	31.43	30.43	28.93	28.43	27.93
2049	26.76	31.31	30.31	28.81	28.31	27.81
2050	26.65	31.20	30.20	28.70	28.20	27.70
2051	26.65	31.20	30.20	28.70	28.20	27.70
2052	26.65	31.20	30.20	28.70	28.20	27.70
2053	26.65	31.20	30.20	28.70	28.20	27.70
2054	26.65	31.20	30.20	28.70	28.20	27.70
2055	26.65	31.20	30.20	28.70	28.20	27.70
2056	26.65	31.20	30.20	28.70	28.20	27.70
2057	26.65	31.20	30.20	28.70	28.20	27.70
2058	26.65	31.20	30.20	28.70	28.20	27.70
2059	26.65	31.20	30.20	28.70	28.20	27.70
2060	26.65	31.20	30.20	28.70	28.20	27.70
2061	26.65	31.20	30.20	28.70	28.20	27.70
2062	26.65	31.20	30.20	28.70	28.20	27.70
2063	26.65	31.20	30.20	28.70	28.20	27.70
2064	26.65	31.20	30.20	28.70	28.20	27.70
2065	26.65	31.20	30.20	28.70	28.20	27.70
2066	26.65	31.20	30.20	28.70	28.20	27.70
2067	26.65	31.20	30.20	28.70	28.20	27.70
2068	26.65	31.20	30.20	28.70	28.20	27.70

# EXHIBIT A

PUERTO RICO ELECTRIC POWER AUTHORITY  
TO

U.S. BANK NATIONAL ASSOCIATION

*as Successor Trustee*

TRUST AGREEMENT

Dated as of January 1, 1974, as amended and supplemented  
through August 1, 2011

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THIS TRUST AGREEMENT, dated for convenience of reference as of January 1, 1974, as amended, by and between

Puerto Rico Electric Power Authority,

a body corporate and politic constituting a public corporation and governmental instrumentality of the Commonwealth of Puerto Rico (hereinafter sometimes called the "Authority"), and

U.S. Bank National Association, as successor trustee

a national banking association duly incorporated and existing under the laws of the United States of America and having its principal office in the Borough of Manhattan, City and State of New York, which is authorized under such laws to exercise trust powers and is subject to examination by federal authority (said banking association and any bank or trust company becoming successor trustee under this Agreement being hereinafter sometimes call the "Trustee"),

Witnesseth:

WHEREAS, by Act No. 83 of the Legislature of Puerto Rico, approved May 2, 1941, as amended, reenacted and supplemented (the "Authority Act"), the Authority was created a body corporate and politic constituting a public corporation and governmental instrumentality of the Commonwealth of Puerto Rico; and

WHEREAS, by virtue of the Authority Act the Authority is empowered to conserve, develop and utilize the water and energy resources of Puerto Rico for the purpose of making available to the inhabitants of the Commonwealth, in the widest economic manner, the benefits thereof, for the promotion of the general welfare and to increase commerce and prosperity, and the Authority is granted and may exercise all the rights and powers necessary or convenient to carry out the aforesaid purposes including but not limited to the following, among others:

- (a) to have complete control and supervision of any undertaking constructed or acquired by it including the power to determine the character of and necessity for all its expenditures and the manner in which they shall be incurred, allowed and paid without regard to the provisions of any laws governing the expenditure of public funds, and such determination shall be final and conclusive upon all officers of the Commonwealth Government, and to prescribe, adopt, amend, and repeal such rules and regulations as may be necessary or proper for the exercise and performance of its powers and duties or to govern the rendering of service or sale or exchange of water or electric energy;
- (b) to sue and be sued, implead and be impleaded, complain and defend, in all courts;
- (c) to make contracts and to execute all instruments necessary or convenient in the exercise of any of its powers;
- (d) to acquire in any lawful manner including, but without limitation, acquisition by purchase, whether by agreement or by the exercise of the power of eminent



domain, lease, bequest, devise, gift, and to hold, maintain, use and operate any undertaking or, parts thereof;

- (e) to acquire in the manner set forth above, produce, impound, develop, manufacture, treat, hold, conserve, use, transmit, distribute, supply, exchange, sell, rent and otherwise dispose of, water, electric energy, equipment, and such other things, supplies and services as the Authority shall deem necessary, proper, incidental, or convenient in connection with its activities; provided, that in disposing at wholesale of electric energy the Authority shall give preference and priority as to supply to public bodies and cooperatives;
- (f) to construct or reconstruct any undertaking or any part or parts thereof, and any additions, improvements and extensions to any undertaking of the Authority by contract or contracts, or under, through; or by means of its own officers, agents, and employees;
- (g) to determine, fix, alter, charge and collect reasonable rates, fees, rentals, and other charges for the use of the facilities of the Authority, or for the services, electric energy, or other commodities sold, rendered, or furnished by it, which shall be sufficient for the payment of the expenses of the Authority incurred in the conservation, development, improvement, extension, repair, maintenance, and operation of its facilities and properties, for, the payment of the principal of and interest on its bonds, and for, fulfilling the terms and provisions of such covenants as may be made with, or for the benefit of, the purchasers or holders of any bonds of the Authority;
- (h) to borrow money, make and issue bonds of the Authority, for any of its corporate purposes, and to secure payment of its bonds and of any and all other obligations by pledge of or lien on all or any of its contracts, revenues, and income only; and
- (i) to make and issue bonds for the purpose funding, refunding, purchasing, paying, or discharging any of the outstanding bonds or obligations issued or assumed by it or any bonds or obligations the principal or interest of which is payable in whole or in part from its revenues; and

WHEREAS the Authority owns and operates an integrated system for the generation, transmission and distribution of electricity throughout the Commonwealth of Puerto Rico, and for the purpose of providing funds, with other available funds, for refunding certain outstanding bonds and paying the cost of a capital improvement program to provide additional generating capacity for the System (as defined herein), and necessary extensions of the transmission and distribution lines of the System and other improvements, the Authority has heretofore issued its Puerto Rico Water Resources Authority Electric Revenue Bonds, outstanding on the date hereof in the aggregate principal amount of \$868,643,000, under and pursuant to the provisions of a trust indenture, dated as of the first day of January, 1947, by and between the Authority and The National City Bank of New York (now First National City Bank), as trustee, as amended by supplemental indentures dated as of January 1, 1948, July 1, 1956, January 1, 1961, March 1, 1962, March 1, 1965, April 1, 1967, April 1, 1970 and September 1, 1971 (said indenture as so

amended, together with all future amendments and all indentures supplemental thereto as therein permitted, being herein called the "1947 Indenture"); and

WHEREAS, First National City Bank has resigned as trustee under the 1947 Indenture and has thereby become discharged from the trusts created thereby; and

WHEREAS, the Authority has appointed The Chase Manhattan Bank (National Association) trustee under the 1947 Indenture and said banking association, having executed, acknowledged and delivered to its predecessor trustee, and also to the Authority, an instrument in writing, accepting such appointment under the 1947 Indenture, is now vested with all rights, immunities, powers and trusts, and subject to all the duties and obligations, of its predecessor trustee under the 1947 Indenture; and

WHEREAS, based upon surveys, estimates and recommendations, the Authority has found and determined that it is necessary and advisable to provide funds for additional facilities for the generation, transmission and distribution of electricity to serve the present and prospective demands upon the System, and has determined that it is necessary to increase its capacity to issue revenue bonds secured as hereinafter provided to provide funds for the foregoing purposes; and

WHEREAS, the Authority deems it advisable to make provision for the issuance from time to time of revenue bonds on a parity with the bonds issued initially under the provisions of this Agreement for the purpose of paying all or any part of the cost of any Improvements (as defined herein): and,

WHEREAS, the Authority has determined that, the coupon bonds to be issued hereunder and the interest coupons to be attached thereto, the registered bonds without coupons to be issued hereunder and the certificate of authentication by the Trustee to be endorsed on all such bonds shall be, respectively, substantially in the following forms, with such variations, omissions, and insertions, as are required or permitted by this Agreement:

[FORM OF COUPON BONDS]

No.

§

UNITED STATES OF AMERICA

PUERTO RICO ELECTRIC POWER AUTHORITY

POWER REVENUE BOND, SERIES

Puerto Rico Electric Power Authority, a body corporate and politic constituting a public corporation and governmental instrumentality of the Commonwealth of Puerto Rico (herein sometimes called the "Authority"), for value received, hereby promises to pay, solely from the special fund provided therefor as hereinafter set forth, to the bearer on the 1st day of \_\_\_\_\_, \_\_\_\_ (or earlier as hereinafter referred to), upon the presentation and surrender hereof, the principal sum of

\_\_\_\_\_ THOUSAND DOLLARS

and to pay, solely from said special fund, interest thereon from the date hereof at the rate of \_\_\_\_\_ per centum (\_\_\_%) per annum until payment of said principal sum, such interest to the maturity hereof being payable semi-annually on the 1<sup>st</sup> days of January and July in each year upon the presentation and surrender of the coupons representing such interest as the same respectively become due. Both the principal of and the interest on this bond are payable in any coin or currency of the United States of America which on the respective dates of payment thereof is legal tender for the payment of public and private debts. The principal of this bond and the interest hereon are payable at the principal office of \_\_\_\_\_, in the \_\_\_\_\_, or at the principal office of \_\_\_\_\_, in the Borough of Manhattan, City and State of New York, at the option of the holder or at such other office or agency of the Authority maintained for that purpose as the Authority shall determine.

This bond shall not be deemed to constitute a debt or obligation of the Commonwealth of Puerto Rico or any of its municipalities or other political subdivisions, and neither the Commonwealth of Puerto Rico nor any such municipalities or other political subdivisions are liable for the payment of this bond or the interest hereon, but this bond shall be payable as to both principal and interest solely from the special fund provided therefor as hereinafter set forth.

This bond is one of a duly authorized series of revenue bonds known as "Puerto Rico Electric Power Authority Power Revenue Bonds, Series \_\_\_", dated as of the 1<sup>st</sup> day of \_\_\_\_\_, \_\_\_\_\_ consisting of bonds maturing in annual installments on the 1<sup>st</sup> day of \_\_\_\_\_ in the years \_\_\_\_\_ to \_\_\_\_\_, inclusive (herein called the "serial bonds"), and of bonds maturing on the 1<sup>st</sup> day of \_\_\_\_\_, \_\_\_\_\_ and the 1<sup>st</sup> day of \_\_\_\_\_, \_\_\_\_\_ (herein collectively called the "term bonds"), and issued for the purpose of paying the cost of acquiring or constructing capital improvements to the electric power properties of the Authority (the electric power properties owned and operated by the Authority as a single integrated system, together with all improvements, renewals and replacements thereof and extensions and additions thereto financed under the provisions of the 1947 Indenture (hereinafter mentioned) and the Agreement (hereinafter mentioned), being herein called the "System").

All of the bonds are issued under and pursuant to a trust agreement (said agreement, together with all agreements supplemental thereto as therein permitted, being herein called the "Agreement"), dated as of the 1st day of January, 1974, by and between the Authority and First National City Bank, in Borough of Manhattan, City and State of New York (said banking association and any bank or trust company becoming successor trustee under the Agreement being herein called the "Trustee"), an executed counterpart of which Agreement is on file at the corporate trust office of the Trustee. Reference is hereby made to the Agreement for the provisions, among others, with respect to the custody and application of the proceeds of bonds issued under the Agreement, the collection and disposition of revenues, the fund charged with and pledged to the payment of the interest on and the principal of the bonds, the nature and extent of the security, the terms and conditions on which the bonds of each series are or may be issued, the rights, duties and obligations of the Authority and of the Trustee and the rights of the holders of the bonds, and, by the acceptance of this bond, the holder hereof assents to all of the provisions of the Agreement.

The Agreement provides for the issuance, from time to time, under the conditions, limitations and restrictions therein set forth, of additional series of bonds (such bonds and the bonds of the series of which this is one being herein collectively called the "bonds").

This bond is issued and the Agreement was made and entered into under and pursuant to the Puerto Rican Federal Relations Act and the Constitution and laws of the Commonwealth of Puerto Rico, including Act No. 83 of the Legislature of Puerto Rico, approved May 2, 1941, as amended, reenacted and supplemented (the "Authority Act"), and under and pursuant to resolutions duly adopted by the Authority.

The Agreement provides for the fixing, charging and collecting by the Authority of reasonable rates and charges for the use of the services and facilities furnished by the System sufficient to provide for the payment of the expenses of the Authority incurred in the conservation, repair, maintenance and operation of the System and for the payment of the principal of and the interest on the 1947 Indenture Bonds and the bonds as the same become due and payable, including reserves for such purposes. The 1947 Indenture provides for the deposit to the credit of a special fund designated "Water Resources Authority Renewal and Replacement Fund" (herein called the "Renewal and Replacement Fund") of the revenues of the System, to the extent required, over and above such expenses of conservation, repair, maintenance and operation and the amounts required to be deposited to the credit of the Puerto Rico Water Resources Authority Electric Revenue Bond Sinking Fund and the Puerto Rico Water Resources Authority General Reserve Fund under the 1947 Indenture and the Agreement provides for the deposit to the credit of the Renewal and Replacement Fund of sufficient funds to provide for the payments from said Fund to the special fund created under the Agreement designated "Puerto Rico Water Resources Authority Power Revenue Bonds Interest and Sinking Fund" (herein called the "Sinking Fund"). The Agreement also provides for the payment into the Sinking Fund of a sufficient amount of the funds on deposit to the credit of the Renewal and Replacement Fund to pay the principal of and the interest on all bonds issued under the Agreement as the same become due and payable and to create a reserve for such purpose, which special fund is pledged to and charged with the payment of the principal of and the interest on the bonds.

The Authority has heretofore issued under the provisions of the trust indenture, dated as of the first day of January, 1947 (such indenture as amended being herein called the "1947 Indenture"), Puerto Rico Water Resources Authority Electric Revenue Bonds (herein, with any additional bonds which hereafter may be issued under the provisions of the 1947 Indenture, called the "1947 Indenture Bonds"). Until all of the 1947 Indenture Bonds shall be paid or provision shall be made for their payment and the release of the 1947 Indenture, the revenues of the System, over and above the expenses of conservation, repair, maintenance and operation thereof, are pledged to the extent required to the payment of the principal of and the interest on the outstanding 1947 Indenture Bonds.

The bonds are issuable as coupon bonds and as registered bonds without coupons, in such denominations as the Authority may by resolution determine. At the corporate trust office of the Trustee, in the manner and subject to the limitations and conditions provided in the Agreement and without cost except for any tax or other governmental charge, registered bonds without coupons may be exchanged for an equal aggregate principal amount of coupon bonds of the same series and maturity, bearing interest at the same rate and having attached thereto coupons

representing all unpaid interest due or to become due thereon, or of registered bonds without coupons of the same series and maturity, of authorized denominations and bearing interest at the same rate, and coupon bonds with all coupons appertaining thereto representing all unpaid interest due or to become due thereon may in like manner be exchanged for an equal aggregate principal amount of registered bonds without coupons of the same series and maturity, of authorized denominations and bearing interest at the same rate.

[Here insert in the bonds of each Series, the terms of redemption applicable to the bonds of such Series.]

The moneys in the Sinking Fund available for the purchase or redemption of bonds shall be allocated to all series of bonds outstanding under the Agreement in the manner provided in the Agreement.

If less than all of the bonds of any one maturity of a series shall be called for redemption, the particular bonds or portions of registered bonds without coupons to be redeemed from such series and maturity shall be selected by the Trustee as provided in the Agreement.

Any such redemption, either in whole or in part, shall be made upon at least thirty (30) days' prior notice by publication and otherwise as provided in the Agreement, and shall be made, in the manner and under the terms and conditions provided in the Agreement. On the date designated for redemption, notice having been published as provided in the Agreement, the bonds or portions of registered bonds without coupons so called for redemption shall become and be due and payable at the redemption price provided for redemption of such bonds or such portions thereof on such date, and, if moneys for payment of the redemption price and the accrued interest are held by the Trustee or by the paying agents, as provided in the Agreement, interest on such bonds or such portions thereof so called for redemption shall cease to accrue, the coupons for any such interest payable subsequent to the redemption date shall be void, such bonds or such portions thereof so called for redemption shall cease to be entitled to any benefit or security under the Agreement, and the holders or registered owners thereof shall have no rights in respect of such bonds or such portions thereof so called for redemption except to receive payment of the redemption price thereof and the accrued interest so held by the Trustee or by the paying agents.

The holder of this bond shall have no right to enforce the provisions of the Agreement or to institute action to enforce the covenants therein, or to take any action with respect to any event of default under the Agreement, or to institute, appear in or defend any suit or other proceeding with respect thereto, except as provided in the Agreement.

In certain events, on the conditions in the manner and with the effect set forth in the Agreement, the principal of all the bonds then outstanding under the Agreement may become or may be declared due and payable before the stated maturities thereof, together with the interest accrued thereon.

**Modifications or alterations of the Agreement or of any agreement supplemental thereto may be made by the Authority and the Trustee only to the extent and in the circumstances permitted by the Agreement.**

As declared by the Authority Act, this bond shall at all times be, and shall be understood to be, a negotiable instrument for all purposes.

This bond is issued with the intent that the laws of the Commonwealth of Puerto Rico shall govern its construction.

All acts, conditions and things required by the Puerto Rican Federal Relations Act and the Constitution and laws of the Commonwealth of Puerto Rico and the rules and regulations of the Authority to happen, exist and be performed precedent to and in the issuance of this bond and the execution of the Agreement have happened, exist and have been performed as so required.

This bond shall not be valid or become obligatory for any purpose, or be entitled to any benefit or security under the Agreement until it shall have been authenticated by the execution by the Trustee of the certificate of authentication endorsed hereon.

IN WITNESS WHEREOF, Puerto Rico Electric Power Authority has caused this bond to [be signed by] [bear the facsimile signature of] the Executive Director of the Authority and to [be signed by] [bear the facsimile signature of] the Secretary of the Authority, and a facsimile of its corporate seal to be imprinted hereon, and the attached interest coupons to bear the facsimile signature of said Executive Director; all as of the 1st day of \_\_\_\_\_, \_\_\_\_.

[Facsimile of corporate seal]

PUERTO RICO ELECTRIC  
POWER AUTHORITY

By: \_\_\_\_\_  
Executive Director

\_\_\_\_\_  
Secretary

[FORM OF COUPONS]

No.

On \_\_\_\_\_ 1, 19\_\_\_\_, Puerto Rico Electric Power Authority will pay to bearer (unless the bond mentioned below shall previously have become payable as provided in the Agreement referred to in said bond and provision for payment thereof shall have been duly made) at the principal office of \_\_\_\_\_ in the \_\_\_\_\_, \_\_\_\_\_, or at the principal office of \_\_\_\_\_ in the Borough of Manhattan, City and State of New York, at the option of the bearer, or at such other office or agency of the Authority maintained for that purpose as the Authority shall determine upon the presentation and surrender hereof, the sum of \_\_\_\_\_ in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts, solely from the special fund referred to in, and for the semi-annual interest then due upon, its Puerto Rico Electric Power Authority Power Revenue Bond, Series \_\_\_\_\_, dated as of \_\_\_\_\_, \_\_\_\_\_, No. \_\_\_\_\_.

\_\_\_\_\_  
Executive Director, Puerto Rico  
Electric Power Authority

[FORM OF REGISTERED BONDS WITHOUT COUPONS]

Same as Form of Coupon Bonds except as follows:

1. Substitute the following for the caption and the first paragraph:

No. R \$ \_\_\_\_\_

UNITED STATES OF AMERICA

PUERTO RICO ELECTRIC POWER AUTHORITY

POWER REVENUE BOND, SERIES \_\_\_\_

Puerto Rico Electric Power Authority, a body corporate and politic constituting a public corporation and governmental instrumentality of the Commonwealth of Puerto Rico (herein sometimes called the "Authority"), for value received, hereby promises to pay, solely from the special fund provided therefor as hereinafter set forth, to \_\_\_\_\_, or registered assigns or legal representative, on the 1<sup>st</sup> day of \_\_\_\_\_, \_\_\_\_ (or earlier as hereinafter referred to), upon the presentation and surrender hereof at the Corporate Trust Office of the Trustee (hereinafter mentioned), the principal sum of

DOLLARS

in any coin or currency of the United States of America which on the date of payment thereof is legal tender for the payment of public and private debts, and to pay, solely from said special fund, to the registered owner hereof by check mailed to the registered owner at his address as it appears on the bond registration books of the Authority, interest on said principal sum from the date hereof or from the January 1 or July 1 next preceding the date of authentication to which interest shall have been paid, unless such date of authentication is a January 1 or July 1, in which case, from such date, semi-annually on January 1 and July 1 in each year in like coin or currency, at the rate or \_\_\_\_\_ per centum (\_\_\_\_%) per annum until payment of said principal sum.

2. Substitute the following for the paragraph concerning the notice of redemption and the effect thereof:

Any such redemption, either in whole or in part, shall be made upon at least thirty (30) days' prior notice by publication and otherwise as provided in the Agreement, and shall be made in the manner and under the terms and conditions provided in the Agreement. On the date designated for redemption, notice having been published as provided in the Agreement, the bonds or portions of registered bonds without coupons so called for redemption shall become and be due and payable at the redemption price provided for redemption of such bonds or such portions thereof of such date, and, if moneys for payment of the redemption price and the accrued interest are held by the Trustee, as provided in the Agreement, interest on such bonds or such portions thereof so called for redemption shall cease to accrue, such bonds or such portions thereof so called for redemption shall cease to be entitled to any benefit or security under the Agreement, and the holders or registered owners thereof shall have no rights in respect of such bonds or portions thereof so called for redemption except to receive payment of the redemption



price thereof and the accrued interest so held by the Trustee. If a portion of this bond shall be called for redemption, a new bond or bonds in principal amount equal to the unredeemed portion hereof will be issued to the registered owner upon the surrender hereof.

3. Substitute the following for the paragraph concerning negotiability:

The transfer of this bond is registrable by the registered owner hereof in person or by his attorney or legal representative at the principal office of the Trustee but only in the manner and subject to the limitations and conditions provided in the Agreement and upon surrender and cancellation of this bond. Upon any such registration of transfer the Authority shall execute and the Trustee shall authenticate and deliver in exchange for this bond a new registered bond or bonds without coupons, registered in the name of the transferee, of authorized denominations, or, at the option of the transferee, coupon bonds with coupons attached representing all unpaid interest due or to become due thereon, in aggregate principal amount equal to the principal amount of this bond, of the same series and maturity and bearing interest at the same rate.

As declared by the Authority Act, this bond, notwithstanding the provisions for registration of transfer stated herein and contained in the Agreement, shall at all times be, and shall be understood to be, a negotiable instrument for all purposes.

4. Substitute the following for the witnessing clause:

IN WITNESS WHEREOF, Puerto Rico Electric Power Authority has caused this bond to [be signed by] [bear the facsimile signature of] the Executive Director of the Authority and to be [signed by] [bear the facsimile signature of] the Secretary of the Authority, and a facsimile of its corporate seal to be imprinted hereon, all as of the 1<sup>st</sup> day of \_\_\_\_\_, \_\_\_\_.

5. Omit the Form of coupons.

[to be endorsed on all bonds]

### CERTIFICATE OF AUTHENTICATION

This is one of the bonds of the series designated therein and issued under the provisions of the within mentioned Agreement.

U.S. Bank National Association, as Successor Trustee

By: \_\_\_\_\_  
Authorized Officer

[to be endorsed on all registered bonds  
following the certificate of authentication]

Date of authentication: \_\_\_\_\_

and

WHEREAS, by virtue of the Authority Act, the Authority is authorized to issue revenue bonds as hereinafter provided, to enter into this Agreement and to do or cause to be done all the acts and things herein provided or required to be done as hereinafter covenanted; and

WHEREAS, the execution and delivery of this Agreement have been duly authorized by resolution of the Authority; and

WHEREAS, all acts, conditions and things required by the Puerto Rican Federal Relations Act, by the Constitution and laws of the Commonwealth of Puerto Rico and the rules and regulations of the Authority to happen, exist and be performed precedent to and in the execution and delivery of this Agreement have happened, exist and have been performed as so required, in order to make this Agreement a legal, valid and binding trust agreement for the security of the bonds in accordance with its terms; and

WHEREAS, the Trustee has accepted the trusts created by this Agreement and in evidence thereof has joined in the execution hereof;

NOW, THEREFORE, THIS AGREEMENT WITNESSETH, that in consideration of the premises, of the acceptance by the Trustee of the trusts hereby created, and of the purchase and acceptance of the bonds by the holders thereof, and also for and in consideration of the sum of One Dollar to the Authority in hand paid by the Trustee at or before the execution and delivery of this Agreement, the receipt of which is hereby acknowledged, and for the purpose of fixing and declaring the terms and conditions upon which the bonds are to be issued, executed, authenticated, delivered, secured and accepted by all persons who shall from time to time be or become holders thereof, and in order to secure the payment of all bonds at any time issued and outstanding hereunder and the interest and the redemption premium, if any, thereon according to their tenor, purport and effect, and in order to secure the performance and observance of all the covenants, agreements and conditions therein and herein contained, the Authority has executed and delivered this Agreement and has pledged and does hereby pledge to the Trustee the

revenues of the System, subject to the pledge of such revenues to the payment of the principal of and the interest on the 1947 Indenture Bonds (hereinafter mentioned), and other moneys to the extent provided in this Agreement as security for the payment of the bonds and the interest and the redemption premium, if any, thereon and as security for the satisfaction of any other obligation assumed by it in connection with such bonds, and it is mutually agreed and covenanted by and between the parties hereto, for the equal and proportionate benefit and security of all and singular the present and future holders of the bonds issued and to be issued under this Agreement, without preference, priority or distinction as to lien or otherwise, except as otherwise hereinafter provided, of any one bond of any other bond, by reason of priority in the issue, sale or negotiation thereof or otherwise, as follows:

### **Article I Definitions.**

Section 101. Meaning of words and terms. In addition to words and terms elsewhere defined in this Agreement, the following words and terms shall have the following meanings, unless some other meaning is plainly intended:

The term "Accreted Value" shall mean with respect to any Capital Appreciation Bonds (i) as of any Valuation Date, the amount set forth for such date in the resolution authorizing such Capital Appreciation Bonds and (ii) as of any date other than a Valuation Date, the sum of (a) the Accreted Value on the preceding Valuation Date and (b) the product of (1) a fraction, the numerator of which is the actual number of days having elapsed from the preceding Valuation Date and the denominator of which is the actual number of days from such preceding Valuation Date to the next succeeding Valuation Date and (2) the difference between the Accreted Values for such Valuation Dates.

The word "Agreement" shall mean this Agreement, dated as of January 1, 1974, together with all agreements supplemental hereto as herein permitted.

The term "Amortization Accrual" shall mean for any period the amount of an Amortization Requirement that would accrue during such period if such Requirement accrued ratably on the basis of a year consisting of twelve (12) thirty-day months. Unless otherwise provided by resolution of the Authority or an agreement supplemental hereto, the monthly accrual in respect of an Amortization Requirement for a term bond shall commence on the first day of each month in the fiscal year for which such Requirement has been established and shall end on the first day of the month succeeding the relevant Deposit Day.

As applied to the term bonds of any Series, the term "Amortization Requirement" for any fiscal year shall mean the principal amount fixed or computed for such fiscal year as hereinafter set forth for the retirement of such term bonds by purchase or redemption.

The Amortization Requirements for the term bonds of each Series shall be initially the respective principal amounts for each fiscal year as fixed in a resolution of the Board adopted prior to the issuance of the bonds of such Series; provided, however,

that if any additional term bonds of such Series shall be issued under the provisions of the first paragraph of Section 210 of this Agreement, the respective Amortization Requirements for the term bonds of such Series shall be increased in proportion as nearly as may be practicable to the increase in the total principal amount of the term bonds of such Series. The aggregate amount of such Amortization Requirements for the term bonds of each Series shall be equal to the aggregate principal amount of the term bonds of such Series. The Amortization Requirements for the term bonds of each Series shall begin in the fiscal year determined by the Board.

If at the close of any fiscal year the total principal amount of term bonds of any Series retired by purchase or redemption, or prior to the close of such fiscal year called for redemption under the provisions of Section 511 of this Agreement, shall be in excess of the amount of the Amortization Requirements for the term bonds of such Series for such fiscal year, then the amount of the Amortization Requirements for the term bonds of such Series shall be reduced for such subsequent fiscal years in such amounts aggregating the amount of such excess as shall be determined by the Executive Director in an order filed with the Trustee on or before the 10<sup>th</sup> day of July following the close of such fiscal year.

If at the close of any fiscal year the total principal amount of term bonds of any Series retired by the purchase or redemption, or called for redemption under the provisions of Section 511 of this Agreement, prior to the close of such fiscal year shall be less than the amount of the Amortization Requirements for the term bonds of such Series for such fiscal year, then the amount of the Amortization Requirements for the term bonds of such Series for the next succeeding fiscal year shall be increased by the amount of the excess of such deficiency over the amount then held to the credit of the Redemption Account.

It shall be the duty of the Trustee, on or before the 15<sup>th</sup> day of July in each fiscal year, to compute the Amortization Requirements for the then current fiscal year for the term bonds of each Series then outstanding. The Amortization Requirements for the then current fiscal year shall continue to be applicable during the balance of such current fiscal year and no adjustment shall be made therein by reason of term bonds purchased or redeemed or called for redemption during such current fiscal year.

The term "Annual Budget" shall mean the Authority's budget of Current Expenses and Capital Expenditures for a fiscal year adopted pursuant to the provisions of Section 504 of this Agreement.

The word "Authority" shall mean the Puerto Rico Electric Power Authority, a body corporate and politic constituting a public corporation and governmental instrumentality of the Commonwealth of Puerto Rico, and the successor or successors of the Authority.

The term "Authority Act" shall mean the Puerto Rico Water Resources Authority Act, being Act No. 83 of the Legislature of Puerto Rico, approved May 2, 1941, as amended and reenacted by Act. No. 19, approved April 8, 1942, as amended, and Act No.

111, approved May 6, 1941, as amended by Act No. 153, approved May 14, 1943, as amended.

The word "Board" shall mean the governing board of the Authority as constituted from time to time and defined by the Authority Act, or if said Board shall be abolished, then the board, body or officer succeeding to the principal functions thereof or to whom the powers of the Authority shall be given by law.

The term "Bond Service Account" shall mean the special account created in the Sinking Fund by the provisions of Section 507 of this Agreement.

The term "bondholder of record" shall mean any bondholder who shall have filed with the Secretary, within the period of two years immediately prior to any time when such term has application, a written request setting forth his name and address and the particular reports, notices, and other documents which he desires to receive and which are required to be mailed under the requirements of this Agreement.

The word "bonds" shall mean the bonds issued under this Agreement.

The term "Build America Bonds" shall mean a series of bonds designated as "Build America Bonds" by the Authority for purposes of Section 54AA of the Code and for which the Authority has irrevocably elected pursuant to Section 54AA(g) of the Code to receive the Federal Subsidy from the United States Treasury in connection therewith under Section 6431 of the Code and apply it in accordance with the provisions of the resolution or resolutions adopted by the Board authorizing the issuance of such bonds.

The term "Capital Appreciation Bonds" shall mean any bonds hereafter issued as to which interest is payable only at the maturity or prior redemption of such bonds. For the purposes of (i) receiving payment of the redemption price if a Capital Appreciation Bond is redeemed prior to maturity to the extent provided in the resolution authorizing the Capital Appreciation Bonds, or (ii) receiving payment of a Capital Appreciation Bond if the principal of all bonds is declared immediately due and payable following an event of default as provided in Section 802 of this Agreement or (iii) computing the principal amount of bonds held by the registered owner of a Capital Appreciation Bond in giving to the Authority of the Trustee any notice, consent, request, or demand pursuant to this Agreement for any purpose whatsoever, the principal amount of a Capital Appreciation Bond shall be deemed to be its Accreted Value. In the case of Capital Appreciation Bonds that are convertible to bonds with interest payable prior to maturity or prior redemption of such bonds, the term "Capital Appreciation Bonds" shall be limited to the period prior to such conversion, and after such conversion, the bonds shall be viewed as any other bonds of the same type for purposes of this Agreement.

The term "Capital Expenditures" shall mean all expenditures made on account of the cost of the Capital Improvement Program, as defined in the 1947 Indenture, and the cost of Improvements under this Agreement and the 1947 Indenture and those expenditures made for the purpose for which funds are provided pursuant to the provisions of Section 512 of the 1947 Indenture.

The term “Capital Improvement Fund” shall mean the Puerto Rico Electric Power Authority Capital Improvement, a special fund created and designated by Section 507 of this Agreement.

The term “Construction Fund” shall mean the Puerto Rico Electric Power Authority Power System Construction Fund, a special fund created and designated by the provisions of Section 401 of this Agreement.

The term “Consulting Engineer” shall mean the engineer or engineering firm or corporation at the time employed by the Authority under the provisions of Section 706 of this Agreement to perform and carry out the duties imposed on the Consulting Engineers by this Agreement.

The word “Controller” shall mean the Controller or any Assistant Controller of the Authority, or if there is no Controller or Assistant Controller, then any person designated by the Board or by the by-laws of the Authority to perform the functions of the chief financial officer of the Authority.

The word “cost”, as applied to any Improvements, shall embrace the cost of the acquisition and construction and all obligations and expenses and all items of cost which are set forth in Section 403 of this Agreement.

The term “Current Expenses” shall mean the Authority’s reasonable and necessary current expenses of maintaining, repairing and operating the System and shall include, without limiting the generality of the foregoing, all administrative expenses, insurance premiums, expenses of preliminary surveys not chargeable to Capital Expenditures, engineering expenses relating to operation and maintenance, fees and expenses of the Trustee, the 1947 Trustee, the Paying Agents and of the paying agents under the 1947 Indenture, legal expenses, any payment to pension or retirement funds, and all other expenses required to be paid by the Authority under the provisions of the 1947 Indenture, this Agreement or by law, or permitted by standard practices for public utility systems, similar to the properties and business of the Authority and applicable in the circumstances but shall not include any deposits to the credit of the Sinking Fund, the Reserve Maintenance Fund, the Subordinate Obligations Fund, the Self-insurance Fund and the Capital Improvement Fund or the 1947 Sinking Fund or deposits under the provisions of Sections 511, 512 and 513 of the 1947 Indenture.

The term “daily newspaper” shall mean a newspaper regularly published in the English language on at least five (5) business days in each calendar week and, in the case of a newspaper published in the Commonwealth of Puerto Rico, may include a newspaper regularly published in the Spanish language on at least five (5) business days in each calendar week.

The word “Depositary” shall mean one or more banks or trust companies duly authorized under the laws of the United States of America, or any state thereof or the Commonwealth of Puerto Rico to engage in the banking business therein and designated by the Authority as a depositary of moneys under the provisions of this Agreement, each

such depository to be a member of the Federal Deposit Insurance Corporation and shall also mean the Trustee and Government Development Bank for Puerto Rico.

The term "Deposit Day" shall mean the date specified in the first paragraph of Section 507 of this Agreement as the date by which all the moneys then held to the credit of the Revenue Fund shall be withdrawn by the Treasurer and deposited in the manner set forth in said Section.

The term "Designated Maturity Bonds" shall mean the indebtedness incurred by the Authority under the terms of a separate trust agreement or resolution, which indebtedness has a maturity of at least ten (10) years and is secured, as to the unamortized principal thereof, on a subordinate basis to the bonds and for which (i) no amortization of principal has been established or (ii) the aggregate amount of the amortized principal that has been established is less than the principal amount of the indebtedness; provided that interest on said indebtedness and any amortized principal of said indebtedness may be payable on a parity, respectively, with interest on bonds and Amortization Requirements on term bonds, in which case said interest and amortized principal shall be included in the calculation of Principal and Interest Requirements on bonds for purposes of this Agreement and shall otherwise be deemed to be, and payable as, interest and Amortization Requirements on bonds for purposes of this Agreement.

The term "Executive Director" shall mean the Executive Director or the Vice Executive Director of the Authority for the time being, or if there is no Executive Director or Vice Executive Director, then any person designated by the Board or by the by-laws of the Authority to perform the functions of the Executive Director.

The term "Extendible Maturity Bonds" shall mean bonds the maturities of which, by their terms, may be extended by and at the option of the bondholder or the Authority.

The term "Federal Subsidy" shall mean a payment made by the Secretary of the Department of Treasury to or for the account of the Authority pursuant to the Code in respect of a series of bonds constituting Federally Subsidized Bonds. Any Federal Subsidy to be received by the Authority in respect of such series of bonds shall be identified as such in the resolution authorizing the issuance of such series of bonds to which it relates.

The term "Federally Subsidized Bonds" shall mean either Build America Bonds or Other Subsidy Bonds or both, as the case may be.

The term "Federal Subsidy Payments" shall mean the amount of Federal Subsidy actually paid to and received by the Trustee in respect of an interest payment for the series of Federally Subsidized Bonds to which it relates. Such Federal Subsidy Payments shall be deposited directly into the Bond Service Account in the Sinking Fund.

The term "fiscal year" shall mean the period commencing on the 1<sup>st</sup> day of July of any year and ending on the last day of June the following year.

The term "General Fund" shall mean the Puerto Rico Electric Power Authority General Fund, a special fund created and designated by the provisions of Section 503 of this Agreement.

The term "General Reserve Fund" shall mean the Puerto Rico Electric Power Authority General Reserve Fund, a special fund created and designated by the provisions of Section 511 of the 1947 Indenture.

The term "Government Obligations" shall mean (i) direct obligations of, or obligations the principal of and the interest on which are unconditionally guaranteed by, the United States Government including securities evidencing ownership interests in such obligations or in specified portions thereof (which may consist of specific portions of the principal of or interest on such obligations), (ii) bonds, debentures or notes issued by any of the following Federal agencies: Banks for Cooperatives, Federal Intermediate Credit Banks, Federal Home Loan Banks, Export-Import Bank of the United States, Government National Mortgage Association, Federal Land Banks, or the Federal National Mortgage Association (including participation certificates issued by such Association) and (iii) all other obligations issued or unconditionally guaranteed as to principal and interest by an agency or person controlled or supervised by and acting as an instrumentality of the United States Government pursuant to authority granted by the Congress.

The word "Improvements" shall mean such improvements, renewals and replacements of the System or any part thereof and such extensions and additions thereto as may be necessary or desirable, in the judgment of the Board, to keep the same in proper condition for the safe, efficient and economic operation thereof and to integrate into the System any unit or part thereof, and shall include such electric-power projects as may be authorized to be acquired or constructed by the Authority under the provisions of the Authority Act and such improvements, renewals and replacements of such properties and the System and such extensions and additions thereto as may be necessary or desirable for continuous and efficient service to the public, which shall be financed in whole or in substantial part from the proceeds of bonds issued under the provisions of the 1947 Indenture or this Agreement or from moneys deposited to the credit of the 1947 Construction Fund, the Construction Fund or the Renewal and Replacement Fund.

The term "Independent Consultant" shall mean the consultant or consulting firm or corporation at the time employed by the Authority under the provisions of Section 706 of this Agreement to perform and carry out the duties of the Independent Consultant by this Agreement.

The term "Interest Accrual" shall mean for any period the amount of interest that would accrue during such period if such interest accrued ratably on the basis of a year consisting of twelve (12) thirty-day months. Unless otherwise provided by resolution of the Authority or an agreement supplemental hereto, the monthly accrual in respect of interest on the bonds shall commence on the later to occur of the date of issue of the bonds of such Series and the date that is six months prior to the due date of such interest and shall end on the first day of the month following the relevant Deposit Day. In the



case of Variable Rate Bonds, the amount deposited shall be based on the sum of the interest accrued through the business day preceding the relevant Deposit Day and the interest (calculated at the maximum rate of interest on such Bonds, or if there is no such maximum rate, then at the rate on such Bonds on the business day preceding the Deposit Day plus one percent (1%)) that would accrue on such Bonds from the Deposit Day to the later to occur of the first day of the next calendar month and any interest payment date on such Bonds occurring prior to the next Deposit Day.

The term "Investment Obligations" shall mean (i) Government Obligations, (ii) obligations of any state or territory of the United States or political subdivision thereof (other than obligations rated lower than the three highest grades by a nationally recognized rating agency), (iii) repurchase agreements with commercial banks fully secured by Government Obligations and (iv) any other investment obligations permitted for governmental instrumentalities such as the Authority under the laws of the Commonwealth of Puerto Rico which are rated, on the date of investment therein, in any of the three highest grades by a nationally recognized rating agency, or which are collateralized by any of the other Investment Obligations described herein.

The term "Net Revenues" for any particular period shall mean the amount of the excess of the Revenues for such period over the Current Expenses for such period.

The term "1947 Construction Fund" shall mean the Puerto Rico Electric Power Authority Construction Fund, a special fund created and designated by the provisions of Section 401 of the 1947 Indenture.

The term "1947 Indenture" shall mean the Trust Indenture, dated as of January 1, 1947, by and between the Authority and The National City Bank of New York (now First National City Bank), as trustee, as amended by Supplemental Indentures, dated January 1, 1948, July 1, 1956, January 1, 1961, March 1, 1962, March 1, 1965, April 1, 1967, April 1, 1970 and September 1, 1971, together with all future amendments and all indentures supplemental thereto as therein permitted.

The term "1947 Indenture Bonds" shall mean the bonds issued under the 1947 Indenture.

The term "1947 Revenue Fund" shall mean the Electric Power Authority Electric Revenue Fund, a special fund created and designated by the provisions of Section 506 of the 1947 Indenture.

The term "1947 Sinking Fund" shall mean the Puerto Rico Electric Power Authority Electric Revenue Bonds Sinking Fund, a special fund created and designated by the provisions of Section 507 of the 1947 Indenture.

The term "1947 Trustee" shall mean the trustee under the 1947 Indenture for the time being, whether original or successor.

The term "Opinion of Counsel" shall mean a written opinion of counsel who may (except as otherwise expressly provided in this Agreement) be counsel for the Authority.

Every opinion of counsel required to be filed with the Trustee in connection with an application to the Trustee to authenticate bonds under this Agreement shall contain the following statements: (i) that the Authority has the legal right and power to enter into this Agreement and has duly authorized and validly executed and delivered this Agreement and this Agreement is legally valid and binding upon the Authority and enforceable in accordance with its terms, (ii) that this Agreement creates a legally valid and effective pledge of the Net Revenues, subject only to the lien of the 1947 Indenture, and of the moneys, securities and funds held or set aside under this Agreement as security for the bonds, subject to the application thereof to the purposes and on the conditions permitted by this Agreement and specifying the place or places, if any, where filing or recording of any document is necessary in order to make such pledge effective or to continue it in effect, (iii) that the Authority has paid all municipal or governmental charges lawfully levied or assessed upon the System or any part thereof or upon any Revenues, (iv) that the issuance of the bonds then directed to be authenticated and delivered will not violate any provision of law or of the by-laws of the Authority, or result in the breach of, or constitute a default under, any agreement, indenture or other instrument to which the Authority is a party or by which it may be bound; (v) that no authorization, consent or approval or withholding of objection of any governmental body or regulatory authority is requisite to the legal issue of said bonds (unless such opinion shall show that no authorization, consent or approval or withholding of objection is requisite to the legal issue of said bonds, it shall specify and attach any officially authenticated certificates, or other documents, by which such authorization, consent or approval or withholding of objection is evidenced), and (vi) that the bonds then directed to be authenticated and delivered are legally valid and binding direct obligations of the Authority, enforceable in accordance with their terms and the terms of this Agreement and have been duly and validly authorized and issued in accordance with law and this Agreement.

The term "Other Subsidy Bonds" shall mean bonds for which a subsidy or other payment made by the Secretary of the Department of Treasury may be made in respect of such bonds other than under Section 6431 of the Code.

The term "Paying Agents" shall mean with respect to the bonds of each Series the one or more banks or trust companies designated in a resolution of the Board or the office or agency of the Authority where the coupon bonds and coupons may be presented for payment.

The term "predecessor bonds" shall mean, with respect to any registered bond without coupons, every previous bond evidencing all or a portion of the same debt as that evidenced by such registered bond without coupons; and, for the purpose of this definition, any bond authenticated and delivered under Section 212 of this Agreement in lieu of a mutilated, destroyed or lost bond shall be deemed to evidence the same debt as the mutilated, destroyed or lost bond.

The term "Prerefunded Municipals" shall mean any bonds or other obligations of any state of the United States of America or Puerto Rico or of any agency, instrumentality of local governmental unit of any such state or Puerto Rico (a) which are (x) not callable prior to maturity or (y) as to which irrevocable instructions have been

given to the trustee of such bonds or other obligations by the obligor to give due notice of redemption and to call such bonds or other obligations for redemption on the date or dates specified in such instructions, (b) which are secured as to principal, redemption premium, if any, and interest by a fund consisting only of cash or Government Obligations or Time Deposits, secured in the manner set forth in Section 601 of this Agreement, which fund may be applied only to the payment of such principal of and interest and redemption premium, if any, on such bonds or other obligations on the maturity date or dates thereof or the specified redemption date or dates pursuant to such irrevocable instructions, as appropriate, and (c) as to which the principal of and interest on the Government Obligations or Time Deposits, secured in the manner set forth in Section 601 of this Agreement, which have been deposited in such fund, along with any cash on deposit in such fund are sufficient to pay principal of and interest and redemption premium, if any, on the bonds or other obligations on the maturity date or dates thereof or on the redemption date or dates specified in the irrevocable instructions referred to in clause (a) of this paragraph, as appropriate.

The term "Principal Accrual" shall mean for any period the amount of principal that would accrue during such period if such principal accrued ratably on the basis of a year consisting of twelve (12) thirty-day months. Unless otherwise provided by resolution of the Authority or an agreement supplemental hereto, the monthly accrual in respect of the principal or serial bonds shall commence on the first day of the twelfth month preceding the due date of such principal and shall end on the first day of the month succeeding the relevant Deposit Day.

The term "Principal and Interest Requirements" for any fiscal year, as applied to the bonds of any Series issued under this Agreement or the 1947 Indenture, shall mean the sum of:

- (a) the amount required to pay the interest on all outstanding bonds of such Series which is payable on January 1 in such fiscal year and on July 1 in the following fiscal year.
- (b) the amount required to pay the principal of all outstanding serial bonds of such Series which is payable after July 31 in such fiscal year and on or prior to July 31 in the following fiscal year, and
- (c) the Amortization Requirement for the term bonds of such Series for such fiscal year.

The Principal and Interest Requirements for the bonds of any Series issued under this Agreement shall be determined, as required from time to time, by the Trustee. In computing the Principal and Interest Requirements for any fiscal year for the bonds of any Series, the Trustee shall assume that an amount of the term bonds of such Series equal to the Amortization Requirement for the term bonds of such Series for such fiscal year will be retired by purchase or redemption on July 1 in the following fiscal year.

For purposes of determining the aggregate Principal and Interest Requirements in the covenant as to rates contained in Section 502, the maximum Principal and Interest Requirements for purposes of Section 704 and the maximum aggregate Principal and Interest Requirements for purposes of Section 712 of this Agreement, the interest rate on Variable Rate Bonds shall be assumed to be one hundred ten percent (110%) of the greater of (i) the average interest rate on such Variable Rate Bonds during the twelve months ending with the month preceding the date of calculation, or such shorter period that such Variable Rate Bonds shall have been outstanding under this Agreement, or (ii) the rate of interest on such Variable Rate Bonds on the date of calculation. For purposes of determining the maximum aggregate Principal and Interest Requirements for purposes of Sections 208, 209 and 210 of this Agreement, the interest rate on Variable Rate Bonds outstanding or proposed to be issued on the date of calculation shall be determined in accordance with the formula in the previous sentence. If Variable Rate Bonds are payable at the option of the Bondholder and the source for said payment is a credit or liquidity facility, the "put" date or dates shall be ignored and the stated dates for Amortization Requirements and principal payments thereof shall be used for purposes of this calculation. If the Authority has notified the Trustee that a SWAP agreement is in effect in respect of Variable Rate Bonds, then for all purposes of this paragraph, except for the purpose of determining the aggregate Principal and Interest Requirements in the covenant as to rates contained in Section 502 hereof, in the certificate mentioned in clause (d) of Section 208 hereof and in the covenant contained in Section 704 hereof, the interest rate on such Variable Rate Bonds shall be the SWAP rate under such SWAP agreement.

For purposes of determining the above requirements in the case of Put Bonds, the "put" dates or dates shall be ignored if the source for payment of said put is a credit or liquidity facility and the stated dates for Amortization Requirements and principal payments shall be used. For purposes of determining the above requirements in the case of Extendible Maturity Bonds, the bonds shall be deemed to mature on the later of the stated maturity date or the date to which such stated maturity date has been extended. For purposes of determining the above requirements in the case of Capital Appreciation Bonds, the principal and interest portions of the Accreted Value of Capital Appreciation Bonds becoming due at maturity or by virtue of an Amortization Requirement shall be included in the calculations of accrued and unpaid interest and principal requirements in such manner and during such period of time as is specified in the resolution authorizing such Capital Appreciation Bonds. If the Authority has notified the Trustee that a SWAP agreement is in effect in respect of Variable Rate Bonds, then for all purposes of this paragraph, except for the purpose of determining the aggregate Principal and Interest Requirements in the covenant as to rates contained in Section 502 hereof, in the certificate mentioned in clause (d) of Section 208 hereof and in the covenant contained in Section 704 hereof, the interest rate on such Variable Rate Bonds shall be the SWAP rate under such SWAP agreement.

Principal and Interest Requirements on bonds shall be deemed to include the amount required to pay interest on outstanding Designated Maturity Bonds and any amortized principal of said Designated Maturity Bonds for any fiscal year, if said interest and amortized principal are payable, under the trust agreement or resolution providing for

said Designated Maturity Bonds, on a parity with interest and Amortization Requirements on bonds.

To the extent all or a portion of the principal of, Amortization Requirements for or interest on, any bonds of any Series are payable from moneys irrevocably set aside or deposited irrevocably for such purpose with a bank or trust company (which may include the Trustee) or from Investment Obligations irrevocably set aside or deposited irrevocably for such purpose with a bank or trust company (which may include the Trustee) or Time Deposits, secured in the manner set forth in Section 601 of this Agreement, and irrevocably set aside for such purpose, the principal of and the interest on which when due will provide sufficient moneys to make such payments, such principal, Amortization Requirements or interest shall not be included in determining Principal and Interest Requirements; provided, however, that for purposes of the definition of Principal and Interest Requirements as used in Sections 502(A)(b) and 502(B)(b), respectively, said definition shall include any interest payable from any amount deposited to the credit of the Bond Service Account from the proceeds of bonds to pay interest to accrue thereon. The Executive Director or his designee shall deliver to the Trustee a certificate describing the principal of, Amortization Requirements for and interest on any bonds for which moneys, Investment Obligations or Time Deposits have been set aside or deposited pursuant to this paragraph, and stating that such principal, Amortization Requirements and interest should not be included in determining the Principal and Interest Requirements. Upon request of the Trustee, the Authority shall cause to be delivered to the Trustee a certificate of an independent verification agent as to the sufficiency of the maturing principal amounts of any Investment Obligations or Time Deposits, together with interest thereon, set aside or deposited pursuant to this paragraph to pay said principal, Amortization Requirements and interest.

For purposes of determining the maximum Principal and Interest Requirements for purposes of Sections 208, 209 and 210 of this Agreement, the aggregate Principal and Interest Requirements in the covenant as to rates contained in Section 502, the maximum Principal and Interest Requirements for purposes of Section 704 and the maximum aggregate Principal and Interest Requirements for purposes of Section 712 of this Agreement, on the date of issuance of a Federally Subsidized Bonds and for so long as the Trustee shall receive the scheduled amount of the Federal Subsidy Payments on or before such interest is payable, all or a portion of the interest in respect of one or more series of Federally Subsidized Bonds shall be excluded from the calculation of the Principal and Interest Requirement if, and to the extent that the interest thereon is payable from a Federal Subsidy. Notwithstanding the foregoing, if the Trustee shall not receive the scheduled amount of the Federal Subsidy Payments on or before the date interest on such Federally Subsidized Bonds is payable or within thirty (30) of the date such Federal Subsidy Payments were scheduled to be received under the then current applicable law and regulations, then from and after the occurrence of such failure to receive such Federal Subsidy and until such Federal Subsidy Payments shall resume and all prior deficiencies are cured, the exclusion from the calculation of the Principal and Interest Requirement set forth in the preceding sentence shall no longer be effective for purposes of determining the maximum Principal and Interest Requirements for purposes of Sections 208, 209 and 210 of this Agreement, the aggregate Principal and Interest Requirements in the covenant

as to rates contained in Section 502, the maximum Principal and Interest Requirements for purposes of Section 704 and the maximum aggregate Principal and Interest Requirements for purposes of Section 712 of this Agreement.

The term "Put Bonds" shall mean bonds, other than Variable Rate Bonds, which by their terms may be tendered by and at the option of the holder thereof for payment prior to the stated maturity thereof.

The term "Redemption Account" shall mean the special account created in the Sinking Fund by the provisions of Section 507 of this Agreement.

The term "Renewal and Replacement Fund" shall mean the Electric Power Authority Renewal and Replacement Fund, a special fund created and designated by the provisions of Section 512 of the 1947 Indenture.

The term "Reserve Account" shall mean the special account created in the Sinking Fund by the provisions of Section 507 of this Agreement.

The term "Reserve Account Insurance Policy" shall mean the insurance policy, surety bond or other acceptable evidence of insurance, if any, to be deposited in the Reserve Account in lieu of or in partial substitution for cash or securities on deposit therein, for the purpose of making the payments required to be made from the Reserve Account under Section 510 hereof. The issuer providing such insurance shall be a municipal bond insurer whose policy or bond results in the rating of municipal obligations secured by such policy or bond to be rated, at the time of deposit into the Reserve Account, in one of the three highest grades by (i) either Standard & Poor's Corporation or its successor, or Moody's Investors Service, Inc. or its successor or (ii) if both such corporations shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, a nationally recognized rating agency.

The term "Reserve Account Letter of Credit" shall mean the irrevocable, transferable letter of credit, if any, to be deposited in the Reserve Account in lieu of or in partial substitution for cash or securities on deposit therein, for the purpose of making the payments required to be made from the Reserve Account under Section 510 hereof. The issuer providing such letter of credit shall be a banking association, bank or trust company or branch thereof whose letter of credit results in the rating of municipal obligations secured by such letter of credit to be rated, at the time of deposit into the Reserve Account, in one of the three highest grades by (i) either Standard & Poor's Corporation or its successor, or Moody's Investors Service, Inc. or its successor or (ii) if both such corporations shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, a nationally recognized rating agency.

The term "Reserve Maintenance Fund" shall mean the Puerto Rico Electric Power Authority Reserve Maintenance Fund, a special fund created and designated by the provisions of Section 507 of this Agreement.

The term "Revenue Fund" shall mean the Puerto Rico Electric Power Authority Power Revenue Fund, a special fund created and designated by the provisions of Section 506 of this Agreement.

The word "Revenues" shall mean all moneys received by the Authority in connection with or as a result of its ownership or operation of the System, including the income derived by the Authority from the sale of electricity generated or distributed by the System, any proceeds of use and occupancy insurance on the System or any part thereof and income from investments made under the provisions of the 1947 Indenture and this Agreement, except income from the investment of moneys in the 1947 Construction Fund, the Construction Fund, the Capital Improvement Fund, the Subordinate Obligations Fund to the extent such income has been derived from the investment of moneys in such Fund to be used to pay Subordinate Obligations incurred to pay the cost of any work or properties which have not been included by the Authority as part of the System as provided in Section 516 hereof, and the Reserve Maintenance Fund which shall be deemed to be a part of said Funds, respectively. Except for the purpose of determining the amount of the Revenues in the covenant as to rates contained in Section 502 hereof, Revenues shall not include any amounts paid to the Authority by a SWAP party in connection with Variable Rate Bonds.

The word "Secretary" shall mean the Secretary, or any Assistant Secretary of the Authority, or if there is no secretary or assistant secretary, then any person designated by the Board or by the by-laws of the Authority to perform the functions of the Secretary.

The term "Self-insurance Fund" shall mean the Puerto Rico Electric Power Authority Self-insurance Fund, a special fund created and designated by the provisions of Section 507 of this Agreement.

The term "serial bonds" shall mean the bonds of a Series which shall be stated to mature in annual or semi-annual installments or bonds which are otherwise designated serial bonds in a resolution of the Board adopted prior to the issuance of such bonds, and the term "term bonds" shall mean the bonds of a Series maturing on July 1 and designated term bonds in a resolution of the Board adopted prior to the issuance of such bonds.

The word "Series" shall mean either (i) the bonds issued and delivered at any one time under the provisions of Section 208 or 209 of this Agreement or (ii) the refunding bonds issued at any one time under the provisions of the second paragraph of Section 210 of this Agreement. Bonds issued under the first paragraph of Section 210 of this Agreement to refund serial bonds of any Series shall be deemed to constitute a part of the bonds of such Series.

The term "Sinking Fund" shall mean the Puerto Rico Electric Power Authority Power Revenue Bonds Interest and Sinking Fund, a special fund created and designated by the provisions of Section 507 of this Agreement.

The term "Subordinate Obligations" shall mean any obligations of the Authority incurred as provided in Section 516 of this Agreement.

The term "Subordinate Obligations Fund" shall mean the Puerto Rico Electric Power Authority Subordinate Obligations Fund, a special fund created and designated by Section 507 of this Agreement.

"SWAP agreement" shall mean an agreement between the Authority and a SWAP party whereby the SWAP party agrees to pay the Authority amounts calculated on the basis of all or a portion of the interest on Variable Rate Bonds at or prior to the times such interest is due and payable in consideration of the Authority's payment to the SWAP party of amounts set forth in the SWAP agreement.

"SWAP party" shall mean a person who is party to a SWAP agreement and whose senior obligations are rated at the time of the execution and delivery of such SWAP agreement in one of the three highest rating categories (without regard to gradations within a category) by (i) Standard & Poor's Corporation or its successor and (ii) Moody's Investors Service or its successor.

"SWAP rate" shall mean the fixed rate per annum on the principal amount of Variable Rate Bonds covered by a SWAP agreement equal to the percentage derived by dividing (i) the sum of the amounts in the last twelve months paid by the Authority in respect of interest on such bonds and to the SWAP party less the amount paid to the Authority by the SWAP party by (ii) such principal amount of Variable Rate Bonds; provided, however, that if such SWAP agreement has been in effect for less than twelve months, such percentage shall be multiplied by 360 divided by the number of days between the effective date of such SWAP agreement and the date of calculation determined on the basis of 30-day months.

The word "System" shall mean all the properties presently owned and operated by the Authority as a single integrated system, together with all works and properties which may be hereafter acquired or constructed by the Authority in connection with the production, distribution or sale of electric energy and the acquisition or construction of which shall be financed in whole or in part from the proceeds of bonds issued under the provisions of the 1947 Indenture or this Agreement or from moneys deposited to the credit of the 1947 Construction Fund, the Construction Fund, the Capital Improvement Fund or the Renewal and Replacement Fund or from Subordinate Obligations to the extent such works and properties have been included by the Authority as part of the System as provided in Section 516 hereof.

The term "Time Deposits" shall mean time deposits, certificates of deposits or similar arrangements with the Trustee, Government Development Bank for Puerto Rico or any bank or trust company which is a member of the Federal Deposit Insurance Corporation having a combined capital and surplus aggregating not less than \$100,000,000.



The word "Treasurer" shall mean the Treasurer or any Assistant Treasurer of the Authority, or if there is no treasurer or assistant treasurer, then any person designated by the Board or by the by-laws of the Authority to perform the functions of the Treasurer.

The word "Trustee" shall mean the Trustee for the time being, whether original or successor.

The term "Valuation Date" shall mean with respect to any Capital Appreciation Bonds the date or dates set forth in the resolution authorizing such bonds on which Accreted Values are assigned to the Capital Appreciation Bonds.

The term "Variable Rate Bonds" shall mean bonds issued with a variable, adjustable, convertible or similar interest rate which is not fixed in percentage at the date of issue for the term thereof, and which may or may not be convertible to a fixed interest rate for the remainder of their term.

Section 102. Miscellaneous definitions. Words of the masculine gender shall be deemed and construed to include correlative words of the feminine and neuter genders. Unless the context shall otherwise indicate, the words "bond", "coupon", "owner", "holder" and "person" shall include the plural as well as the singular number, the word "person" shall mean any individual, corporation, partnership, joint venture, association, joint-stock company, trust, unincorporated organization or government or any agency or political subdivision thereof, and the word "holder" or "bondholder" when used herein with respect to bonds issued hereunder shall mean the holder or registered owner, as the case may be, of bonds at the time issued and outstanding hereunder.

## **Article II**

### **Form, Execution and Registration of Bonds and Conditions for Authentication and Delivery of Bonds.**

Section 201. Limitation on issuance of bonds. No bonds may be issued under the provisions of this Agreement except in accordance with the provisions of this Article.

Section 202. Form of bonds. The definitive bonds are issuable as coupon bonds or as registered bonds without coupons or both. The definitive bonds issued under the provisions of this Article shall be substantially in the forms hereinabove set forth, with such appropriate variations, omissions and insertions as are permitted or required by this Agreement and with such additional changes as may be necessary or appropriate to conform to the provisions of the resolution or resolutions providing for the issuance of such bonds. All such bonds may have endorsed thereon such legends or text as may be necessary or appropriate to conform to any applicable rules and regulations of any governmental authority or of any securities exchange on which the bonds may be listed to traded or any usage or requirement of law with respect thereto or as may be authorized by the Authority and approved by the Trustee. The form of bonds may be changed as specified in said resolution or resolutions to reflect appropriate provisions for the issuance of bonds with interest payable other than semi-annually, and may reflect, without limitation, provisions for Capital Appreciation Bonds, Variable Rate Bonds, Put Bonds,

Extendible Maturity Bonds and other types of bonds, subject to any limitations under the laws of Puerto Rico at the time of the issuance of the particular bonds.

Section 203. Details of bonds. The bonds shall be dated, shall bear interest until their payment, such interest to the maturity thereof being payable semi-annually on the 1st days of January and July in each year, and shall be stated to mature (subject to the right of prior redemption), all as hereinafter provided. Notwithstanding the previous sentence, bonds may bear interest payable other than semi-annually, as may be provided by the resolution or resolutions authorizing the issuance of particular bonds, and bonds may include, without limitation, Capital Appreciation Bonds, Variable Rate Bonds, Put Bonds, Extendible Maturity Bonds and other types of bonds, subject to any limitations under the laws of Puerto Rico at the time of the issuance of the particular bonds.

Each coupon bond shall bear interest from its date. Each registered bond without coupons shall bear interest from the interest payment date next preceding the date on which it is authenticated, unless authenticated on an interest payment date, in which case it shall bear interest from such interest payment date, or, unless authenticated prior to the first interest payment date, in which case it shall bear interest from its date; provided, however, that if at the time of authentication of any registered bond without coupons interest is in default, such bond shall bear interest from the date to which interest shall have been paid.

The bonds shall be signed by, or bear the facsimile signature of, the Executive Director and shall be signed by, or bear the facsimile signature of, the Secretary, and a facsimile of the corporate seal of the Authority shall be imprinted on the bonds.

The coupons attached to the coupon bonds shall be substantially in the form hereinabove set forth and shall bear the facsimile signature of the Executive Director.

In case any officer whose signature or facsimile of whose signature shall appear on any bonds or coupons shall cease to be such officer before the delivery of such bonds, such signature or such facsimile shall nevertheless be valid and sufficient for all purposes the same as if he had remained in office until such delivery, and also any bond may bear the facsimile signature of or may be signed by such persons as at the actual time of the execution of such bond shall be the proper officer to sign such bond although at the date of such bond such persons may not have been such officers.

Both the principal of and the interest on the bonds shall be payable in any coin or currency of the United States of America which on the respective dates of payment thereof is legal tender for the payment of public and private debts. The principal of coupon bonds of each Series and the interest on all coupon bonds of such Series shall be payable at the principal offices of the Paying Agents designated for the bonds of such Series. The principal of all registered bonds without coupons shall be payable only to the registered owner or his legal representative at the principal corporate trust office of the Trustee, and payment of the interest on each registered bond without coupons shall, except as may otherwise be provided by resolution of the Authority authorizing the issuance of any Series of bonds under this Agreement, be made by the Trustee on each interest payment date to the person appearing on the registration books of the Authority hereinafter provided for as the registered owner thereof (or of any predecessor bond) on the 15<sup>th</sup>

day of the month next preceding such interest payment date, by check mailed to such registered owner at his address as it appears on such registration books. Except as provided in Section 211 of this Agreement, payment of the principal of all bonds shall be made upon the presentation and surrender of such bonds as the same shall become due and payable. Payment of the interest on the coupon bonds shall be made upon the presentation and surrender of the coupons, if any, representing such interest as the same respectively become due and payable.

Section 204. Authentication of bonds. Only such of the bonds as shall have endorsed thereon a certificate of authentication substantially in the form hereinabove set forth, duly executed by the Trustee, shall be entitled to any benefit or security under this Agreement. No bond and no coupon appertaining to any coupon bond shall be valid or obligatory for any purpose unless and until such certificate of authentication shall have been duly executed by the Trustee, and such certificate of the Trustee upon any such bond shall be conclusive evidence that such bond has been duly authenticated and delivered under this Agreement. The Trustee's certificate of authentication on any bond shall be deemed to have been duly executed if signed by an authorized officer of the Trustee, but it shall not be necessary that the same officer sign the certificate of authentication on all of the bonds that may be issued hereunder at any one time. Before authenticating or delivering any coupon bonds the Trustee shall detach and cancel all matured coupons, if any, appertaining thereto, except any coupons which represent unpaid interest.

Section 205. Exchange of coupon bonds for registered bonds. Coupon bonds, upon surrender thereof at the principal office of the Trustee with all unmatured coupons and all matured coupons in default, if any, appertaining thereto, may, at the option of the holder thereof, be exchanged for an equal aggregate principal amount of registered bonds without coupons of the same Series and maturity, of any denomination or denominations authorized by this Agreement, bearing interest at the same rate, and, with the exception of the differences between the form of coupon bonds and the form of registered bonds without coupons which are set forth in the preamble of this Agreement, in the same form as the coupon bonds surrendered for exchange.

Registered bonds without coupons, upon surrender thereof at the principal office of the Trustee, together with an assignment duly executed by the registered owner or his attorney or legal representative in such form as shall be satisfactory to the Trustee, may, at the option of the registered owner thereof, be exchanged for an equal aggregate principal amount of coupon bonds of the same Series (if authorized for such Series) and maturity, bearing interest at the same rate and having attached thereto coupons representing all unpaid interest due or to become due thereon, or of registered bonds without coupons of the same Series and maturity, of any denomination or denominations authorized by this Agreement, and bearing interest at the same rate, and in either case, with the exception of the differences between the form of coupon bonds and the form or registered bonds without coupons which are set forth in the preamble of this Agreement, in the same form as the registered bonds without coupons surrendered for exchange.

The Authority shall make provision for the exchange of bonds at the principal office of the Trustee.

Section 206. Negotiations of coupon bonds. Title to any coupon bond and to any interest coupon shall pass by delivery in the same manner as a negotiable instrument payable to bearer. The Trustee as Bond Registrar shall keep books for the registration of and for the registration of transfers of bonds as provided in this Agreement. The transfer of any registered bond without coupons may be registered only upon the books kept for the registration of and registration of transfers of bonds upon surrender thereof to the Bond Registrar together with an assignment duly executed by the registered owner or his attorney or legal representative in such form as shall be satisfactory to the Bond Registrar. Upon any such registration of transfer the Authority shall execute and the Trustee shall authenticate and deliver in exchange for such bond a new registered bond or bonds without coupons registered in the name of the transferee, of any denomination or denominations authorized by this Agreement, or, at the option of the transferee and if coupon bonds are authorized for the same Series of such bond, coupon bonds with coupons attached representing all unpaid interest due or to become due thereon, in an aggregate principal amount equal to the principal amount of such registered bond without coupons, of the same Series and maturity and bearing interest at the same rate.

In all cases in which bonds shall be exchanged or the transfer of registered bonds without coupons shall be registered hereunder, the Authority shall execute and the Trustee shall authenticate and deliver at the earliest practicable time bonds in accordance with the provisions of this Agreement. All registered bonds without coupons surrendered in any such exchange or registration of transfer shall forthwith be cancelled by the Trustee. All coupon bonds and unmatured coupons surrendered in any such exchange or registration of transfer shall be retained by the Trustee in its custody. The Authority or the Trustee may make a charge for every such exchange or registration of transfer of bonds sufficient to reimburse it for any tax or other governmental charge required to be paid with respect to such exchange or registration transfer, but no other charge shall be made to any bondholder for the privilege of exchanging or registering the transfer of bonds under the provisions of this Agreement. Neither the Authority nor the Trustee shall, except as may otherwise be provided by resolution of the Authority authorizing the issuance of any Series of bonds under this Agreement, be required to make any such exchange or registration of transfer of bonds during the fifteen (15) days immediately preceding an interest payment date on the bonds or, in the case of any proposed redemption of bonds, immediately preceding the date of first publication of notice of such redemption (or, if all the bonds to be redeemed are issuable as registered bonds without coupons, immediately preceding the date of mailing of notice of such redemption), or after such bond or any portion thereof has been selected for redemption.

Section 207. Ownership of registered bonds. As to any registered bond without coupons, the person in whose name the same shall be registered shall be deemed and regarded as the absolute owner thereof for all purposes, and payment of or on account of the principal of and the premium, if any, an interest on any such bond shall be made only to the registered owner thereof or his legal representative. All such payment shall be valid and effectual to satisfy and discharge the liability upon such bond including the interest thereon to the extent of the sum or sums so paid. The Authority, the Trustee, the Bond Register and the Paying Agents may deem and treat the bearer of any coupon bond and the bearer of any coupon appertaining to any coupon bond as the absolute owner of such bond or coupon, as the case may be, whether such bond or coupon shall be overdue or not, for the purpose of receiving payment thereof and for all other

purposes whatsoever, and neither the Authority, the Trustee, the Bond Registrar nor the Paying Agents shall be affected by any notice to the contrary.

Any person in possession of any coupon bond or of any coupon appertaining to any coupon bond is hereby authorized to represent himself as the absolute owner of such bond or coupon, as the case may be, and is hereby granted power to transfer absolute title thereto by delivery thereof to a bona fide purchaser for value (present or antecedent) without notice of prior defenses or equities or claims of ownership enforceable against his transferor or any person in the chain of title and before the maturity of such bond. Any registered owner of any registered bond without coupons is hereby granted power to transfer absolute title thereto by assignment thereof to a bona fide purchaser for value (present or antecedent) without notice of prior defenses or equities or claims of ownership enforceable against his assignor or any person in the chain of title and before the maturity of such bond. Every prior holder or owner of any bond or of any coupon appertaining to any coupon bond shall be deemed to have waived and renounced all of his equities or rights therein in favor of every such bona fide purchaser, and every such bona fide purchaser shall acquire absolute title thereto and to all rights represented thereby.

Section 208. Issuance of revenue bonds to pay cost of Improvements. Revenue bonds of the Authority may be issued under and secured by this Agreement, subject to the conditions hereinafter provided in this Section, from time to time for the purpose of paying all or any part of the cost of any Improvements, including the repayment of moneys advanced for paying such cost and, if deemed necessary by the Board, the payment of the interest to accrue on such moneys advanced to the date of such payment and for providing moneys for deposit to the credit of the Reserve Account.

Before any bonds shall be issued under the provisions of this Section, the Board shall adopt a resolution or resolutions authorizing the issuance of such bonds, fixing the amount and the details thereof, describing in brief and general terms, the Improvements which are to be acquired or constructed or which were acquired or constructed from any advances or moneys to be repaid from the proceeds of such bonds, and specifying the amount, if any, of the proceeds of such bonds to be deposited to the credit of the Reserve Account. The bonds of each Series issued under the provisions of this Section shall be designated "Puerto Rico Electric Power Authority Power Revenue Bonds Series ...." (inserting a year or a letter to identify the particular Series), shall be issued in such form, shall be in such denominations, shall be dated, shall bear interest at a rate or rates not exceeding the maximum rate then permitted by law, shall be stated to mature on July 1 as to term bonds or annually on January 1 or July 1 or semi-annually on January 1 and July 1 as to serial bonds, in such year or years, not later than fifty (50) years from their date, shall be made redeemable at such times and prices (subject to the provisions of Article III of this Agreement), shall be numbered, shall have such Paying Agents, and the term bonds of such Series shall have such Amortization Requirements, all as may be provided by resolution or resolutions adopted by the Board prior to the issuance of such bonds. Except as to any differences in the maturities thereof or the rate or rates of interest or the provisions for redemption, such bonds shall be on a parity with and shall be entitled to the same benefits and security under this Agreement as all other bonds issued under this Agreement.

Before any Variable Rate Bonds shall be issued under the provisions of this Section, the Board shall adopt a resolution specifying, without limitation, the interest rate calculation

methods and any conversion features, and any credit or liquidity facility which may be drawn upon to make principal and interest payments on the Variable Rate Bonds. The Variable Rate Bonds may provide that the owner of any such Bond may demand payment of principal and interest within a stated period after delivering notice to a designated agent for the Authority and providing a copy of the notice with the tender of the Variable Rate Bond to such agent. The designated agent for the Authority, in accordance with the terms of a remarketing or placement agreement, may provide for the resale or redelivery of the Variable Rate Bond on behalf of the Authority at a price provided for in the agreement. If the Variable Rate Bonds shall not be resold or redelivered within a stated period, the agent for the Authority may be authorized to draw upon a previously executed credit or liquidity facility of one or more banks or other financial or lending institutions for payment of interest and principal for a particular Series of Variable Rate Bonds to which such credit or liquidity facility shall pertain. The particular form or forms of such demand provisions, the period or periods for payment of principal and interest after delivery of notice, the appointment of the agent for the Authority, the terms and provisions for the remarketing or placement agreement, and the terms and provisions of the credit or liquidity facility, including the terms of any lien on Revenues in connection with the credit or liquidity facility not inconsistent with Section 712 hereof, shall be as designated by a resolution of the Board pertaining to the Variable Rate Bonds to which such terms and provisions are applicable prior to the issuance thereof. Before any Put Bonds shall be issued under the provisions of this Section, the Board shall adopt a resolution which may provide for some of the above terms and provisions. Before any Extendible Maturity Bonds shall be issued under the provisions of this Section, the Board shall adopt a resolution which shall set forth the terms and conditions of the exercise by the bondholders or the Authority of any option to extend the maturity of said bonds. Before any Capital Appreciation Bonds shall be issued under the provisions of this Section, the Board shall adopt a resolution specifying the Valuation Dates, the Accreted Values on such dates, the manner in which and the period during which principal and interest shall be deemed to accrue on such bonds for purposes of the definition of "Principal and Interest Requirements" and the amount of any deposit required for the Reserve Account in accordance with Section 507 hereof.

Prior to the issuance of any Federally Subsidized Bonds, the Board shall adopt a resolution identifying the details of such bonds, including, without limitation, the rate or rates of interest to be paid on such bonds, the source or sources and the amount of the Federal Subsidy expected to be received by the Authority in respect of such Series of Federally Subsidized Bonds, whether the amounts received from such Federal Subsidy are to be pledged solely to the owners of such Series of Federally Subsidized Bonds or to the owners of all outstanding bonds and a covenant by the Authority to take such actions as are necessary to ensure receipt of such Federal Subsidy.

Such bonds shall be executed substantially in the form and manner hereinabove set forth and shall be deposited with the Trustee for authentication, but before the Trustee shall authenticate and deliver such bonds there shall be filed with the Trustee the following:

(a) a copy, certified by the Secretary, of the resolution or resolutions mentioned above:

(b) a copy, certified by the Secretary, of the resolution of the Board awarding such bonds, specifying the interest rate for each of such bonds and directing the authentication and delivery of such bonds to or upon the order of the purchasers mentioned therein upon payment of the purchase price therein set forth and the accrued interest on such bonds;

(c) a certificate, signed by the Executive Director and approved by the Consulting Engineers, setting forth:

(i) the amounts of the Net Revenues for any twelve (12) consecutive calendar months out of the eighteen (18) calendar months immediately preceding the date of the issuance of such bonds, adjusted to reflect the moneys which would have been received if the rate schedule in effect on the date of the issuance of such bonds had been in effect throughout such twelve (12) calendar months,

(ii) the amount of the maximum aggregate Principal and Interest Requirements for any fiscal year thereafter on account of all 1947 Indenture Bonds then outstanding and all bonds then outstanding under this Agreement,

(iii) the amount of the maximum aggregate Principal and Interest Requirements for any fiscal year thereafter on account of all 1947 Indenture Bonds then outstanding and all bonds then outstanding under this Agreement and the bonds then to be issued hereunder.

(iv) his estimate of the Net Revenues for each of the five (5) fiscal years immediately following the fiscal year in which the issuance of such bonds occurs, taking into account the rate schedule in effect on the date of the issuance of such bonds and any rate schedule the Authority has covenanted to put in effect during such five (5) fiscal years,

(v) his estimate of the average annual Net Revenues for such five (5) fiscal years, taking into account the rate schedules referred to in item (iv) of this clause (c),

(vi) the percentage derived by dividing the amount in item (i) of this clause (c) by the amount shown in item (ii) of said clause, and

(vii) the percentage derived by dividing the amount in item (v) of this clause (c) by the amount shown in item (iii) of said clause;

(d) if any of the 1947 Indenture Bonds are outstanding, a certificate, signed by the Executive Director and approved by the Consulting Engineers, to the effect that the sum determined by the Authority, with the approval of the Consulting Engineers, as the proper amount to be transferred each month from the 1947 Revenue Fund to the credit of the Renewal and Replacement Fund is not less than one-twelfth (1/12) of the maximum Principal and Interest Requirements for any fiscal year thereafter to and including the fiscal year in which the last maturity of any outstanding 1947 Indenture Bonds occurs on account of all bonds then outstanding under this Agreement and the bonds then to be issued hereunder; and

(e) an Opinion of Counsel stating that all conditions precedent to the delivery of such bonds have been fulfilled.

When the documents mentioned above in this Section shall have been filed with the Trustee and when the bonds described in the resolutions mentioned in clauses (a) and (b) of this Section shall have been executed and authenticated as required by this Agreement, the Trustee shall deliver such bonds at one time to or upon the order of the purchasers mentioned in the resolution mentioned in said clause (b), but only upon payment to the Trustee of the purchase price of such bonds and the accrued interest. The Trustee shall be entitled to rely upon such resolutions as to all matters stated therein. The Trustee, however, shall not authenticate and deliver such bonds unless each of the percentages shown in items (vi) and (vii) of the certificate mentioned in clause (c) of this Section is not less than one hundred twenty per centum (120%).

The proceeds (excluding accrued interest but including any premium) of such bonds shall be deposited as is required by the resolution or resolutions authorizing the issuance of such bonds; provided, however, that any balance of such proceeds remaining after providing for (i) any repayment of moneys advanced to the Authority, including any payment of interest accrued on such moneys advanced to the date of such payment, (ii) any deposit to the credit of the Reserve Account, and (iii) any deposit to the Bond Service Account on account of interest on such bonds in accordance with clause (f) of Section 403 of this Agreement and (iv) any payment of expenses incident to the financing shall be paid to the Authority for deposit to the credit of the Construction Fund.

All moneys received as accrued interest on bonds issued under the provisions of this Section shall be deposited with the Trustee to the credit of the Bond Service Account.

Section 209. Issuance of revenue bonds for any proper corporate purpose. After the outstanding 1947 Indenture Bonds have been paid or provision has been made for the their payment and the release of the 1947 Indenture, in addition to any other bonds which may be issued under the provisions of this Article, revenue bonds of the Authority may be issued under and secured by this Agreement, subject to the conditions hereinafter provided in this Section, from time to time for any proper corporate purpose of the Authority (other than for the purpose of refunding outstanding bonds of the Authority or for the purpose of providing funds to pay any part of the cost of Improvements or for repaying advances for such purpose).

Before any bonds shall be issued under the provisions of this Section, the Board shall adopt a resolution or resolutions authorizing the issuance of such bonds, fixing the amount and the details thereof and setting forth the purpose for which such bonds are to be issued. The bonds of each Series issued under the provisions of this Section shall be designated "Puerto Rico Electric Power Authority Power Revenue Bonds, Series ....." (inserting a year or a letter to identify the particular Series), shall be issued in such form, shall be in such denominations, shall be dated, shall bear interest at a rate or rates not exceeding the maximum rate then permitted by law, shall be stated to mature on July 1 as to term bonds or annually on January 1 or July 1 or semi-annually on January 1 and July 1 as to serial bonds, in such year or years, not later than fifty (50) years from their date, shall be made redeemable at such times and prices (subject to the provisions of Article III of this Agreement), shall be numbered, shall have such Paying Agents and the term bonds of such Series shall have such Amortization Requirements, all as may be



provided by resolution or resolutions adopted by the Board prior to the issuance of such bonds. Except as to any differences in the maturities thereof or the rate or rates of interest or the provisions for redemption, such bonds shall be on a parity with and shall be entitled to the same benefits and security under this Agreement as all other bonds issued under this Agreement.

Before any Variable Rate Bonds shall be issued under the provision of this Section, the Board shall adopt a resolution specifying, without limitation, the interest rate calculation methods and any conversion features, and any credit or liquidity facility which may be drawn upon to make principal and interest payments on the Variable Rate Bonds. The Variable Rate Bonds may provide that the owner of any such bond may demand payment of principal and interest within a stated period after delivering notice to a designated agent for the Authority and providing a copy of the notice with the tender of the Variable Rate Bond to such agent. The designated agent for the Authority, in accordance with the terms of a remarketing or placement agreement, may provide for the resale or redelivery of the Variable Rate on behalf of the Authority at a price provided for in the agreement. If the Variable Rate Bonds shall not be resold or redelivered within a stated period, the agent for the Authority may be authorized to draw upon a previously executed credit or liquidity facility of one or more banks or other financial or lending institutions for payment of interest and principal for a particular Series of Variable Rate Bonds to which such credit or liquidity facility shall pertain. The particular forms of such demand provisions, the period or periods for payment of principal and interest after delivery of notice, the appointment of the agent for the Authority, the terms and provisions of the remarketing or placement agreement, and the terms and provisions of the credit or liquidity facility, including the terms of any lien on Revenues in connection with the credit or liquidity facility not inconsistent with Section 712 hereof, shall be as designated by a resolution of the Board pertaining to the Variable Rate Bonds to which such terms and provisions are applicable adopted prior to the issuance thereof. Before any Put Bonds shall be issued under the provisions of this Section, the Board shall adopt a resolution which may provide for some of the above terms and provisions. Before any Extendable Maturity Bonds shall be issued under the provisions of this Section, the Board shall adopt a resolution which shall set forth the terms and conditions of the exercise by the bondholders of the Authority of any option to extend the maturity of said bonds. Before any Capital Appreciation Bond shall be issued under the provisions of this Section, the Authority shall adopt a resolution specifying the Valuation Dates, the Accredited Values on such dates, the manner in which and the period during which principal and interest shall be deemed to accrue on such bonds for purposes of the definition of "Principal and Interest Requirements" and the amount of any deposit required for the Reserve Account in accordance with Section 507 hereof.

Prior to the issuance of any Federally Subsidized Bonds, the Board shall adopt a resolution identifying the details of such bonds, including, without limitation, the rate or rates of interest to be paid on such bonds, the source or sources and the amount of the Federal Subsidy expected to be received by the Authority in respect of such Series of Federally Subsidized Bonds, whether the amounts received from such Federal Subsidy are to be pledged solely to the owners of such Series of Federally Subsidized Bonds or to the owners of all outstanding bonds and a covenant by the Authority to take such actions as are necessary to ensure receipt of such Federal Subsidy.

Such bonds shall be executed substantially in the form and manner hereinabove set forth and shall be deposited with the Trustee for authentication, but before the Trustee shall authenticate and deliver such bonds there shall be filed with the Trustee the following:

(a) a copy, certified by the Secretary, of the resolution or resolutions mentioned above;

(b) a copy, certified by the Secretary, of the resolution of the Board awarding such bonds; specifying the interest rate for each of such bonds and directing the authentication and delivery of such bonds to or upon the order of the purchasers mentioned therein upon payment of the purchase price therein set forth and the accrued interest on such bonds;

(c) a certificate, signed by the Executive Director and approved by the Consulting Engineers, setting forth:

(i) the amount of the Net Revenues for any twelve (12) consecutive calendar months out of the eighteen (18) calendar months immediately preceding the date of the issuance of such bonds, adjusted to reflect the moneys which would have been received if the rate schedule in effect on the date of the issuance of such bonds had been in effect throughout such twelve (12) calendar months,

(ii) the amount of the maximum aggregate Principal and Interest Requirements for any fiscal year thereafter on account of all bonds then outstanding under this Agreement,

(iii) the amount of the maximum aggregate Principal and Interest Requirements for any fiscal year thereafter on account of all bonds then outstanding under this Agreement and the bonds then to be issued hereunder,

(iv) his estimate of the Net Revenues for each of the five (5) fiscal years immediately following the fiscal year in which the issuance of such bonds occurs, taking into account the rate schedule in effect on the date of the issuance of such bonds and any rate schedule the Authority has covenanted to put in effect during such five (5) fiscal years,

(v) his estimate of the average annual Net Revenues for such five (5) fiscal years, taking into account the rate schedules referred to in item (iv) of this clause (c),

(vi) the percentage derived by dividing the amount in item (i) of this clause (c) by the amount shown in item (ii) of said clause, and

(vii) the percentage derived by dividing the amount in item (v) of this clause (c) by the amount shown in item (iii) of said clause; and

(d) an Opinion of Counsel stating that all conditions precedent to the delivery of such bonds have been fulfilled.

When the documents mentioned above in this Section shall have been filed with the Trustee and when the bonds described in the resolutions mentioned in clauses (a) and (b) of this Section shall have been executed and authenticated as required by this Agreement, the Trustee shall deliver such bonds at one time to or upon the order of the purchasers mentioned in the resolution mentioned in said clause (b); but only upon payment to the Trustee of the purchase price of such bonds and the accrued interest. The Trustee shall be entitled to rely upon such resolutions as to all matters stated therein. The Trustee, however, shall not authenticate and deliver such bonds unless each of the percentages shown in items (vi) and (vii) of the certificate mentioned in clause (c) of this Section is not less than one hundred twenty per centum (120%).

The proceeds (excluding accrued interest but including any premium) of such bonds shall be deposited as is required by the resolution or resolutions authorizing the issuance of such bonds.

All moneys received as accrued interest on bonds issued under the provisions of this Section shall be deposited with the Trustee to the credit of the Bond Service Account.

Section 210. Issuance of revenue refunding bonds to refund all 1947 Indenture Bonds and bonds issued under this Agreement. If at any time the Board shall determine that the moneys in the Sinking Fund available for such purpose will not be sufficient for paying at the maturity the serial bonds of any Series which will mature within one year thereafter, revenue refunding bonds of the Authority may be issued under and secured by this Agreement, subject to the conditions hereinafter provided in this Section, for the purpose of providing funds for refunding such bonds and, if deemed necessary by the Board, for paying the interest to accrue thereon to their maturity and any expenses in connection with such refunding. Before any bonds shall be issued under the provisions of this paragraph the Board shall adopt a resolution or resolutions authorizing the issuance of such bonds, fixing the amount and the details thereof, and describing the bonds to be refunded. Such revenue refunding bonds shall be deemed to constitute a part of the term bonds, if any, of such Series and shall mature at the same time and shall be subject to redemption at the same times and prices as such term bonds or, in case all the outstanding bonds of such Series shall be serial bonds, such revenue refunding bonds shall mature on the 1<sup>st</sup> day of July in a year not earlier than one year after the last maturing installment of the bonds of such Series and not later than fifty (50) years from their date, shall be deemed to be term bonds of such Series and shall be made redeemable at such times and prices (subject to the provisions of Article III of this Agreement), all as may be provided by the resolution or resolutions authorizing the issuance of such bonds. Such revenue refunding bonds shall be designated, shall be issued in such form, shall be dated and shall bear interest at a rate not exceeding the maximum rate then permitted by law, all as may be provided by resolution or resolutions adopted by the Board prior to the issuance of such bonds.

Revenue refunding bonds of the Authority may also be issued under and secured by this Agreement, subject to the conditions hereinafter provided in this Section, from time to time, for the purpose of providing funds, with any other available funds, for redeeming prior to or at their maturity or maturities all of the outstanding 1947 Indenture Bonds, any 1947 Indenture Bonds issued for a purpose for which moneys may be expended from the Renewal and Replacement Fund, all or any part of the outstanding bonds of any Series or outstanding Designated Maturity Bonds, including the payment of any redemption premium thereon, and, if deemed necessary by

the Board, for paying the interest to accrue thereon to the date fixed for their redemption or their maturity and any expenses in connection with such refunding and for the purpose of providing moneys for deposit to the credit of the Reserve Account. Before any bonds shall be issued under the provisions of this paragraph, the Board shall adopt a resolution authorizing the issuance of such bonds, fixing the amount and the details thereof and describing the bonds to be redeemed or paid. Such revenue refunding bonds shall be designated, shall be issued in such form, shall be in such denominations, shall be dated, shall bear interest at a rate or rates not exceeding the maximum rate then permitted by law, shall be stated to mature on July 1 as to term bonds or annually on January 1 or July 1 or semi-annually on January 1 and July 1 as to serial bonds in such year or years, not later than fifty (50) years from their date, and shall be made redeemable at such times and prices (subject to the provisions of Article III of this Agreement), shall be numbered, shall have such Paying Agents, and any term bonds of such Series shall have such Amortization Requirements, all as may be provided by resolution or resolutions adopted by the Board prior to the issuance of such bonds. Except as to any differences in the maturities thereof or the rate or rates of interest or the provisions for redemption, such revenue refunding bonds shall be on a parity with and shall be entitled to the same benefit and security of this Agreement as all other bonds issued under this Agreement.

Before any Variable Rate Bonds shall be issued under the provisions of this Section, the Board shall adopt a resolution specifying, without limitation, the interest rate calculation methods and any conversion features, and any credit or liquidity facility which may be drawn upon to make principal and interest payments on the Variable Rate Bonds. The Variable Rate Bonds may provide that the owner of any such Bond may demand payment of principal and interest from the Authority within a stated period after delivering notice to a designated agent for the Authority and providing a copy of the notice with the tender of the Variable Rate Bond to such agent. The designated agent for the Authority, in accordance with the terms of a remarketing or placement agreement, may provide for the resale or redelivery of the Variable Rate Bonds on behalf of the Authority at a price provided for in the agreement. If the Variable Rate Bonds shall not be resold or redelivered within a stated period, the agent for the Authority may be authorized to draw upon a previously executed credit or liquidity facility of one or more banks or other financial or lending institutions for payment of interest and principal for a particular Series of Variable Rate Bonds to which such credit or liquidity facility shall pertain. The particular form or forms of such demand provisions, the period or periods for payment of principal and interest after delivery of notice, the appointment of the agent for the Authority, the terms and provisions of the remarketing or placement agreement, and the terms and provisions of the credit or liquidity facility, including the terms of any lien on Revenues in connection with the credit or liquidity facility not inconsistent with Section 712 hereof, shall be as designated by a resolution of the Board pertaining to the Variable Rate Bonds to which such terms and provisions are applicable adopted prior to the issuance thereof. Before any Put Bonds shall be issued under the provisions of this Section, the Board shall adopt a resolution which may provide for some of the above terms and provisions. Before any Extendible Maturity Bonds shall be issued under the provisions of this Section, the Board shall adopt a resolution which shall set forth the terms and conditions of the exercise by the bondholders or the Authority of any option to extend the maturity of said bonds. Before any Capital Appreciation Bonds shall be issued under the provisions of this Section, the Authority shall adopt a resolution specifying the Valuation Dates, the Accredited Values on such dates, the manner in which and the period during which principal and interest shall be deemed to accrue on such bonds for purposes of the

definition of "Principal and Interest Requirements" and the amount of any deposit required for the Reserve Amounts in accordance with Section 507 hereof.

Revenue refunding bonds issued under the provisions of this Section shall be executed substantially in the form and manner hereinabove set forth and shall be deposited with the Trustee for authentication, but before the Trustee shall authenticate and deliver such bonds there shall be filed with the Trustee the following:

(a) a copy, certified by the Secretary, of the resolution or resolutions mentioned above;

(b) a copy, certified by the Secretary, of the resolution adopted by the Board awarding such bonds, specifying the interest rate for each of such bonds and directing the authentication and delivery of such bonds to or upon the order of the purchasers mentioned therein upon payment of the purchase price therein set forth and the accrued interest on such bonds;

(c) in case such bonds are to be issued for the purpose of providing funds for redeeming all of the outstanding 1947 Indenture Bonds or any 1947 Indenture Bonds issued for a purpose for which moneys may be expended from the Renewal and Replacement Fund, all or any part of the outstanding bonds of any Series or outstanding Designated Maturity Bonds at or prior to their maturity or maturities.

(i) a certificate, signed by the Executive Director, setting forth (A) the amount of the maximum aggregate Principal and Interest Requirements for any fiscal year thereafter on account of all 1947 Indenture Bonds then outstanding and all bonds then outstanding under this Agreement, and (B) the amount of the maximum aggregate Principal and Interest Requirements for any fiscal year thereafter on account of all 1947 Indenture Bonds then outstanding and all bonds to be outstanding under this Agreement after the issuance of such revenue refunding bonds and the redemption or payment of the bonds to be refunded; and

(ii) such documents as shall be required by the Trustee to show that provision has been made in accordance with the provisions of the 1947 Indenture or this Agreement, as the case may be, for the redemption of all of the bonds to be refunded; and

(d) an Opinion of Counsel stating that all conditions precedent to the delivery of such bonds have been fulfilled.

When the documents mentioned above in this Section shall have been filed with the Trustee and when the bonds described in the resolutions, mentioned in clauses, (a) and (b) of this Section shall have been executed and authenticated as required by this Agreement, the Trustee shall deliver such bonds at one time to or upon the order of the purchasers mentioned in the resolution mentioned in said clause (b), but only upon payment to the Trustee of the purchase price of such bonds and the accrued interest. The Trustee shall be entitled to rely upon such resolution as to all matters stated therein. The Trustee, however, shall not authenticate and deliver such bonds unless

(I) the proceeds (excluding accrued interest but including any premium) of such revenue refunding bonds, together with any moneys to be withdrawn from the Sinking Fund by the Trustee, and any other moneys which have been made available to the Trustee for such purpose as hereinafter provided, or the principal of and the interest on the investment of such proceeds or any such moneys, shall be not less than an amount sufficient to pay the principal of and the redemption premium, if any, on the bonds to be refunded and the interest which will become due and payable on or prior to the date of their payment or redemption, the financing costs in connection with such refunding, and any deposit to the credit of the Reserve Account and

(II) in case such bonds are to be issued for the purpose of providing funds for redeeming all of the outstanding 1947 Indenture Bonds or any 1947 Indenture Bonds issued for a purpose for which moneys may be expended from the Renewal and Redemption Fund, all or any part of the outstanding bonds of any Series or outstanding Designated Maturity Bonds prior to their maturity or maturities, either (1) the amount shown in item (B) of the certificate mentioned in subclause (i) of clause (c) of this Section shall be less than the amount shown item (A) of said certificate or (2) there shall be filed with the Trustee a certificate, signed by the Executive Director and approved by the Consulting Engineers, setting forth

- (A) the amount of the Net Reserves for any twelve (12) consecutive calendar months out of the eighteen (18) calendar months immediately preceding the date of the issuance of such bonds, adjusted to reflect the moneys which would have been received if the rate schedule in effect on the date of the issuance of such bonds had been in effect throughout such twelve (12) calendar months,
- (B) his estimate of the Net Revenues for each of the five (5) fiscal years immediately following the fiscal year in which the issuance of such bonds occurs, taking into account the rate schedule in effect on the date of the issuance of such bonds and any rate schedule the Authority has covenanted to put in effect during such five (5) fiscal years, and
- (C) his estimate of the average annual Net Revenues for such five (5) fiscal years, taking into account the rate schedules referred to in item (B) above.

and stating that each of the amounts shown in items (A) and (C) above is not less than one hundred twenty per centum (120%) of each of the amounts shown in items (A) and (B) of the certificate mentioned in subclause (i) of clause (c) of this Section.

The proceeds of such revenue refunding bonds shall, to the extent practicable, be invested and reinvested by the Trustee, with the approval of the Executive Director, in Government Obligations, in Prerefunded Municipals or in Time Deposits, secured in the manner set forth in Section 601 of this Agreement, and the moneys so invested shall be available for use when required. The income derived from such investments shall be added to such proceeds and applied in accordance with the provisions of this Section 210.

Simultaneously with the delivery of such revenue refunding bonds the Trustee shall withdraw from the Bond Service Account and the Redemption Account in the Sinking Fund an amount equal to the sum of the amounts deposited to the credit of such Accounts under the provisions of Section 507 of this Agreement on account of the interest which is payable on the bonds to be refunded on the next interest payment date of such bonds and on account of the next maturing installment of principal of or the Amortization Requirement for the bonds to be refunded, but no such withdrawal shall be made on account of any deposits to the credit of the Reserve Account in the Sinking Fund. The amount so withdrawn, the proceeds (excluding accrued interest but including any premium) of such revenue refunding bonds and, any other moneys which have been made available to the Trustee for such purpose, shall be held by the Trustee or deposited with the Paying Agents to be held in trust for the sole and exclusive purpose of paying such principal, redemption premium and interest; provided, however, that such portion of the proceeds of such revenue refunding bonds as is specified by the Executive Director in a certificate filed with the Trustee shall be paid to the Authority to be used for the payment of expenses incident to the financing. Any part of the proceeds of such revenue refunding bonds which are not needed for the purpose of paying the principal of and the redemption premium, if any, on the bonds to be refunded, making any deposit to the Reserve Account or paying any expenses in connection with such refunding shall be deposited with the Trustee to the credit of the Bond Service Account in the Sinking Fund. The amount received as accrued interest on such revenue refunding bonds shall be deposited with the Trustee to the credit of the Bond Service Account in the Sinking Fund.

Section 210A. Issuance of revenue refunding bonds for purposes of exchanging such bonds for all outstanding 1947 Indenture Bonds. Revenue refunding bonds of the Authority may also be issued under and secured by this Agreement, subject to the conditions hereinafter provided in this Section, at one time, for the purpose of exchanging such revenue refunding bonds for an equal principal amount of all of the 1947 Indenture Bonds then outstanding. Before any bonds shall be issued under the provisions of this Section 201A, the Board shall adopt a resolution authorizing the issuance of such bonds, fixing the amount and details thereof and describing the 1947 Indenture Bonds to be exchanged therefor. Such revenue refunding bonds shall be designated, shall be issued in the form of registered bonds without coupons, shall be in such denominations and shall be numbered, all as may be provided by resolution or resolutions adopted by the Board prior to the issuance of such bonds. Such revenue refunding bonds shall be dated the July 1 or January 1 to which interest has been paid on the 1947 Indenture Bonds to be exchanged therefor, shall bear interest at the same rate or rates as the interest on such 1947 Indenture Bonds, shall be stated to mature in the same principal amounts and on the same dates as such 1947 Indenture Bonds and shall be subject to redemption at the same times and prices, either in whole or in part, as such 1947 Indenture Bonds. Except as to any differences in the maturities thereof or the rate or rates of interest or the provisions for redemption, such revenue refunding bonds shall be on a parity with and shall be entitled to the same benefit and security of this Agreement as all other bonds issued in this Agreement.

Revenue refunding bonds issued under the provisions of this Section shall be executed substantially in the form and manner hereinabove set forth and shall be deposited with the Trustee for authentication, but before the Trustee shall authenticate and deliver such bonds there shall be filed with the Trustee the following:

(a) a copy, certified by the Secretary, of the resolution or resolutions mentioned above;

(b) a copy, certified by the Secretary, of the resolution adopted by the Board directing the authentication and delivery of such bonds to or upon the order of the holders of the 1947 Indenture Bonds to be exchanged therefor;

(c) such documents as shall be required by the Trustee to show that, upon the date designated for exchange, no 1947 Indenture Bonds shall then be outstanding under the provisions of the 1947 Indenture;

(d) an opinion of counsel, who may be counsel for the Authority, to the effect that, on the date designated for exchange notice having been duly given in the manner and under the conditions hereinafter provided and revenue refunding bonds duly executed and authenticated as herein provided being held by the Trustee for delivery for exchange for 1947 Indenture Bonds, interest on such 1947 Indenture Bonds shall be deemed to have ceased to accrue from the January 1 or July 1 to which interest has been paid, the coupons for any coupon bonds called for exchange payable subsequent to the exchange date shall be void and such 1947 Indenture Bonds shall cease to be entitled to any lien, benefit or security under the 1947 Indenture and the holders of such 1947 Indenture Bonds shall have no rights in respect thereof, except to receive such revenue refunding bonds of the same principal amount and maturity, bearing interest at the same rate, subject to redemption at the same times and prices as such 1947 Indenture Bonds and of any denominations authorized by this Agreement; and

(e) an Opinion of Counsel stating that all conditions precedent to the delivery of such bonds have been fulfilled.

Not later than forty-five (45) days before the exchange date of such revenue refunding bonds for such 1947 Indenture Bonds, the Authority shall give written notice to the Trustee and the 1947 Trustee of the proposed exchange and shall direct the 1947 Trustee to provide the Trustee with the names and addresses of the owners of such 1947 Indenture Bonds that are registered bonds without coupons or coupon bonds registered as to principal alone or as to both principal and interest. At least thirty (30) days before such exchange date the Trustee shall cause a notice of such exchange substantially in the form prepared by the Authority and signed by the Trustee (a) to be published once in a daily newspaper of general circulation published in the Municipality of San Juan, Puerto Rico, and in a daily newspaper of general circulation or a financial journal published in the Borough of Manhattan, City and State of New York, and (b) to be mailed, postage prepaid, to all registered owners of such 1947 Indenture Bonds at their addresses provided to the Trustee by the 1947 Trustee, but failure to mail such notice to any registered owner shall not affect the validity of the proceedings for the exchange of 1947 Indenture Bonds of any other registered owners. If all the 1947 Indenture Bonds to be exchanged are registered bonds without coupons or coupon bonds registered as to principal alone or as to both principal and interest, such notice shall be given by mail and the Trustee shall not be required to publish such notice. Each such notice shall set forth the date fixed for exchange, the address of the office of the Trustee at which the 1947 Indenture Bonds with all unmatured coupons appurtenant thereto, if any, shall be presented and surrendered for exchange, that on the exchange date interest on such 1947 Indenture Bonds shall be deemed to have ceased to accrue



from the January 1 or July to which interest has been paid, the coupons for any coupon bonds called for exchange payable subsequent to the exchange date shall be void and such 1947 Indenture Bonds shall cease to be entitled to any lien, benefit or security under the 1947 Indenture and the holders of such 1947 Indenture Bonds shall have no rights in respect thereof, except to receive registered bonds without coupons issued hereunder of the same principal amount and maturity, bearing interest at the same rate, subject to redemption at the same time and prices as such 1947 Indenture Bonds and of any denomination or denominations authorized by this Agreement.

All 1947 Indenture Bonds and unmatured coupons appurtenant thereto, if any, upon surrender thereof to the Trustee shall be delivered to the 1947 Trustee for cancellation.

Section 211. Temporary Bonds. Until definitive bonds of any Series are ready for delivery, there may be executed, and upon request of the Authority, the Trustee shall authenticate and deliver, in lieu of definitive bonds and subject to the same limitations and conditions, temporary printed, typewritten, engraved or lithographed bonds, in the form of either coupon bonds in such denominations, with or without coupons, or registered bonds without coupons in such denominations, or both, or in the form of a single registered bond without coupons in a denomination equal to the aggregate principal amount of such definitive bonds and payable in installments corresponding to the maturities of such definitive bonds, with payment record attached for the notation of payments of such installments and interest, without presentation and surrender of such single registered bond, as the Authority by resolution may provide, substantially of the tenor hereinabove set forth and with such appropriate omissions, insertions and variations as may be required.

Until definitive bonds of any Series are ready for delivery, any temporary bond of such Series may, if so provided by the Authority by resolution, be exchanged at principal office of the Trustee, without charge to the holder thereof, for an equal aggregate principal amount of temporary coupon bonds or of temporary registered bonds without coupons or both, of like tenor, at the same Series and maturity and bearing interest at the same rate.

If temporary bonds shall be issued, the Authority shall cause the definitive bonds to be prepared and to be executed and delivered to the Trustee, and the Trustee, upon presentation to it at its principal office of any temporary bond accompanied by all unpaid coupons, if any, shall cancel the same and authenticate and deliver in exchange therefor at the place designated by the holder, without charge to the holder thereof, a definitive bond or bonds of an equal aggregate principal amount, of the same Series and maturity and bearing interest at the same rate as the temporary bond surrendered. Upon any such exchange, all coupons appertaining to definitive coupon bonds and representing interest theretofore paid shall be detached and cancelled by the Trustee. Until so exchanged the temporary bonds shall in all respects be entitled to the same benefit and security of this Agreement as the definitive bonds to be issued and authenticated hereunder. Interest on temporary coupon bonds, when due and payable, if the definitive bonds shall not be ready for exchange, shall be paid on presentation of such temporary coupon bonds and notation of such payment shall be endorsed thereon, or such interest shall be paid upon the surrender of the appropriate coupons if coupons representing such interest shall be attached to such temporary bonds. No charge for taxes or governmental charges shall be made against the holder upon an exchange of a temporary bond for a definitive bond.

Section 212. Mutilated, destroyed or lost bonds. In case any bond secured hereby shall become mutilated, or be destroyed or lost, the Authority shall cause to be executed, and the Trustee shall authenticate and deliver, a new bond of like date and tenor in exchange and substitution for and upon the cancellation of such mutilated bond and its interest coupons, if any, or in lieu of and in substitution for such bond and its coupons, if any, destroyed or lost, upon the holder's paying the reasonable expenses and charges of the Authority and the Trustee in connection therewith and, in the case of a bond destroyed or lost, his filing with the Trustee evidence satisfactory to it and to the Authority that such bond and coupons, if any, were destroyed or lost, and of his ownership thereof, and furnishing the Authority and the Trustee with indemnity satisfactory to them.

### **Article III Redemption of Bonds.**

Section 301. Redemption of bonds. The bonds of any Series issued under the provisions of this Agreement shall be made subject to redemption, both in whole and in part and at such time and prices, as may be provided by resolution adopted by the Authority prior to the issuance of such bonds; provided, however, that term bonds shall be made subject to redemption to the extent of any Amortization Requirements therefor on July 1 immediately following each year in which there is an Amortization Requirement in respect of such bonds.

If less than all of the bonds of any one maturity of a Series shall be called for redemption, the particular bonds or portions of registered bonds without coupons to be redeemed from such Series and maturity shall be selected by the Trustee in such manner as the Trustee in its discretion may determine; provided, however, that the portion of any registered bond without coupons to be redeemed shall be in the principal amount equal to the lowest denomination authorized for such Series or some multiple thereof, and that, in selecting bonds for redemption, the Trustee shall treat each registered bond without coupons as representing that number of coupon bonds which is obtained by dividing the principal amount of such registered bond without coupons by the amount of such lowest authorized denomination.

For purposes of this Section 301, if less than all of the Capital Appreciation Bonds shall be called for redemption, the portion of any Capital Appreciation Bond of a denomination of more than the maturity amount specified in the resolution authorizing such Bonds to be redeemed shall be such maturity amount or a multiple thereof, and, in selecting portions of such Capital Appreciation Bonds for redemption, the Trustee shall treat such Capital Appreciation Bonds as representing that number of Capital Appreciation Bonds of such maturity amount which is obtained by dividing the maturity amount of such Capital Appreciation Bond to be redeemed in part by the maturity amount specified in such resolution.

Section 302. Redemption notice. At least thirty (30) days before the redemption date of any bonds the Trustee shall cause a notice of any such redemption, either in whole or in part, signed by the Trustee, (a) to be published once in a daily newspaper of general circulation published in the Municipality of San Juan, Puerto Rico, and in a daily newspaper of general circulation or a financial journal published in the Borough of Manhattan, City and State of New York, (b) to be filed with the Paying Agents, and (c) to be mailed, postage prepaid, to all registered owners of bonds or portions of bonds to be redeemed at their addresses as they appear

on the registration books hereinabove provided for, but failure so to file or mail any such notice shall not affect the validity of the proceedings for such redemption. If all the bonds to be redeemed are issuable only as registered bonds without coupons, such notice of redemption shall be given by mail and the Trustee shall not be required to publish such notice of redemption. Each such notice shall set forth the date fixed for redemption, the redemption price to be paid and, if less than all of the bonds of any one maturity of a Series then outstanding shall be called for redemption, the distinctive numbers and letters, if any, of such bonds to be redeemed and, in the case of registered bonds without coupons to be redeemed in part only, the portion of the principal amount thereof to be redeemed. In case any registered bond without coupons is to be redeemed in part only, the notice of redemption which relates to such bond shall state also that on or after the redemption date, upon surrender of such bond, new bond or bonds of the same Series and maturity, bearing interest at the same rate and in principal amount equal to the unredeemed portion of such bond will be issued.

Section 303. Effect of calling for redemption. On the date so designated for redemption, notice having been given in the manner and under the conditions hereinabove provided, the bonds or portions of registered bonds without coupons so called for redemption shall become and be due and payable at the redemption price provided for redemption of such bonds or portions of bonds on such date, and, if moneys for payment of the redemption price and the accrued interest are held in separate accounts by the Trustee or by the Paying Agents in trust for the holders of the bonds or portions thereof to be redeemed, as provided in this Agreement, interest on the bonds or portions of bonds so called for redemption shall cease to accrue, the coupons for interest on any coupon bonds so called for redemption payable subsequent to the redemption date shall be void, such bonds or portions of bonds shall cease to be entitled to any benefit or security under this Agreement, and the holders or registered owners of such bonds or portions of bonds shall have no rights in respect thereof except to receive payment of the redemption price thereof and the accrued interest and, to the extent provided in Section 305 of this Article, to receive bonds for any unredeemed portions of registered bonds without coupons.

Section 304. Matured coupons. All unpaid coupons which appertain to coupon bonds so called for redemption and which shall have become due and payable on or prior to the date of redemption designated in such notice shall continue to be payable to the bearers, severally and respectively upon the presentation and surrender of such coupons.

Section 305. Redemption of portion of registered bonds. In case part but not all of an outstanding registered bond without coupons shall be selected for redemption, the registered owner thereof or his attorney, or legal representative shall present and surrender such bond to the Trustee for payment of the principal amount thereof so called for redemption, and the Authority shall execute and the Trustee shall authenticate and deliver to or upon the order of such registered owner or his legal representative, without charge therefor, for the unredeemed portion of the principal amount of the registered bond without coupons so surrendered, either coupon bonds (if authorized for the Series of such registered bond) or a registered bond or bonds without coupons, at the option of such registered owner or his attorney or legal representative, of the same Series and maturity, bearing interest at the same rate and of any denomination or denominations authorized by this Agreement.

Section 306. Cancellation of bonds and coupons redeemed. Coupon bonds so redeemed, and all unmatured coupons appertaining thereto, and registered bonds without coupons so presented and surrendered, shall be cancelled upon the surrender, thereof.

Section 307. Bonds and portions of bonds called for redemption not deemed outstanding. Bonds and portions of bonds which have been duly called for redemption under the provisions of this Article, or with respect to which irrevocable instructions to call for redemption or payment at or prior to maturity have been given to the Trustee in form satisfactory to it, and for the payment of principal or the redemption price and the accrued interest of which sufficient moneys, or Government Obligations or Prerefunded Municipals or Time Deposits, secured in the manner set forth in Section 601 of this Agreement, shall be held in separate accounts by the Trustee or by the Paying Agents in trust for the holders of the bonds or portions thereof to be redeemed, all as provided in this Agreement, shall not thereafter be deemed to be under the provisions of this Agreement.

#### **Article IV Custody and Application of Proceeds of Bonds**

Section 401. Construction Fund. A special fund is hereby created and designated "Puerto Rico Electric Power Authority Power System Construction Fund" (herein sometimes called the "Construction Fund"), to the credit of which such deposits shall be made as are required by the provisions of Section 208 of this Agreement. There shall also be deposited to the credit of the Construction Fund any moneys received from any other source for paying any portion of the cost of any Improvements. One or more separate accounts may be created in the Construction Fund for use for specified projects.

The moneys in the Construction Fund shall be held by the Authority in trust, separate and apart from all other funds of the Authority, and shall be applied to the payment of the cost of any Improvements and, except for any moneys in separate accounts in the Construction Fund received from the United States Government or any agency thereof or from the Commonwealth of Puerto Rico or any agency thereof, pending such application, shall be subject to a lien and charge in favor of the holders of the bonds issued and outstanding under this Agreement and for the further security of such holders until paid out or transferred as herein provided.

Section 402. Payments from Construction Fund. Payment of the cost of any Improvements shall be made from the Construction Fund as herein provided. Moneys in the Construction Fund shall be disbursed by check, voucher, order, draft, certificate or warrant signed by the Executive Director or by any officer or employee of the Authority designated by him for such purpose.

Section 403. Items of cost. For the purposes of this Article, the cost of any Improvements shall embrace the cost of acquisition or construction and equipment and all other items of cost incident to such acquisition and construction and equipment and the financing thereof, and shall include, without intending thereby to limit or restrict any proper definition of such cost under the provisions of law or this Agreement, the following:

(a) obligations incurred for labor and materials and to contractors, builders and materialmen in connection with the construction of any Improvements;

(b) the cost of acquiring by purchase, if such purchase shall be deemed expedient, and the amount of any award or final judgment in or any settlement or compromise of any proceeding to acquire by condemnation, such property, lands, rights, rights of way, franchises, easements and other interests in land constituting a part of, or as may be deemed necessary or convenient for the construction of any Improvements, options and partial payments thereon, the cost of filling, draining or improving any lands so acquired, and the amount of any damages incident to or consequent upon the construction of any Improvements;

(c) the fees and expenses of the Trustee for its services under Article II of this Agreement, including its services in connection with the acceptance of the trusts hereby created, legal expenses and fees, fees and expenses of consultants, financing charges, cost of preparing and issuing the bonds, taxes or other municipal or governmental charges lawfully levied or assessed during construction upon any Improvements, and premiums on insurance in connection with any Improvements during construction;

(d) fees and expenses of architects or engineers for making studies, surveys and testing, for preparing plans and specifications and supervising construction, as well as for the performance of all other duties of architects or engineers set forth herein in relation to the construction of any Improvements;

(e) expenses of administration properly chargeable to any Improvements and all other items of expense not elsewhere in this Section specified, incident to the acquisition or construction and equipment of any Improvements;

(f) interest on the bonds prior to and during construction of the Improvements financed by such bonds and for such period after completion of such construction as the Authority may determine, if then permitted by law; and

(g) any obligation or expense heretofore or hereafter incurred by the Authority and any amounts heretofore or hereafter advanced by the Commonwealth of Puerto Rico or any agency thereof or by the United States Government, or from any other source, for any of the foregoing purposes.

Section 404. Lands for projects. The Authority covenants that no disbursement will be made for the purchase price or cost of any electric system or portion thereof, or any lands, buildings, franchises, licenses, easements or rights of way, unless and until counsel for the Authority shall have rendered his written opinion to the Authority to the effect that the Authority either has or will have immediately upon such disbursement (by reason of the prior or simultaneous delivery of proper instruments of conveyance and transfer mentioned in such opinion) title thereto sufficient for the purposes of the System.

## **Article V Revenues and Funds**

Section 501. Covenants as to bills for services. The Authority covenants that it will continue to render bills for the services and facilities furnished by the System on a monthly or bi-monthly basis until such time as the Authority shall deem it advisable to change the period covered by such bills, and that it will establish and enforce reasonable regulations in relation to the collection of such bills.

Section 502. Covenant as to rates. The Authority further covenants that it will at all times fix, charge and collect reasonable rates and charges for the use of the services and facilities furnished by the System and that from time to time, and as often as it shall appear necessary, it will adjust such rates and charges so that the Revenues will at all times be sufficient

(A) until the outstanding 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture:

- (a) to pay the Current Expenses of the System, and
- (b) to provide the greater of (i) the amount equal to one hundred twenty per centum (120%) of the aggregate Principal and Interest Requirements for the next fiscal year on account of all 1947 Indenture Bonds then outstanding and all bonds then outstanding under this Agreement, reduced by any amount deposited to the credit of the Bond Service Account from the proceeds of bonds to pay interest to accrue thereon in such fiscal year, or (ii) the amount required to make the deposits, transfers and payments mentioned in items (1) through (4), inclusive, below:

- (1) to make the deposits to the credit of the 1947 Sinking Fund which are required to be made in each fiscal year under the provisions of Section 507 of the 1947 Indenture,
- (2) to make the deposits to the credit of the General Reserve Fund which are required to be made in each fiscal year under the provisions of Section 511 of the 1947 Indenture,
- (3) to make the transfers to the credit of the Renewal and Replacement Fund which are required to be made in each fiscal year under the provisions of Section 512 of the 1947 Indenture, and
- (4) to make the payments which are required to be made in each fiscal year under the provisions of clause (a) of Section 513 of the 1947 Indenture, and

(B) after the outstanding 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture:

- (a) to pay the Current Expenses of the System, and

(b) to provide an amount at least equal to one hundred twenty per centum (120%) of the aggregate Principal and Interest Requirements for the next fiscal year on account of all the bonds then outstanding under this Agreement, reduced by any amount deposited to the credit of the Bond Service Account from the proceeds of bonds to pay interest to accrue thereon in such fiscal year.

The Authority further covenants that if at any time the Revenues shall not be sufficient to make such deposits, transfers and payments, it will revise the rates and charges for the services and facilities furnished by the System and, if necessary, it will revise its regulations in relation to the collection of bills for such services and facilities, so that such deficiency will be made up before the end of the next ensuing fiscal year. Should any deficiency not be made up in such next ensuing fiscal year, the requirement therefor, except as to the payments which are required to be made in such fiscal year under subclause (4) of clause (b) of paragraph (A) of this Section, shall be cumulative and the Authority shall continue to revise such rates until such deficiency shall have been completely made up.

Forthwith upon the adoption of any revision of rates and charges the Authority shall cause certified copies thereof to be filed with the Trustee.

In the event that the Authority shall fail to adjust the schedule of rates and charges in accordance with the provisions of this Section, the Trustee, without regard to whether an event of default, as defined in Article VIII of this Agreement, shall have occurred, shall, upon the request of the holders of not less, than ten per centum (10%) in principal amount of all bonds then outstanding and upon being indemnified to its satisfaction, institute and prosecute in a court of competent jurisdiction an appropriate suit, action or proceeding to compel the Authority to adjust such schedule in accordance with the requirements of this Section, and the Authority covenants that it will adopt and charge rates and charges in compliance with any judgment, order or decree entered in any such suit, action or proceeding.

Section 503. General Fund. A special fund is hereby created and designated the "Puerto Rico Electric Power Authority General Fund" (herein sometimes called the "General Fund"). The Authority covenants that, after the outstanding 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, all Revenues, other than income from investments made under the provisions of this Agreement, will be deposited as received in the name of the Authority with a qualified depository or depositories to the credit of the General Fund and applied in accordance with the provisions of this Article.

Section 504. Annual Budget. The Authority covenants that on or before the 15<sup>th</sup> day of May in each year the Board will cause to be prepared and will adopt and file with the Secretary, with the Trustee and with the Consulting Engineers a proposed budget of Current Expenses and of Capital Expenditures for the ensuing fiscal year.

The Authority further covenants that such proposed budget of Current Expenses will be prepared in such manner as to segregate, in so far as advisable, the accounts in respect of the different classes of operations, projects, undertakings and activities of the Authority and will be prepared on the basis of monthly requirements so that it will be possible to determine from the

budget the Current Expenses for each month during the fiscal year, that it will comply with any reasonable request of the Consulting Engineers as to the classifications in which such budget shall be prepared, and that such proposed budget of Capital Expenditures will show separately (a) so long as any 1947 Indenture Bonds are outstanding, the amount to be expended during such fiscal year from moneys deposited or transferred to the credit of the Renewal and Replacement Fund, including a separate statement as to the amount to be withdrawn from said Fund under the provisions of Section 507 of this Agreement, (b) the amount to be expended during such fiscal year from moneys deposited to the credit of the Construction Fund and, so long as any 1947 Indenture Bonds are outstanding, the 1947 Construction Fund, and (c) the amount of the working cash funds required for each month during such fiscal year.

The Authority further covenants that on the 1<sup>st</sup> day of June of each year, or on the first business day thereafter, it will hold a public hearing at its office in the Municipality of San Juan, Puerto Rico, on the proposed budget for the ensuing fiscal year, at which any bondholder, any consumer or any other interested person may appear, in person or by agent or attorney, and present any objections he may have to such proposed budget, and that promptly after each such public hearing and, in any event, on or before the first day of the next ensuing fiscal year the Board will finally adopt the annual budget of Current Expenses and Capital Expenditures for such fiscal year (which budget, together with any amendment thereof or supplement thereto as hereinafter permitted, is herein sometimes called the "Annual Budget"). The Authority covenants that the total expenditures provided for in the Annual Budget of Current Expenses will not exceed the total expenditures set forth in the proposed budget unless such excess shall be approved by the Consulting Engineers, and that before adopting the budget of Capital Expenditures it will receive and consider the Consulting Engineers' advice and recommendations with respect thereto.

If for any reason the Board shall not have adopted the Annual Budget before the first day of any fiscal year, the proposed budget for such fiscal year, if approved by the Consulting Engineers, or, if there is none so approved, the budget for the preceding fiscal year, shall, until the adoption of the Annual Budget, be deemed to be in force and shall be treated as the Annual Budget under the provisions of this Article; provided, however, that, so long as any 1947 Indenture Bonds are outstanding, the amounts provided for in the Annual Budget to be transferred from the 1947 Revenue Fund to the Renewal and Replacement Fund shall not be less than the amount set forth in the most recent certificate of the Executive Director filed with the Trustee pursuant to clause (d) of Section 208 of this Agreement.

The Board may at any time cause to be prepared and may file with the Secretary, with the Trustee and with the Consulting Engineers, and the Board may thereafter adopt, after receiving the approval of the Consulting Engineers, an amended or supplemental Annual Budget for the then current fiscal year.

Section 505. Application of moneys in General Fund. The Authority covenants that moneys in the General Fund will be used first for the payment of the Current Expenses of the System, that such expenses will not exceed an amount which is reasonable and necessary for maintaining, repairing and operating the System in an efficient and economical manner, and that the total amount of Current Expenses in any fiscal year will not exceed the amount provided therefor in the Annual Budget for such fiscal year or any amendment thereof or supplement



thereto unless such expenses shall be required by conditions beyond the control of the Authority happening during such fiscal year and which could not reasonably have been contemplated at the time of the adoption of the Annual Budget. If at any time the total amount theretofore expended during any fiscal year for Current Expenses shall exceed the total amount provided in the Annual Budget for Current Expenses for such fiscal year, the Authority covenants that it will report in writing the amount of such excess and the reason or reasons therefor to the Consulting Engineers and to the Trustee as soon as practicable but not later than the last day or the sixth month following the month in which such excess shall have occurred.

**Section 506. Revenue Fund.** A special fund is hereby created and designated the "Puerto Rico Electric Power Authority Power Revenue Fund" (herein sometimes called the "Revenue Fund"). After the outstanding 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, the Treasurer shall transfer, on or before the 15<sup>th</sup> day of each month, from the General Fund to the credit of the Revenue Fund an amount equal to the amount of all moneys held for the credit of the General Fund on the last day of the preceding month less such amount to be held as a reserve for Current Expenses as the Treasurer may determine, but not more than one-sixth (1/6) of the amount shown by the Annual Budget to be necessary for Current Expenses for the current fiscal year, such transfer to be made on the books of the Authority as of the close of the preceding month. The Authority covenants that all moneys to the credit of the Revenue Fund will be applied to the purposes and in the order set forth in this Article.

**Section 507. Sinking Fund.** A special fund is hereby created and designated the "Puerto Rico Electric Power Authority Power Revenue Bonds Interest and Sinking Fund" (herein sometimes called the "Sinking Fund"). There are hereby created three separate accounts in the Sinking Fund designated "Bond Service Account," "Reserve Account" and "Redemption Account," respectively. Another special fund is hereby created and designated "Puerto Rico Electric Power Authority Reserve Maintenance Fund" (herein sometimes called the "Reserve Maintenance Fund"). Two other special funds are hereby created and designated "Puerto Rico Electric Power Authority Self-insurance Fund" (herein sometimes called the "Self-insurance Fund") and "Puerto Rico Electric Power Authority Capital Improvement Fund" (herein sometimes called the "Capital Improvement Fund"). Another special fund is hereby created and designated "Puerto Rico Electric Power Authority Subordinate Obligations Fund" (herein sometimes called the "Subordinate Obligations Fund"). On or before the last day of the month during which the first Series of bonds shall be issued under the provisions of Section 208 of this Agreement and on or before the 25<sup>th</sup> day of each month thereafter, (i) until the outstanding 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, it shall be the duty of the Executive Director or any officer or employee of the Authority designated by him for such purpose to withdraw from the Renewal and Replacement Fund, and (ii) after the outstanding 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, it shall be the duty of the Treasurer to withdraw from the Revenue Fund, all of the moneys then held to the credit of such Fund (less any amount equal to the amount of Federal Subsidy Payments that have not been received as of the 25<sup>th</sup> of the month preceding the Interest Payment Date to which such Federal Subsidy Payments relate, which amount will be held in the Revenue Fund and (x) if the Federal Subsidy Payment has not been received by the Authority by such Interest Payment Date, transferred to the Bond Service Account on the Interest Payment Date and applied to the

payment of interest on Bonds or (y) if the Federal Subsidy Payment has been received by the Authority on or before such Interest Payment Date, remain on deposit in the Revenue Fund for application in accordance with the provisions below in the following calendar month) and deposit the moneys so withdrawn to the credit of the following Accounts and Funds in the following order:

(a) to the credit of the Bond Service Account, such amount thereof (or the entire sum so withdrawn if less than the required amount) as may be required to make the total amount then to the credit of the Bond Service Account equal to the sum of

(1) the Interest Accrual on all the outstanding bonds to and including the first day of the next calendar month, and

(2) the Principal Accrual on the outstanding serial bonds to and including the first day of the next calendar month;

(b) to the credit of the Redemption Account, such amount, if any, of any balance remaining after making the deposit under clause (a) above (or the entire balance if less than the required amount) as may be required to make the amount then to the credit of the Redemption Account equal to the Amortization Accrual to and including the first day of the next calendar month;

(c) to the credit of the Reserve Account, such amount, if any, of any balance remaining after making the deposits under clauses (a) and (b) above (or the entire balance if less than the required amount) as may be required to make the amount then to the credit of the Reserve Account, including the amount of any Reserve Account Insurance Policy or any Reserve Account Letter of Credit therein, equal to the interest payable on the bonds of each Series issued hereunder within the next ensuing twelve (12) months; (A) provided, however, that the amount so deposited in any month in respect of bonds of any Series issued under Sections 208 or 209 of this Agreement need not exceed one-sixtieth (1/60) of the amount of the increase in the interest payable within the next ensuing twelve (12) months resulting from the issuance of the bonds of such Series; and that if the amount so deposited in any month to the credit of said Account shall be less than the required amount for such month, the requirement therefor shall nevertheless be cumulative and the amount of any deficiency in any month shall be added to the amount otherwise required to be deposited in each month thereafter until such time as such deficiency shall have been made up; and that in the case of Variable Rate Bonds, the minimum amount to be deposited in the Reserve Account over the period required herein shall be based initially on the interest rate in effect on the date of issuance of the Variable Rate Bonds and then shall be adjusted on the 25<sup>th</sup> day of each subsequent month based on the actual interest accrued from the 25<sup>th</sup> day of the previous month to the date of adjustment, except that in the case of Variable Rate Bonds in respect of which the Authority has notified the Trustee that a SWAP agreement is in effect, the Trustee shall use the SWAP rate in calculating the interest payable on such Bonds within the next ensuing twelve (12) months; and that in the case of Capital Appreciation Bonds, the minimum amount required to be deposited in the Reserve Account shall be an amount derived from the interest rate which has been used to calculate the assumed yield on such bonds through their maturity times the Accreted Value of such bonds on the Valuation Date occurring at or after the first day of the twelfth succeeding month to the date of calculation of this

requirement, as may be further specified in the resolution authorizing Capital Appreciation Bonds and (B) provided, however, that in the case of Federally Subsidized Bonds, the amount of interest deemed to be payable on such bonds from the date of issuance of such Federally Subsidized Bonds and for so long as the Trustee shall receive the scheduled amount of the Federal Subsidy Payments on or before such interest shall be payable shall exclude the amount of interest to be paid from the Federal Subsidy and provided further, however, that if the Trustee shall not receive the scheduled amount of the Federal Subsidy Payments on or before the date interest on such Federally Subsidized Bonds is payable or within thirty (30) of the date such Federal Subsidy Payments were scheduled to be received under the then current applicable law and regulations, then for purposes of the calculation of interest to be credited to the Reserve Account, the amount shall be equal to the interest payable on the bonds of each Series issued hereunder within the next twelve (12) months;

(d) to the credit of the Reserve Maintenance Fund, such amount, if any, of any balance remaining after making the deposits under clauses (a), (b) and (c) above (or the entire balance if less than the required amount) as may be recommended by the Consulting Engineers, as provided by Section 706 of this Agreement, to be deposited to the credit of said Fund during such month; provided, however, that if the amount so deposited to the credit of said Fund in any month shall be less than the amount recommended by the Consulting Engineers, the requirement therefor shall nonetheless be cumulative and the amount of any such deficiency in any month shall be added to the amount otherwise required to be deposited in each month thereafter until such time as such deficiency shall have been made up, unless such requirement shall have been modified by the Consulting Engineers in writing, a signed copy of such modification to be filed with the Authority; and provided further, however, that in the event that the Authority shall so covenant in respect of any Subordinate Obligation, as authorized by Section 516 of this Agreement, the deposit required by this clause (d) in any month shall be equal to the least of

(i) the amount described above in this clause (d),

(ii) the amount of \$400,000, and

(iii) an amount that when added to the amount then held to the credit of the Reserve Maintenance Fund shall make the total amount to the credit of said Fund equal to \$10,000,000;

(e) to the credit of one or more special accounts in the Subordinate Obligations Fund, such amount, if any, of any balance remaining after making the deposits under clauses (a), (b), (c) and (d) above (or the entire balance if less than the required amount) that together with funds then held to the credit of the Subordinate Obligations Fund will make the total amount then to the credit thereof equal to any amounts required to be paid or accrued with respect to any Subordinate Obligations prior to the Deposit Day of the next succeeding month from or to the Subordinate Obligations Fund;

(f) in the event the Authority shall have covenanted pursuant to Section 516 with respect to Subordinate Obligations to limit its deposit to the Reserve Maintenance Fund in accordance with the provisions of the second proviso of clause (d) above and in fact the deposit to said Fund pursuant to clause (d) was limited to the amount described in subclause (ii) or (iii),

to the credit of the Reserve Maintenance Fund, such amount, if any, of any balance remaining after making the deposits under clauses (a), (b), (c), (d) and (e) above (or the entire balance if less than the required amount) as may be required to make the total amount deposited to the credit of the Reserve Maintenance Fund in such month equal to the amount described in subclause (i) of clause (d) above;

(g) on the date of the release of the 1947 Indenture, to the credit of the Self-insurance Fund an amount equal to the amount held to the credit of the General Reserve Fund under the 1947 Indenture on the date of such release remaining after making the deposits under clauses (a), (b), (c), (d), (e) and (f) above and thereafter such amount, if any, of any balance remaining after making the deposits under clauses (a), (b), (c), (d), (e) and (f) above, as the Consulting Engineers shall from time to time recommend; and

(h) after the outstanding 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, to the credit of the Capital Improvement Fund such amount, if any, of any balance remaining after making the deposits under clauses (a), (b), (c), (d), (e), (f) and (g) above, as the Consulting Engineers shall recommend as provided by Section 706 of this Agreement; provided, however, that if the amount so deposited to the credit of said Fund during any fiscal year of the Authority shall be less than the amount recommended by the Consulting Engineers, the requirement therefor shall nevertheless be cumulative and the amount of any such deficiency in any such fiscal year shall be added to the amount otherwise required to be deposited in each fiscal year thereafter until such time as such deficiency shall have been made up, unless such requirement shall have been modified by the Consulting Engineers in writing, a signed copy of such modification to be filed with the Authority.

Until the 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, any balance remaining after making the deposits under clauses (a), (b) and (c) above shall be transferred to the Renewal and Replacement Fund. After the outstanding 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, any balance remaining after making the deposits under clauses (a) through (h) above may be used for any lawful purpose of the Authority.

The moneys in the Sinking Fund shall be held by the Trustee in trust, and the moneys in the Reserve Maintenance Fund, the Self-insurance Fund and the Capital Improvement Fund shall be held by the Authority in trust, separate and apart from all other funds of the Authority, and shall be applied as hereinafter provided with respect to such Funds and, pending such application, shall be subject to a lien and a charge in favor of the holders of the bonds issued and outstanding under this Agreement and for the further security of such holders until paid out or transferred as herein provided. The moneys in each account in the Subordinate Obligations Fund shall be held by the Authority (or a Depository) in trust, separate and apart from all other funds of the Authority, and shall be applied as hereinafter provided with respect to such Fund and, pending such application, shall be subject to a lien and charge in favor of the holders of the Subordinate Obligations incurred in the manner provided under this Agreement and for the further security of such holders until paid out or transferred as herein provided. The Authority (or such Depository) may establish one or more accounts within the Subordinate Obligations Fund corresponding to the source of moneys or particular Subordinate Obligations for each

deposit made into said Fund so that the Authority (and such Depository) may ascertain the source and date of deposit of the moneys in each such account.

Section 508. Disposition of balances in 1947 Indenture funds and accounts. At such time as the outstanding 1947 Indenture Bonds shall be paid or provision shall be made for their payment and the Trustee under the 1947 Indenture shall have released the 1947 Indenture, all moneys (other than moneys held for the redemption or payment of bonds and coupons), including any obligations purchased as an investment of such moneys, then held for the credit of the special funds and accounts created under the provisions of the 1947 Indenture shall be withdrawn and deposited to the credit of the special funds and accounts created under the provisions of this Agreement, as follows:

<u>1947 Indenture</u>	<u>Agreement</u>
Construction Fund	Construction Fund
General fund	General Fund
Revenue fund	Revenue Fund
Sinking Fund, including Reserve Account	Reserve Account in Sinking Fund
General Reserve Fund	General Fund
Renewal and Replacement Fund	General Fund

At the same time the Authority shall withdraw all moneys then held to the credit of the Construction Fund revolving fund under the provisions of the 1947 Indenture and deposit such moneys to the credit of the Construction Fund under the provisions of the this Agreement.

Section 509. Application of moneys in Bond Service Account. The Trustee shall, on the business day immediately preceding each interest payment date, withdraw from the Bond Service Account and (a) remit by mail to each owner of registered bonds without coupons the amounts required for paying the interest on such bonds as such interest becomes due and payable and (b) set aside or deposit in trust with the Paying Agents the amounts required for paying the interest on the coupon bonds as such interest becomes due and payable and the principal of all serial bonds as such principal becomes due and payable.

Notwithstanding the foregoing, if principal and interest payments, or a portion thereof (other than any payments of the purchase price of bonds pursuant to a "put"), for particular bonds have been made on behalf of the Authority by a credit or liquidity facility issuer or other entity insuring, guaranteeing or providing for said payments, amounts deposited in the Bond Service Account and allocable to said payments for said bonds shall be paid, to the extent required under any agreement, to the credit or liquidity facility issuer or entity having theretofore made said corresponding payment.

Section 510. Application of moneys in Reserve Account. Moneys held for the credit of the Reserve Account or amounts available under any Reserve Account Insurance Policy or Reserve Account Letter of Credit shall first be used for the purpose of paying interest on the bonds and maturing principal of the serial bonds whenever and to the extent that the moneys held for the credit of the Bond Service Account shall be insufficient for such purpose and thereafter for the purpose of making deposits to the credit of the Redemption Account pursuant to the

requirements of clause (b) of Section 507 of this Agreement whenever and to the extent that the withdrawals from the Renewal and Replacement Fund or the Revenue Fund, as the case may be, are insufficient for such purpose. If at any time the moneys held for the credit for the Reserve Account, including amounts available under any Reserve Account Insurance Policy or Reserve Account Letter of Credit, shall exceed interest payable within the next ensuing twelve (12) months on the bonds of each Series issued and then outstanding hereunder, such excess shall be transferred to the credit of the Bond Service Account or any Reserve Account Insurance Policy or Reserve Account Letter of Credit may be reduced to the extent of such excess at the option of the Authority. For purposes of determining whether any excess exists in the Reserve Account, the amount required for Capital Appreciation Bonds and interest payable within the next ensuing twelve (12) months for Variable Rate Bonds shall be calculated in accordance with clause (c) of Section 507, and the minimum amount required in the Reserve Account shall be deemed to include any additional level of funding of the Reserve Account required under the terms of the resolution adopted by the Authority for such bonds.

Notwithstanding anything to the contrary contained in Section 507 or elsewhere in this Agreement, in lieu, or in partial satisfaction, of any required deposit into the Reserve Account, the Authority may cause to be deposited into the Reserve Account a Reserve Account Insurance Policy or a Reserve Account Letter of Credit, as to which any reimbursement obligation in respect of a drawing thereon may be secured by a lien on Revenues not inconsistent with Section 712 hereof, for the benefit of the holders of the bonds in an amount equal to the required deposit or any portion thereof, and which Reserve Account Insurance Policy or Reserve Account Letter of Credit shall be payable or available to be drawn upon, as the case may be (upon the giving of notice as required thereunder), on any date on which moneys are required to be paid out of the Reserve Account pursuant to the first sentence of this Section 510. If a disbursement is made under the Reserve Account Insurance Policy or the Reserve Account Letter of Credit, the Authority shall be obligated either to reinstate the amount of such Reserve Account Insurance Policy or Reserve Account Letter of Credit or to deposit into the Reserve Account moneys, in accordance with the provisions of Section 507 hereof, in the amount of the disbursement made under such Reserve Account Insurance Policy or Reserve Account Letter of Credit, or a combination of such alternatives. The Authority may at any time substitute (i) all or a portion of the moneys held to the credit of the Reserve Account with a Reserve Account Insurance Policy or Reserve Account Letter of Credit or a combination of such alternatives, (ii) all or a portion of any Reserve Account Insurance Policy on deposit in the Reserve Account with moneys or a Reserve Account Letter of Credit, or a combination of such alternatives, or (iii) all or a portion of any Reserve Account Letter of Credit on deposit in the Reserve Account with moneys or a Reserve Account Insurance Policy, or a combination of such alternatives. Any moneys on deposit in the Reserve Account in substitution of which a Reserve Account Insurance Policy or Reserve Account Letter of Credit is deposited into the Reserve Account shall, to the extent not required to fund any deficiencies in the amount then required to be on deposit in the Reserve Account, be released and immediately paid over to the Authority to be used by the Authority for any lawful purpose of the Authority. Prior to the expiration date of any Reserve Account Insurance Policy or Reserve Account Letter of Credit then on deposit to the credit of the Reserve Account, the Authority shall (x) cause the term of such Reserve Account Insurance Policy or Reserve Account Letter of Credit to be extended, (y) replace any such Reserve Account Insurance Policy with moneys (which may include, without limitation, moneys available under the Reserve Account Insurance Policy or from any other source available for such purpose) or a

Reserve Account Letter of Credit, or a combination of such alternatives, or (z) replace any such Reserve Account Letter of Credit with moneys (which may include, without limitation, moneys available under the Reserve Account Letter of Credit or from any other source available for such purpose) or a Reserve Account Insurance Policy, or a combination of said alternatives; provided that, in the event the Authority has not extended or replaced the expiring Reserve Account Insurance Policy or Reserve Account Letter of Credit by the fifth (5<sup>th</sup>) business day prior to the date of expiration, the expiring Reserve Account Insurance Policy or Reserve Account Letter of Credit shall, on such date, be drawn upon to fund the Reserve Account. For purposes of this Agreement, other than Article VI hereof, moneys deposit to, or held for the credit of, the Reserve Account shall include amounts available under any Reserve Account Insurance Policy or Reserve Account Letter of Credit on deposit in the Reserve Account.

Section 511. Application of moneys in Redemption Account. Moneys held for the credit of the Redemption Account shall be applied to the retirement of bonds issued under the provisions of this Agreement as follows:

(a) Subject to the provisions of paragraph (c) of this Section, the Trustee shall endeavor to purchase bonds or portions of bonds secured hereby and then outstanding, whether or not such bonds or portions shall then be subject to redemption, at the most advantageous price obtainable with reasonable diligence, such price not to exceed the principal of such bonds plus the amount of the premium, if any, which would be payable on the next redemption date to the holders of such bonds under the provisions of Article III of this Agreement if such bonds or portions of bonds should be called for redemption on such date from the moneys in the Sinking Fund. The Trustee shall pay the interest accrued on such bonds or portions of bonds to the date of settlement therefor from the Bond Service Account and the purchase price from the Redemption Account, but no such purchase shall be made by the Trustee within the period of forty-five (45) days immediately preceding any interest payment date on which such bonds are subject to call for redemption under the provisions of this Agreement except from moneys other than the moneys set aside or deposited for the redemption of bonds.

(b) Subject to the provisions of paragraph (c) of this Section, the Trustee shall call for redemption on each interest payment date on which bonds are subject to redemption from moneys in the Sinking Fund such amount of bonds or portions of bonds then subject to redemption as, with the redemption premium, if any, will exhaust the moneys then held for the credit of the Redemption Account as nearly as may be; provided, however, that not less than One Hundred Thousand Dollars (\$100,000) principal amount of bonds shall be called for redemption at any one time. Such redemption shall be made pursuant to the provisions of Article III of this Agreement. Prior to calling bonds or portions of bonds for redemption the Trustee shall withdraw from the Bond Service Account and from the Redemption Account and set aside in separate accounts or deposit with the Paying Agents the respective amounts required for paying the interest on, and the principal and redemption premium of, the bonds or portions of bonds so called for redemption.

(c) Moneys in the Redemption Account shall be applied by the Trustee in each fiscal year to the retirement of bonds of each Series then outstanding in the following order:

*first*, the term bonds of each such Series to the extent of the Amortization Requirement, if any, for such fiscal year for the term bonds of each such Series then outstanding, plus the applicable premium, if any, and, if any amount available in such fiscal year shall not be equal thereto, then in proportion to the Amortization Requirement, if any, for such fiscal year for the term bonds of each such Series then outstanding, plus the applicable premium, if any;

*second*, any balance then remaining shall be applied to the purchase of any bonds secured hereby and then outstanding whether or not such bonds shall then be subject to redemption, in accordance with the provisions of paragraph (a) of this Section;

*third*, any balance then remaining shall be applied to the redemption of the term bonds of each such Series in proportion to the Amortization Requirement, if any, for such fiscal year for the term bonds of each such Series then outstanding, plus the applicable premium, if any; and

*fourth*, after the retirement of all term bonds, any balance still remaining shall be applied to the retirement of the serial bonds of each Series in proportion to the aggregate principal amount of the serial bonds of each such Series originally issued under the provisions of this Agreement.

Until the outstanding 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, the Authority shall pay from the Renewal and Replacement Fund all expenses in connection with any such purchase or such redemption; thereafter all such expenses shall be paid from the Revenue Fund.

Notwithstanding the foregoing, if amounts applied to the retirement of bonds that would have been applied from the Redemption Account are paid instead by a credit or liquidity facility issuer or other entity insuring, guaranteeing or providing for said payment, amounts deposited in the Redemption Account and allocable to said payments for said bonds shall be paid, to the extent required under any agreement, to the credit or liquidity facility issuer or entity having theretofore made said corresponding payment.

Section 512. Use of moneys in Reserve Maintenance Fund. Except as hereinafter provided in this Section and in Section 707 of this Agreement, moneys held for the credit of the Reserve Maintenance Fund shall be disbursed only for the purpose of paying the cost of unusual or extraordinary maintenance or repairs, maintenance or repairs not recurring annually and renewals and replacements, including major items of equipment. Such disbursements shall be made in accordance with the provisions of Section 402 of this Agreement for payments from the Construction Fund.

If at any time moneys held for the credit of the Bond Service Account and the Reserve Account shall be insufficient for the purpose of paying the interest on all bonds and the principal of the serial bonds as such interest and principal become due and payable, then the Authority shall transfer from any moneys held for the credit of the Reserve Maintenance Fund to the credit of the Bond Service Account an amount sufficient to make up any such deficiency. If at any time the moneys held for the credit of the Redemption Account and the Reserve Account shall be



insufficient for the purpose of providing funds for the retirement of term bonds to the extent of the Amortization Requirements therefor at the end of any fiscal year, then the Authority shall transfer from any moneys held for the credit of the Reserve Maintenance Fund an amount sufficient to make up any such deficiency; provided, however, that no such transfer shall be made unless the moneys then held for the credit of the Bond Service Account are at least equal to the maximum requirement therefor under clause (a) Section 507 of this Agreement. Any moneys so transferred from the Reserve Maintenance Fund shall be restored by the Authority from available moneys in the Revenue Fund, subject to the same conditions as are prescribed for deposits to the credit of the Reserve Maintenance Fund under the provisions of Section 507 of this Agreement.

Section 512A. Use of moneys in Self-insurance Fund. Except as hereinafter provided in the following two paragraphs and in Section 707 of this Agreement, moneys held for the credit of the Self-insurance Fund (1) shall be disbursed in the manner provided by Section 402 of this Agreement for disbursements from the Construction Fund only for the purpose of paying the cost of repairing, replacing or reconstructing any property damaged or destroyed from or extraordinary expenses incurred as a result of a cause which is not covered by insurance under the provisions of said Section 707 or (2) shall be transferred to the Revenue Fund in an amount, approved by the Consulting Engineers, equal to the loss of income from the System as a result of a cause which is not covered by insurance under the provision of said Section 707.

If at any time moneys held for the credit of the Bond Service Account and the Reserve Account (including moneys transferred from the Reserve Maintenance Fund to the credit of the Bond Service Account pursuant to the provisions of the first sentence of the second paragraph of Section 512 of this Agreement) shall be insufficient for the purpose of paying the interest on all bonds and the principal of all serial bonds as such interest and principal becomes due and payable, then the Authority shall transfer from any moneys held for the credit of the Self-insurance Fund to the credit of the Bond Service Account an amount sufficient to make up such deficiency. If at any time moneys held for the credit of the Redemption Account and the Reserve Account (including moneys transferred from the Reserve Maintenance Fund to the credit of the Redemption Account pursuant to the provisions of the second sentence of the second paragraph of Section 512 of this Agreement) shall be insufficient for the purpose of providing funds for the retirement of bonds to the extent of the Authorization Requirements therefor at the end of any fiscal year, then the Authority shall transfer from any moneys held for the credit of the Self-insurance Fund to the credit of the Redemption Account an amount sufficient to make up any such deficiency; provided, however, that no such transfer shall be made unless the moneys then held for the credit of the Bond Service Account are at least equal to the maximum requirement therefor under clause (a) of Section 507 of this Agreement.

If the Authority shall have determined that all or any portion of the moneys held to the credit of the Self-insurance Fund is no longer needed for the purposes specified in the second preceding paragraph, the Authority may withdraw an amount equal to such portion from the Self-insurance Fund and transfer such amount to the credit of the Bond Service Account; provided, however, that no such transfer shall be made prior to the time that the Consulting Engineers shall have approved such transfer in writing.

Section 512B. Use of moneys in Capital Improvement Fund. Moneys held for the credit of the Capital Improvement Fund shall be disbursed in the manner provided by Section 402 of this Agreement only for paying the cost of anticipated extensions and Improvements of the System the cost of which has not otherwise been provided for from the proceeds of bonds issued under the provisions of this Agreement.

If at any time moneys held for the credit of the Bond Service Account and the Reserve Account (including moneys transferred from the Reserve Maintenance Fund or the Self-insurance Fund to the credit of the Bond Service Account pursuant to the provisions of the first sentence of the second paragraph of Sections 512 and 512A of this Agreement, respectively) shall be insufficient for the purpose of paying the interest on all bonds and the principal of all serial bonds as such interest and principal become due and payable, then the Authority shall transfer from any moneys held for the credit of the Capital Improvement Fund to the credit of the Bond Service Account an amount sufficient to make up such deficiency. If at any time moneys held for the credit of the Redemption Account and the Reserve Account (including moneys transferred from the Reserve Maintenance Fund or the Self-insurance Fund to the credit of the Redemption Account pursuant to the provisions of the second sentence of the second paragraph of Sections 512 and 512A of this Agreement, respectively) shall be insufficient for the purpose of providing funds for the retirement of bonds to the extent of the Amortization Requirements therefor at the end of any fiscal year, then the Authority shall transfer from any moneys held for the credit of the Capital Improvement Fund to the credit of the Redemption Account an amount sufficient to make up any such deficiency; provided, however, that no such transfer shall be made unless the moneys then held for the credit of the Bond Service Account are at least equal to the maximum requirement therefor under clause (a) of Section 507 of this Agreement.

Section 513. Application and pledge of moneys in Sinking Fund. Subject to the terms and conditions set forth in this Agreement, moneys held for the credit of the Bond Service Account, the Reserve Account and the Redemption Account shall be held in trust and disbursed by the Trustee for (a) the payment of interest on the bonds issued hereunder as such interest becomes due and payable, or (b) the payment of the principal of such bonds at their respective maturities, or (c) the payment of the purchase or redemption price of such bonds before their respective maturities, and such moneys are hereby pledged to and charged with the payments mentioned in this Section.

Whenever the total of the moneys held for the credit of the Bond Service Account, the Reserve Account and the Redemption Account shall be sufficient for paying the principal of and the redemption premium, if any, and the interest accrued on all bonds then outstanding under the provisions of this Agreement, such moneys shall be applied by the Trustee to the payment, purchase or redemption of such bonds.

Section 514. Moneys set aside for principal and interest held in trust. All moneys which the Trustee shall have withdrawn from the Sinking Fund or shall have received from any other source and set aside, or deposited with the Paying Agents, for the purpose of paying any of the bonds hereby secured, either at the maturity thereof or upon call for redemption, or for the purpose of paying any maturing coupons appertaining to any of the coupon bonds hereby secured, shall be held in trust for the respective holders of such bonds or coupons. But any moneys which shall be so set aside or deposited by the Trustee and which shall remain

unclaimed by the holders of such bonds or of such coupons for the period of six (6) years after the date on which such bonds or such coupons shall have become due and payable shall upon request in writing be paid to the Authority or to such officer, board or body as may then be entitled by law to receive the same, and thereafter the holders of such bonds or coupons shall look only to the Authority or to such officer, board or body, as the case may be, for payment and then only to the extent of the amounts so received without any interest thereon, and the Trustee and the Paying Agents shall have no responsibility with respect to such moneys.

Section 515. Cancellation of bonds and coupons upon payment. All bonds paid, redeemed or purchased, either at or before maturity, together with all unmatured coupons, if any appertaining thereto, shall be cancelled upon the payment, redemption or purchase of such bonds and shall be delivered to the Trustee when such payment, redemption or purchase is made. All coupons, which are paid by the Paying Agents, shall be cancelled upon their payment and delivered to the Trustee in the Borough of Manhattan, City and State of New York. Except for such coupons, all bonds and coupons cancelled under any of the provisions of this Agreement shall be destroyed by the Trustee, which shall execute a certificate in duplicate describing the bonds and coupons so destroyed except that the numbers of the bonds to which such coupons appertain may be omitted unless otherwise directed by the Authority, and one executed certificate shall be filed with the Secretary and the other executed certificate shall be retained by the Trustee. The coupons so paid by any Paying Agent shall be destroyed by the Trustee in the Borough of Manhattan, City and State of New York, which shall execute a certificate in triplicate describing the coupons so destroyed except that the numbers of the bonds to which such coupons appertain may be omitted unless otherwise directed by the Authority, and one executed certificate shall be filed with the Secretary and another with the Trustee and the third executed certificate shall be retained by such Paying Agent.

Section 516. Application of moneys in Subordinate Obligations Fund. (a) Moneys held for the credit of the Subordinate Obligations Fund shall be paid out or pledged by the Authority as necessary to enable the Authority to meet its Subordinate Obligations. Subordinate Obligations may be incurred or issued by the Authority for any proper corporate purpose of the Authority.

(b) The Authority shall have the right to covenant with the holders from time to time of any Subordinate Obligations issued or incurred by the Authority to limit the deposits to the Reserve Maintenance Fund as authorized by Section 507(d) and to add the conditions, limitations and restrictions under which bonds may be issued under the provisions of Sections 208, 209 and 210 hereof.

(a) Any such Subordinate Obligations shall be payable out of and may be secured by a pledge of (i) such amounts in the Subordinate Obligations Fund as may from time to time be available therefor, and (ii) any other funds of the Authority that may be available for such purpose, provided that any such payment or pledge made pursuant to clause (i) of this sentence shall be, and shall be expressed to be, subordinate and junior in all respects to the lien and charge of the bonds secured hereby upon the Revenues.

(b) Before incurring any Subordinate Obligations the proceeds of which shall finance in whole or in part the acquisition or construction of any works or properties by the Authority in

connection with the production, distribution or sale of electric energy, the Authority shall adopt a resolution specifying whether or not such works or properties are to be included as part of the System.

(c) The resolution, indenture or other instrument securing each issue of Subordinate Obligations shall contain provisions (which shall be binding on all holders of such Subordinate Obligations) not more favorable to the holders of such Subordinate Obligations than the following:

(1) In the event of any insolvency or bankruptcy proceedings, and any receivership, liquidation, reorganization or their similar proceedings in connection therewith, relative to the Authority or to its creditors, as such, or to its property, and in the event of any proceedings for voluntary liquidation, dissolution or other winding up of the Authority, whether or not involving insolvency or bankruptcy, the owners of all bonds then outstanding shall be entitled to receive payment in full of all principal and interest due on all such bonds in accordance with the provisions of this Agreement before the holders of the Subordinate Obligations are entitled to receive any payment from the funds pledged to the bonds on account of principal (and premium, if any) or interest upon the Subordinate Obligations.

(2) In the event that any Subordinate Obligation is declared due and payable before its expressed maturity because of the occurrence of an event of default (under circumstances when the provisions of (1) above shall not be applicable), the owners of all bonds outstanding at the time such Subordinate Obligation becomes due and payable because of the occurrence of such an event of default shall be entitled to receive payment in full of all principal of and interest on all such bonds then due and payable before the holder of such Subordinate Obligation is entitled to receive any accelerated payment from the Revenues and other moneys pledged to the bonds under this Agreement of principal (and premium, if any) or interest upon such Subordinate Obligation.

(3) If any event of default specified in Section 802 hereof with respect to the bonds shall have occurred and be continuing (under circumstances when the provisions of (1) above shall not be applicable), the owners of all bonds then outstanding shall be entitled to receive payment in full of all principal of and interest on all such bonds as the same become due and payable before the holders of the Subordinate Obligations are entitled to receive, subject to the provisions of (5) below, any payment from the Revenues or other moneys pledged to the bonds under this Agreement of principal (and premium, if any) or interest upon the Subordinate Obligations.

(4) No owner of a bond shall be prejudiced in this right to enforce subordination of the Subordinate Obligations by any act or failure to act on the part of the Authority.

(5) The Subordinate Obligations may provide that the provisions of (1), (2), (3) and (4) above are solely for the purpose of defining the relative rights of the owners of the bonds on the one hand, and the holders of Subordinate Obligations on the other

hand, and that nothing therein shall impair, as between the Authority and the holders of the Subordinate Obligations, the obligation of the Authority, which is unconditional and absolute, to pay to the holders thereof the principal thereof and premium, if any, and interest thereon in accordance with their terms, nor shall anything therein prevent the holders of the Subordinate Obligations from exercising all remedies otherwise permitted by applicable law or thereunder upon default thereunder, subject to the rights under (1), (2), (3) and (4) above of the owners of bonds to receive cash, property or securities from the funds pledged to the bonds under this Agreement otherwise payable or deliverable to the holders of the Subordinate Obligations; and the Subordinate Obligations may provide that, insofar as a trustee or paying agent for such Subordinate Obligations is concerned, the foregoing provisions shall not prevent the application by such trustee or paying agent of any moneys deposited with such trustee or paying agent for the purpose of the payment of or on account of the principal (and premium, if any) and interest on such Subordinate Obligations if such trustee or paying agent did not have knowledge at the time of such application that such payment was prohibited by the foregoing provisions.

(6) Any issue of Subordinate Obligations may have such rank or priority with respect to any other issue of Subordinate Obligations as may be provided in the resolution, trust agreement or other instrument securing such issue of Subordinate Obligations and may contain such other provisions as are not in conflict with the provisions of this Agreement.

(7) Neither the Trustee nor any Depository shall be deemed to owe any fiduciary duty to the holders of Subordinate Obligations and shall not be liable to such holders if it shall mistakenly pay over or transfer to owners of bonds, the Authority or any other person, moneys to which any holders of Subordinate Obligations shall be entitled by virtue of this Section 516 or otherwise; provided, however, that neither the Trustee nor any Depository then holding the Subordinate Obligations Fund shall be relieved from liability for its own negligent action, its own negligent failure to act, or its own willful misconduct. Notwithstanding any of the provisions of this Section 516 or any other provision of this Agreement, neither the Trustee nor any such Depository shall at any time be charged with knowledge of the existence of any facts that would prohibit the making of any payment of moneys to or by the Trustee or any such Depository in respect of Subordinate Obligations or of any default in the payment of the principal of or premium, if any, or interest on any Subordinate Obligations, unless and until the Trustee or such Depository shall have received written notice thereof from the Authority or the holders of a majority in principal amount of any class or category of any Subordinate Obligations or from any trustee or other fiduciary therefor and any financial institution that provides credit or security for any Subordinate Obligations.

## **Article VI**

### **Depositaries of Moneys, Security for Deposits and Investment of Funds.**

Section 601. Deposits constitute trust funds. All moneys received by the Authority under the provisions of this Agreement shall be deposited with a Depository or Depositaries,

shall be held in trust, shall be applied only in accordance with the provisions of this Agreement and shall not be subject to lien or attachment by any creditor of the Authority.

All moneys deposited with the Trustee or any other Depositary hereunder in excess of the amount guaranteed by the Federal Deposit Insurance Corporation or other Federal agency shall be continuously secured for the benefit of the Authority and the holders of the bonds, either (a) by lodging with a bank or trust company approved by the Authority and by the Trustee as custodian, or, if then permitted by law, by setting aside under control of the trust department of the bank holding such deposit, as collateral security, Government Obligations, or, with the approval of the Trustee, other marketable securities eligible as security for the deposit of trust funds under applicable regulations of the Comptroller of the Currency of the United States or applicable Commonwealth of Puerto Rico or state law or regulations, having a market value (exclusive of accrued interest) not less than the amount of such deposit, or (b) if the furnishing of security as provided in clause (a) of this Section is not permitted by applicable law, in such other manner as may then be required or permitted by applicable Commonwealth of Puerto Rico, state or Federal laws or regulations regarding the security for, or granting a preference in the case of, the deposit of trust funds; provided, however, that it shall not be necessary for the Paying Agents to give security for the deposits of any moneys with them for the payment of the principal or of the redemption premium or the interest on any bonds issued hereunder, or for the Trustee to give security for any moneys which shall be represented by obligations purchased under the provisions of this Article as an investment of such moneys.

All moneys deposited with each Depositary, including the Trustee, shall be credited to the particular fund or account to which such moneys belong.

Section 602. Investment of moneys. Moneys held for the credit of the Bond Service Account and the Redemption Account, shall, as nearly as may be practicable, be continuously invested and reinvested by the Trustee in Government Obligations which shall mature, or which shall be subject to redemption by the holder thereof at the option of such holder, not later than the respective dates when moneys held for the credit of said Accounts will be required for the purposes intended, or in Time Deposits; provided, however, that each such Time Deposit shall permit the moneys so placed to be available for use at the times provided above.

Moneys held for the credit of the Construction Fund, the Reserve Maintenance Fund and the Self-insurance Fund shall, as nearly as may be practicable, be continuously invested and reinvested by the Authority in Investment Obligations, and moneys held for the credit of the Revenue Fund shall, as nearly as may be practicable, be continuously invested and reinvested by the Authority in Government Obligations, which Investment Obligations and Government Obligations shall mature, or shall be subject to redemption by the holder thereof at the option of such holder, not later than the respective dates when moneys held for the credit of said Funds will be required for the purposes intended, or in Time Deposits; provided, however, that each such Time Deposit shall permit the moneys so placed to be available for use at the times provided above.

Moneys held for the credit of the Reserve Account shall, as nearly as may be practicable, be continuously invested and reinvested by the Trustee in Investment Obligations which shall mature, or which shall be subject to redemption by the holder thereof at the option of such

holder, (i) as to approximately 50% of such moneys, not later than 5 years after the date of such investment, and (ii) as to the balance of such moneys, as directed by the order mentioned below or in Time Deposits; provided, however, that each such Time Deposit shall permit the moneys so placed to be available for use at the times provided above.

Fifty per centum (50%) of the moneys held for the credit of the Reserve Account shall be invested by the Trustee upon receipt of an order signed by the Executive Director or other authorized officer of the Authority or authorized representative of the Executive Director or other authorized officer stating the amount to be invested and directing such investment in Investment Obligations having such maturities as are specified in such order. Such obligations shall be sold by the Trustee upon receipt of an order signed by the Executive Director or other authorized officer of the Authority or authorized representative of the Executive Director or other authorized officer.

Notwithstanding any provision of this Section to the contrary, moneys held to the credit of the Self-insurance Fund may also be invested by the Authority in any investments authorized by Act No. 447 of the Legislature of Puerto Rico, approved May 15, 1951, as amended from time to time (codified as Title 3, Chapter 33, Section 779, Laws of Puerto Rico Annotated), for the Retirement System of the Employees of the Government for Puerto Rico and its Instrumentalities; provided, however, that the Authority shall invest not less than the lesser of \$25,000,000 and the entire balance to the credit of such Fund in Investment Obligations with an average weighted maturity of not in excess of three years.

Prior to investing any moneys held for the credit of the Self-insurance Fund in other Investment Obligations, the Authority shall require an Independent Consultant retained pursuant to the provisions of Section 706 to present a report described in said Section 706 recommending what portion of moneys held for the credit of the Self-insurance Fund the Authority shall maintain invested in Investment Obligations. Should the Self-insurance Fund be held by the Trustee on behalf of the Authority, a copy of such report will be furnished to the Trustee.

Prior to investing any moneys held for the credit of the Self-insurance Fund in other than Investment Obligations, the Authority shall, after duly considering the report it shall have received pursuant to the foregoing paragraph, formally adopt, subject to the consent of Government Development Bank for Puerto Rico, and maintain an investment policy first determining, subject to the limitation prescribed by the second preceding paragraph, the minimum portion of the moneys held for the credit of the Self-insurance Fund to remain invested in Investment Obligations and then setting forth prudent investment principles, considerations and goals, including, without limitation, liquidity, diversification of assets, safety and rate or rates of return, that will govern the investment strategies and goals for the balance of the moneys held for the credit of the Self-insurance Fund. The Authority agrees to advise the Trustee in writing of those investments other than Investment Obligations that are authorized by said investment policy.

The Board shall receive at each regular meeting a detailed report from its Treasurer of the current portfolio of Investment Obligations, other securities and other moneys held to the credit of the Self-insurance Fund.

Obligations and Time Deposits so purchased as an investment of moneys in any such Fund or Account shall be deemed at all times to be part of such Fund or Account. The interest accruing thereon and any profit realized from such investment shall be credited to such Fund or Account and any loss resulting from such investment shall be charged to such Fund or Account. The Trustee shall sell or present for payment or redemption any obligations so acquired whenever it shall be necessary so to do in order to provide moneys to meet any payment from such Fund or Account. Neither the Trustee nor the Authority nor any officer or agent of either thereof shall be liable or responsible for any loss resulting from any such investment.

## **Article VII Particular Covenants**

Section 701. Payment of principal, interest and premium. The Authority covenants that it will promptly pay the principal of and the interest on each and every bond issued under the provisions of this Agreement at the places, on the dates and in the manner specified herein and in said bonds and in the coupons, if any, appertaining thereto, and any premium required for the retirement of said bonds by purchase or redemption, according to the true intent and meaning thereof. Until the 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, such principal, interest and premium are payable solely from moneys in the Renewal and Replacement Fund and said moneys are hereby pledged to the payment thereof in the manner and to the extent hereinabove particularly specified. After the 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, such principal, interest and premium will be payable solely from the Revenues and said Revenues are hereby pledged to the payment thereof in the manner and to the extent hereinafter particularly specified. Nothing in the bonds or in this Agreement shall be deemed to constitute the bonds a debt or obligation of the Commonwealth of Puerto Rico or any of its municipalities or other political subdivisions, and neither the Commonwealth of Puerto Rico nor any such municipalities or other political subdivisions shall be liable for the payment of the principal of or the interest on the bonds.

The Authority further covenants that so long as any bonds issuable as coupon bonds shall be outstanding it will cause offices or agencies where the coupon bonds and coupons may be presented for payment to be maintained in the Borough of Manhattan, City and State of New York.

Section 702. Covenants to Integrate Improvements into System. The Authority covenants that, upon the acquisition or construction of any Improvements, it will forthwith integrate the properties so acquired or constructed with the System and will thereupon operate and maintain the System and all of such properties as an integrated system.

The Authority further covenants that it will construct all Improvements and all other works on properties constituting part of the System for the construction of which bonds or Subordinate Obligations shall be issued under the provisions of this Agreement, or for which moneys repayable from the proceeds of bonds or Subordinate Obligations issued under the provisions of this Agreement shall have been advanced to the Authority, in accordance with plans theretofore adopted by the Board and approved by the Consulting Engineers and that upon



the completion of such Improvements or other works or properties it will operate and maintain the same as a part of the System.

The Authority further covenants that it will establish and enforce reasonable rules and regulations governing the use of the System and the operation thereof, that all compensation, salaries, fees and wages paid by it in connection with the maintenance, repair and operation of the System will be reasonable, that no more persons will be employed by it than are necessary, that it will operate the System in an efficient and economical manner, that it will at all times maintain the System in good repair and in sound operating condition and will make all necessary repairs, renewals and replacements, and that it will comply with all valid acts, rules, regulations, orders and directions of any legislative, executive, administrative or judicial body applicable to the System.

**Section 703. Compliance with 1947 Indenture.** The Authority further covenants that, until all of the 1947 Indenture Bonds shall have been paid or provision shall have been made for their payment and the 1947 Indenture shall have been released, it will duly and punctually perform all of the covenants, agreements and conditions contained in the 1947 Indenture on the part of the Authority to be performed. The Authority further covenants that it will cause the 1947 Indenture to be released at the earliest practicable date. The Authority further covenants that it will not enter into any indenture or agreement supplemental to the 1947 Indenture for the purpose of granting to or conferring upon the 1947 Trustee for the benefit of the holders of the bonds issued under the 1947 Indenture any additional rights, remedies, powers, authority or security that may lawfully be granted to or conferred upon such holders or the 1947 Trustee, or for the purpose of modifying, altering, amending, adding to or rescinding, in any particular, any of the terms or provisions contained in the 1947 Indenture, or for the purpose of extending the maturity of any 1947 Indenture Bond or creating a lien upon or a pledge of revenues ranking prior to or on a parity with the lien or pledge created by the 1947 Indenture. Nothing herein contained shall prevent the Authority from entering into an indenture or agreement supplemental to the 1947 Indenture to cure any ambiguity or formal defect or omission in the 1947 Indenture; and notwithstanding the above, the Authority may enter into any indenture or agreement supplemental to the 1947 Indenture for any purposes permitted thereunder, including, without limitation, modifying any of the terms or provisions contained in the 1947 Indenture, to the extent that any such indenture or agreement would not adversely affect the interest of the bondholders under this Agreement. Under this Section, the Trustee will be entitled to receive, and shall be fully protected in relying upon the opinion of any counsel approved by it, who may be counsel for the Authority.

**Section 704. Covenant as to Renewal and Replacement Fund.** The Authority covenants that so long as any 1947 Indenture Bonds are outstanding under the provisions of the 1947 Indenture it will cause to be made the deposits to the credit of the Renewal and Replacement Fund required by Section 512 of the 1947 Indenture and it will not revise its determination as to the proper amount to be transferred each month from the 1947 Revenue Fund to the credit of the Renewal and Replacement Fund by reducing such amount below one-twelfth (1/12) of the maximum Principal and Interest Requirements for any fiscal year thereafter to and including the fiscal year in which the last maturity of any outstanding 1947 Indenture Bonds occurs on account of all bonds then outstanding under this Agreement.

Section 705. Payment of lawful charges. The Authority further covenants that, out of the Revenues, it will pay all municipal or governmental charges lawfully levied or assessed upon the System or any part thereof or upon any Revenues when the same shall become due, that it will duly observe and comply with all valid requirements of any municipal or governmental authority relative to the System, that it will not create or suffer to be created any lien or charge upon the System or any part thereof or upon the Revenues ranking equally with or prior to the bonds, except the lien and charge of the 1947 Indenture Bonds and the bonds secured hereby upon the Revenues and except as otherwise permitted in this Agreement, and that, out of the Revenues, it will pay or cause to be discharged, or will make adequate provision to satisfy and discharge, within sixty (60) days after the same shall accrue, all lawful claims and demands for labor, materials, supplies or other objects which, if unpaid, might by law become a lien upon the System or any part thereof or the Revenues; provided, however, that nothing contained in this Section shall require the Authority to pay or cause to be discharged, or make provision for, any such lien or charge so long as the validity thereof shall be contested in good faith and by appropriate legal proceedings.

Section 706. Employment of Consulting Engineers. The Authority covenants and agrees that so long as any 1947 Indenture Bonds are outstanding it will, for the purpose of performing and carrying out the duties imposed on the Consulting Engineers by this Agreement, employ such Consulting Engineers as are employed under Section 704 of the 1947 Indenture, and after the 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture and so long as any bonds are outstanding under this Agreement, it will employ an independent engineer or engineering firm or corporation having a wide and favorable repute in the United States for skill and experience in the construction and operation of electric systems. No engineer or engineering firm shall be employed as Consulting Engineers under this Agreement, except with the written approval of the Trustee. Except for fees and expenses incurred under the provisions of Section 403 of this Agreement, the cost of employing Consulting Engineers shall be treated as a part of the cost of operation and maintenance of the System.

It shall be the duty of the Consulting Engineers to prepare and file with the Authority and with the Trustee on or before the 1<sup>st</sup> day of November in each year a report setting forth their recommendations as to any necessary or advisable revisions of rates and charges and such other advices and recommendations as they may deem desirable. After the outstanding 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, it shall be the duty of the Consulting Engineers to include in such report their recommendations as to the amount that should be deposited monthly during the ensuing fiscal year to the credit of the Reserve Maintenance Fund for the purposes set forth in Section 512 of this Agreement, deposited during the ensuing fiscal year to the credit of the Self-insurance Fund for the purposes set forth in Section 512A of this Agreement, if any, and deposited during the ensuing fiscal year to the credit of the Capital Improvement Fund for the purposes set forth in Section 512B of this Agreement.

The Authority further covenants that the Consulting Engineers shall at all times have free access to all properties of the System and every part thereof for the purposes of inspection and examination, and that its books, records and accounts may be examined by the Consulting Engineers at all reasonable times.

The Authority covenants and agrees that so long as any bonds are outstanding under this Agreement, it will, for the purpose of carrying out the duties imposed on the Independent Consultant by this Agreement, employ one or more independent firms having a wide and favorable repute in the United States for expertise in risk management and other insurance matters related to the construction and operation of electric systems. Except for fees and expenses incurred under the provisions of Section 403 of this Agreement, the cost of employing such Independent Consultant shall be treated as part of the cost of operation and maintenance of the System.

It shall be the duty of the Independent Consultant to prepare and file with the Authority and the Trustee at least biennially, on or before the first day of November, beginning November, 1999, a report setting forth its recommendations, based on a review of the insurance then maintained by the Authority in accordance with Section 707 of this Agreement and the status of the Self-insurance Fund, of any changes in coverage, including its recommendations of policy limits and deductibles and self-insurance, and investment strategies for the Self-insurance Fund.

Section 707. Insurance. The Authority covenants that it will at all times carry insurance, in a responsible insurance company or companies authorized and qualified under the laws of Puerto Rico to assume the risk thereof, covering such properties belonging to the System as are customarily insured, and against loss or damage from such causes as are customarily insured against, by companies engaged in similar business.

All such policies shall be for the benefit of the Authority, shall be made payable to the Authority and shall be deposited with the Treasurer, and the Treasurer shall have the sole right to receive the proceeds of such policies and to collect and receipt for claims thereunder. The proceeds of any and all such insurance shall be deposited by the Treasurer in the name of the Authority in a Depository.

The Authority covenants that, immediately after any loss or damage to any properties of the System resulting from any cause, whether or not such loss or damage shall be covered by insurance, it will cause its engineers to prepare plans and specifications for repairing, replacing or reconstructing (either in accordance with the original or a different design) the damaged or destroyed property, and that it will forthwith commence and diligently prosecute the repair, replacement or reconstruction of the damaged or destroyed property unless it shall determine that the repair, replacement, or reconstruction of such property is not essential to the efficient operation of the System.

The proceeds of all insurance policies referred to in this Section shall be available for, and shall to the extent necessary be applied to, the repair, replacement or reconstruction of the damaged or destroyed property, and shall be disbursed in the manner provided by Section 402 of this Agreement for disbursements from the Construction Fund. Until the 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, if such proceeds are more than sufficient for such purpose, the balance remaining shall be deposited to the credit of the Renewal and Replacement Fund. After the 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, such balance shall be deposited to the credit of the Redemption Account in the Sinking Fund or, at the option of the Authority, to the credit of the Construction Fund. Until the

1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, if such proceeds shall be insufficient for such purpose, the deficiency may be supplied, first, out of moneys in the General Reserve Fund under the 1947 Indenture, and second, out of moneys in the Renewal and Replacement Fund. After the 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, such deficiency may be supplied out of any moneys held for the credit of the Reserve Maintenance Fund or from any other moneys of the Authority available for such purpose, including any moneys held for the credit of the Self-insurance Fund.

Until the 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, the proceeds of any insurance not applied within eighteen (18) months after their receipt by the Treasurer to repairing, replacing or reconstructing the damaged or destroyed property, unless the Authority shall be prevented from so doing because of conditions beyond its control, or unless the holders of fifty-one per centum (51%) in aggregate principal amount of all 1947 Indenture Bonds then outstanding shall otherwise direct, shall be deposited to the credit of the Renewal and Replacement Fund. After the 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, such proceeds shall be deposited to the credit of the Redemption Account in the Sinking Fund or, at the option of the Authority, to the credit of the Construction Fund, unless the Authority shall be prevented from so doing because of conditions beyond its control, or unless the holders of fifty-one per centum (51%) in aggregate principal amount of all bonds then outstanding under this Agreement shall otherwise direct.

Section 708. Inspection of insurance policies. All insurance policies shall be open to the inspection of the bondholders and their representatives at all reasonable times. The Treasurer of the Authority is hereby authorized to demand, collect, sue and receipt for the insurance money which may become due and payable under any policies payable to the Authority.

Section 709. No inconsistent action. The Authority covenants and agrees that, so long as any of the bonds secured hereby shall be outstanding, none of the gross revenues of the System will be used for any purpose other than as provided in the 1947 Indenture and this Agreement, and that no contract or contracts will be entered into or any action taken by which the rights of the Trustee or of the bondholders might be impaired or diminished.

Section 710. Accurate records. The Authority covenants that its accounts will be kept according to standard practices for the public utility systems similar to the properties and business of the Authority and applicable in such circumstances, and in such manner as appropriately to segregate, in so far as advisable, the accounts in respect of the different classes of its operations, projects, undertakings and activities, that it will keep accurate records and accounts of all items of cost and expenditures relating to the System and to each integral unit of the System, the Revenues collected and the application of the Revenues, and the number of consumers, and that it will keep such records and accounts with respect to its physical properties in such manner that it will be possible at all times to identify both the amounts and the items of all additions and retirements.

The Authority further covenants that at least once each month it will cause to be filed with the Trustee and the Consulting Engineers copies of any revisions of the rate schedules

during the preceding calendar month and a report, signed by the Executive Director, setting forth the following:

- (a) a separate income and expense statement for Revenue Fund purposes of the System for the preceding calendar month and the twelve (12) month period ending with such month;
- (b) a statement for the preceding calendar month and for the fiscal year to date of all deposits and transfers to the credit of and withdrawals from each special fund and account created under the provisions of this Agreement, showing the balance to the credit of each such fund or account;
- (c) a statement of the amount of bonds issued, paid, purchased or redeemed during the preceding calendar month;
- (d) a balance sheet as of the end of the preceding calendar month;
- (e) the amounts on deposit at the end of the preceding calendar month in each bank or trust company; and
- (f) the amounts of the proceeds received during the preceding calendar month from any sales of property pursuant to Section 712 of this Article.

The Authority further covenants that in the first month of each fiscal year it will cause an audit to be made of its books and accounts pertaining to the System by an independent firm of certified public accountants of suitable experience and responsibility and widely known in the United States, to be chosen by the Executive Director with the approval of the Trustee. Before the first day of the third month following the making of such audit, reports of such audits shall be filed with the Trustee and the Authority, and copies of such reports shall be mailed to the Consulting Engineers. Such audit reports shall set forth in respect of the preceding fiscal year the same matters as are hereinabove required for the monthly reports.

The Authority further covenants that it will cause any additional reports or audits relating to the System to be made as required by law or by any applicable rules or regulations of any governmental authority or of any securities exchange on which the bonds may be listed or traded, and that as often as may be requested it will furnish to the Trustee such other information concerning the System or the operation thereof as the Trustee may reasonably request. The cost of such audits shall be treated as a part of the cost of operation of the System.

Section 711. Covenants as to additional 1947 Indenture Bonds. The Authority covenants that so long as any bonds shall be outstanding under the provisions of this Agreement it will not issue additional 1947 Indenture Bonds which mature after July 1, 2007 and except as follows:

- (a) revenue bonds under the provisions of Section 209 of the 1947 Indenture issued to pay the cost of Improvements and sold to the Rural Electrification Administration of the United States of America; provided, however, that the aggregate principal amount of such revenue bonds issued hereafter shall not exceed \$12,834,000,

(b) revenue bonds under the provisions of Section 210 of the 1947 Indenture issued for the purpose of providing working cash funds for the Authority; provided, however, that the aggregate principal amount of such revenue bonds outstanding in any fiscal year hereafter shall not exceed one-sixth (1/6) of the amount shown by the Annual Budget to be necessary for Current Expenses for such fiscal year or for the next ensuing fiscal year, whichever is greater, and

(c) revenue refunding bonds under the provisions of Section 211 of the 1947 Indenture.

Section 712. Covenant against sale or encumbrance; exceptions. (a) The Authority covenants that so long as any bonds shall be outstanding under the provisions of this Agreement and except as in this Agreement otherwise permitted, it will not sell, lease or otherwise dispose of or encumber the System or any part thereof and will not create or permit to be created any charge or lien on the Revenues ranking equally with or prior to the charge or lien on the Revenues of the bonds issued under and secured by this Agreement. The Authority may, however, from time to time, sell any machinery, fixtures, apparatus, tools, instruments, or other movable property acquired by it in connection with the System, or any materials used in connection therewith, if the Authority shall determine that such articles are no longer needed or are no longer useful in connection with the construction or operation and maintenance of the System, and the proceeds thereof shall be applied to the replacement of the properties so sold or disposed of or shall be deposited (i) until the 1947 Indenture Bonds have been paid or provision has been made for their replacement and the release of the 1947 Indenture, to the credit of the Renewal and Replacement Fund, and (ii) after the 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, to the credit of the Redemption Account in the Sinking Fund or the Construction Fund, at the option of the Authority; provided that in connection with the issuance of bonds, the Authority may secure its obligations to the provider of a credit or liquidity facility securing said bonds on a parity with the bonds. Notwithstanding the provisions of paragraph (a) of this Section, the Authority may from time to time sell or lease such other property forming part of the System as is not needed or serves no useful purpose in connection with the maintenance and operation of the System, and the proceeds of any such sale of property which is declared by resolution of the Board to be unnecessary for the System shall be deposited, so long as any 1947 Indenture Bonds are outstanding, to the credit of the Renewal and Replacement Fund or to the credit of the 1947 Reserve Account, as may be provided by such resolution, and, after the 1947 Indenture Bonds shall have been paid or provision has been made for their payment and the release of the 1947 Indenture, to the credit of the Redemption Account in the Sinking Fund or the Construction Fund, as may be provided by such resolution. Until the 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, the rentals under any such lease shall be deposited to the credit of the 1947 Revenue Fund, and thereafter such rentals shall be deposited to the credit of the Revenue Fund.

(b) Notwithstanding the provisions of paragraph (a) of this Section, after the 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, the Authority may from time to time permanently abandon the use of, sell or lease any property forming a part of the System but only if

(1) there shall be filed with the Trustee prior to such abandonment, sale or lease a certificate, signed by the Executive Director and approved by the Consulting Engineers, stating

(A) that the Authority is not then in default in the performance of any of the covenants, conditions, agreements or provisions contained in this Agreement, and

(B) that the Net Revenues for any twelve (12) consecutive calendar months out of the eighteen (18) calendar months next preceding the date of such certificate, after giving effect to such abandonment, sale or lease and any replacement and after adjustment to reflect the moneys which would have been received if the rate schedule in effect on the date of such certificate had been in effect throughout such twelve (12) calendar months, are not less than one hundred twenty per centum (120%) of the maximum aggregate Principal and Interest Requirements for any fiscal year thereafter on account of all bonds then outstanding under the provisions of this Agreement, and

(2) the amount held by the Trustee to the credit of the Reserve Account in the Sinking Fund is the maximum amount required under the provisions of Section 507 of this Agreement.

The proceeds of the sale of any property forming part of the System under the provisions of paragraph (c) of this Section shall either be deposited by the Authority to the credit of the Redemption Account in the Sinking Fund or the Construction Fund, at the option of the Authority, or shall be applied to the replacement of the property so sold, and any property acquired as such replacement shall become a part of the System subject to the provisions of this Agreement. The rentals under any such lease shall be deposited to the credit of the Revenue Fund.

For purposes of paragraphs (b) and (c) of this Section, references to sales or leases shall include also other transfers of property and for purposes of paragraph (c) of this Section the transferee may be considered in lieu of the Authority or in addition to the Authority if the transferee agrees to assume the Authority's obligations under this Agreement and the Authority delivers to the Trustee an opinion of counsel to the Authority to the effect that the transferee's undertaking to assume the Authority's obligations hereunder is legally valid and binding with the same effect as though the transferee were the Authority. If the transferee is a public corporation or other governmental entity, such transfer shall be permitted notwithstanding the Authority's failure to demonstrate the necessary coverage requirement in paragraph (c) above; provided that the Authority delivers a certificate of its Consulting Engineers to the Trustee demonstrating that the coverage ratio shown in the above certificate is not reduced due to such transfer.

(a) Notwithstanding the provisions of paragraph (a) of this Section, except as may conflict with the provisions of the 1947 Indenture until the 1947 Indenture Bonds have been paid or provision has been made for their payment and the release of the 1947 Indenture, the Authority may lease portions of the System, or grant licenses, easements and other rights or

make contracts or other arrangements for operation or use of portions of the System, if there shall be delivered to the Trustee the following:

(i) a report of the Consulting Engineers determining that (A) the proposed lessee or other contracting party is a financially responsible entity with substantial experience in the operation and management of utilities of the type and size of the System, and (B) the available revenues projected to be derived from the portion of the System subject to the lease, contract, license, easement or other arrangement following the date on which such lease, contract, license, easement or other arrangement is to be effective are forecasted to be sufficient to pay to the Authority the rent or other payments provided by such lease, contract, license, easement or other arrangements and to make all necessary repairs, improvements and replacements to said portion of the System in the condition it was prior to such lease, contract, license, easement or other arrangement; and

(ii) a certificate of the Consulting Engineers to the effect that the lease, contract, license, easement or other arrangement provides (A) for rent or other payments sufficient, with other Net Revenues projected to be derived from the System, to make all payments of the Principal and Interest Requirements for all bonds which will remain outstanding following the execution and delivery of the lease, contract, license, easement or other arrangement, (B) operational covenants binding on the lessee or other contracting party similar to those covenants contained in this Agreement and (C) to the extent permitted by law in the case of a lease, for immediate termination of the lease of such lessee without resort to legal process in the event of a default under the lease; and

(iii) an opinion of counsel of recognized standing in the field of law relating to municipal bonds to the effect that the proposed transaction would not adversely affect the federal income tax status of any Bonds.

The rentals and other payments under any such lease, contract, license, easement or other arrangement shall be included in the definition of Revenues and shall be deposited to the credit of the Revenue Fund.

Section 713. Build America Bonds. With respect to Build America Bonds, the Authority hereby covenants to file, or cause to be filed, a Form 8038-CP with the Internal Revenue Service not less than 45 days and not more than 90 days prior to the date interest on the Build America Bonds shall be payable, as provided in Notice 2010-26 issued by the Internal Revenue Service, so long as filing such form is a condition to receipt of the Federal Subsidy prior to the date such interest shall be payable. In the event that the Internal Revenue Service shall amend or revise the guidance provided in Notice 2010-26, the Authority agrees that it shall take all such actions as are necessary to ensure receipt of the Federal Subsidy. With respect to Other Subsidy Bonds, the Authority hereby covenants it shall take all such actions as are necessary to ensure receipt of the Federal Subsidy related to such series of bonds as shall be set forth in the resolution relating to such Other Subsidy Bonds. The only effect of any failure to comply with this Section 713 shall be that the Federal Subsidy to which such failure relates shall no longer be excluded from the calculation of Principal and interest Requirements.



### **Article VIII Remedies**

Section 801. Extended coupons. In case the time for the payment of any coupon or the interest on any registered bond without coupons shall be extended, whether or not such extension be by or with the consent of the Authority, such coupon or such interest so extended shall not be entitled in case of default hereunder to the benefit or security of this Agreement except subject to the prior payment in full of the principal of all bonds then outstanding and of all coupons and interest the time for the payment of which shall not have been extended.

Section 802. Events of default. Each of the following events is hereby declared an "event of default", that is to say, if:

(a) payment of the principal and the redemption premium, if any, of any of the bonds shall not be made when the same shall become due and payable, either at maturity or by proceedings for redemption or otherwise; or

(b) payment of any installment of interest on any of the bonds shall not be made when the same shall become due and payable; or

(c) the Authority shall for any reason be rendered incapable of fulfilling its obligations hereunder; or

(d) any part of the System necessary for its effective operation shall be destroyed or damaged and shall not be properly repaired, replaced or reconstructed; or

(e) final judgment for the payment of money shall be rendered against the Authority as a result of the ownership, control or operation of the System and any such judgment shall not be discharged within sixty (60) days from the entry thereof or an appeal shall not be taken therefrom or from the order, decree or process upon which or pursuant to which such judgment shall have been granted or entered, in such manner as to stay the execution of or levy under such judgment, order, decree or process or the enforcement thereof; or

(f) an order or decree shall be entered, with the consent or acquiescence of the Authority, for the purpose of effecting composition between the Authority and its creditors or for the purpose of adjusting the claims of such creditors pursuant to any federal or Commonwealth statute now or hereafter enacted, if the claims of such creditors are under any circumstances payable from the Revenues; or

(g) any proceeding shall be instituted, with the consent or acquiescence of the Authority, for the purpose of effecting a composition between the Authority and its creditors or for the purpose of adjusting the claims of such creditors pursuant to any federal or Commonwealth statute now or hereafter enacted, if the claims of such creditors are under any circumstances payable from the Revenues; or

(h) the Authority shall default in the due and punctual performance of any other of the covenants, conditions, agreements and provisions contained in the bonds or in this Agreement on the part of the Authority to be performed, including meeting any Amortization

Requirement, and such default shall continue for thirty (30) days after written notice specifying such default and requiring same to be remedied shall have been given to the Authority by the Trustee, which may give such notice in its discretion and shall give such notice at the written request of the holders of not less than ten per centum (10%) in aggregate principal amount of the bonds then outstanding; or

(i) an event of default within the meaning of that term in Section 802 of the 1947 Indenture shall occur; or

(j) notice has been received by the Trustee and the Authority, from the bank or other financial or lending institution providing a credit or liquidity facility or other entity insuring, guaranteeing or providing for payments of principal or interest in respect of any bonds that an event of default has occurred under the agreement underlying said facility, or a failure by said bank or other financial or lending institution or other entity to make said facility available or to reinstate the interest component of said facility, in accordance with the terms of said facility, to the extent such notice or failure is established as an event of default under the terms of the resolution authorizing the issuance of said bonds.

**Section 803. Acceleration of maturities.** Upon the happening and continuance of any event of default specified in Section 802 of this Article, then and in every such case the Trustee may, and upon the written request of the holders of not less than twenty per centum (20%) in aggregate principal amount of the bonds then outstanding shall, by a notice in writing to the Authority, declare the principal of all of the bonds then outstanding (if not then due and payable) to be due and payable immediately, and upon such declaration in the same shall become and be immediately due and payable, anything contained in the bonds or in this Agreement to the contrary notwithstanding; provided, however, that if at any time after the principal of the bonds shall have been so declared to be due and payable, and before the entry of final judgment or decree in any suit, action or proceeding instituted on account of such default, or before the completion of the enforcement of any other remedy under this Agreement, moneys shall have accumulated in the Sinking Fund sufficient to pay the principal of all matured bonds and all arrears of interest, if any, upon all the bonds then outstanding (except the principal of any bonds not then due and payable by their terms and the interest accrued on such bonds since the last interest payment date), and the charges, compensation, expenses, disbursements, advances, and liabilities of the Trustee and all other amounts then payable by the Authority hereunder shall have been paid or a sum sufficient to pay the same shall have been deposited with the Trustee, and every other default known to the Trustee in the observance or performance of any covenant, condition, agreement or provision contained in the bonds or in this Agreement (other than a default in the payment of the principal of such bonds then due and payable only because of a declaration under this Section) shall have been remedied to the satisfaction of the Trustee, then and in every such case the Trustee may, and upon the written request of the holders of not less than twenty per centum (20%) in aggregate principal amount of the bonds not then due and payable by their terms and then outstanding shall, by written notice to the Authority, rescind and annul such declaration and its consequences, but no such rescission or annulment shall extend to or affect any subsequent default or impair any right consequent thereon.

**Section 804. Enforcement of remedies.** Upon the happening and continuance of any event of default specified in Section 802 of this Article, then and in every such case the Trustee

may proceed, and upon the written request of the holders of not less than ten per centum (10%) in aggregate principal amount of the bonds then outstanding hereunder shall proceed, subject to the provisions of Section 902 of this Agreement, to protect and enforce its rights and the rights of the bondholders under applicable laws or under this Agreement by such suits, actions or special proceedings in equity or at law, or by proceedings in the office of any board or officer having jurisdiction, either for the appointment of a receiver as authorized by the Authority Act or for the specific performance of any covenant or agreement contained herein or in aid or execution of any power herein granted or for the enforcement of any proper legal or equitable remedy, as the Trustee, being advised by counsel, shall deem most effectual to protect and enforce such rights; provided, however, that the Trustee shall not be required to proceed for the appointment of a receiver of the System unless it shall receive the written request of the holders of not less than twenty-five per centum (25%) in principal amount of the bonds then outstanding under the provisions of this Agreement.

In the enforcement of any remedy under this Agreement the Trustee shall be entitled to sue for, enforce payment of and receive any and all amounts then or during any default becoming, and at any time remaining, due from the Authority for principal, interest or otherwise under any of the provisions of this Agreement or of the bonds and unpaid, with interest on overdue payments of principal at the rate or rates of interest specified in such bonds, together with any and all costs and expenses of collection and of all proceedings hereunder and under such bonds, without prejudice to any other right or remedy of the Trustee or of the bondholders, and to recover and enforce any judgment or decree against the Authority, but solely as provided herein and in such bonds, for any portion of such amounts remaining unpaid and interest, costs and expenses as above provided, and to collect (but solely from moneys in the Sinking Fund and any other moneys available for such purpose) in any manner provided by law, the moneys adjudged or decreed to be payable.

Section 805. Pro rata application of funds. Anything in this Agreement to the contrary notwithstanding, if at any time the moneys in the Sinking Fund shall not be sufficient to pay the interest on or the principal of the bonds as the same shall become due and payable (either by their terms or by acceleration of maturities under the provisions of Section 803 of this Article, such moneys, together with any moneys then available or thereafter becoming available for such purpose, whether through the exercise of the remedies provided for in this Article or otherwise, shall be applied as follows:

(a) if the principal of all the bonds shall not have become or shall not have been declared due and payable, all such moneys shall be applied

*first:* to the payment to the persons entitled thereto of all installments of interest then due and payable in the order in which such installments became due and payable and, if the amount available shall not be sufficient to pay in full any particular installment, then to the payment, ratably, according to the amounts due on such installment, to the person entitled thereto, without any discrimination or preference except as to any difference in the respective rates of interest specified in the bonds;

*second:* to the payment to the persons entitled thereto of the unpaid principal of any of the bonds which shall have become due and payable (other than bonds called for

redemption for the payment of which moneys are held pursuant to the provisions of this Agreement) in the order of their due dates, with interest on the principal amount of such bonds at the respective rates specified therein from the respective dates upon which such bonds became due and payable, and, if the amount available shall not be sufficient to pay in full the principal of the bonds due and payable on any particular date, together with such interest, then to the payment first of such interest, ratably, according to the amount of such interest due on such date, and then to the payment of such principal, ratably, according to the amount of such principal due on such date, to the persons entitled thereto without any discrimination or preference except as to any difference in the respective rates of interest specified in the bonds; and

*third:* to the payment of the interest on and the principal of the bonds, to the purchase and retirement of bonds and to the redemption of bonds, all in accordance with the provisions of Article V of this Agreement.

(b) If the principal of all bonds shall have become or shall have been declared due and payable, all such moneys shall be applied

*first:* to the payment to the persons entitled thereto of all installments of interest due and payable on or prior to maturity, if any, in the order in which such installments became due and payable and, if the amount available shall not be sufficient to pay in full any particular installment, then to the payment, ratably, according to the amount due on such installment, to the persons entitled thereto, without any discrimination or preference except as to any difference in the respective rates of interest specified in the bonds, and then to the payment of any interest due and payable after maturity on the bonds, ratably, to the persons entitled thereto, without any discrimination or preference except as to any difference in the respective rates of interest specified in the bonds; and

*second:* to the payment of the principal of the bonds, ratably, to the persons entitled thereto, without preference or priority of any bond over any other bond.

(c) If the principal of all the bonds shall have been declared due and payable and if such declaration shall thereafter have been rescinded and annulled under the provisions of Section 803 of this Article, then, subject to the provisions of paragraph (b) of this Section in the event that the principal of all the bonds shall later become due and payable or be declared due and payable, the moneys remaining in and thereafter accruing to the Sinking Fund shall be applied in accordance with the provisions of paragraph (a) of this Section.

The provisions of paragraphs (a), (b) and (c) of this Section are in all respects subject to the provisions of Section 801 of this Article.

Whenever moneys are to be applied by the Trustee pursuant to the provisions of this Section, such moneys shall be applied by the Trustee at such times, and from time to time, as the Trustee in its sole discretion shall determine, having due regard to the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future; the deposit of such moneys with the Paying Agents, or otherwise setting aside such moneys, in trust for the proper purpose shall constitute proper application by the

Trustee; and the Trustee shall incur no liability whatsoever to the Authority, to any bondholder or to any other persons for any delay in applying any such moneys, so long as the Trustee acts with reasonable diligence, having due regard to the circumstances, and ultimately applies the same in accordance with such provisions of this Agreement as may be applicable at the time of application by the Trustee. Whenever the Trustee shall exercise such discretion in applying such moneys, it shall fix the date (which shall be an interest payment date unless the Trustee shall deem another date more suitable) upon which such application is to be made and upon such date interest on the amounts of principal to be paid on such date shall cease to accrue. The Trustee shall give such notice as it may deem appropriate of the fixing of any such date, and shall not be required to make payment to the holder of any unpaid coupon or any bond until such coupon or such bond and all unmatured coupons, if any, appertaining to such bond shall be surrendered to the Trustee for appropriate endorsement, or for cancellation if fully paid.

Section 806. Effect of discontinuance of proceedings. In case any proceeding taken by the Trustee or bondholders on account of any default shall have been discontinued or abandoned for any reason, then and in every such case the Authority, the Trustee and the bondholders shall be restored to their former positions and rights hereunder, respectively, and all rights, remedies, powers and duties of the Trustee shall continue as though no such proceeding had been taken.

Section 807. Majority of bondholders may control proceedings. Anything in this Agreement to the contrary notwithstanding, the holders of a majority in principal amount of the bonds then outstanding hereunder shall have the right, subject to the provisions of Section 902 of this Agreement, by an instrument or concurrent instruments in writing executed and delivered to the Trustee, to direct the method and place of conducting all remedial proceedings to be taken by the Trustee hereunder, provided that such direction shall not be otherwise than in accordance with law or the provisions of this Agreement.

Section 808. Restrictions upon action by individual bondholder. No holder of any of the bonds shall have any right to institute any suit, action or proceeding in equity or at law on any bond or for the execution of any trust hereunder or for any remedy hereunder unless such holder previously shall have given to the Trustee written notice of the event of default on account of which such suit, action or proceeding is to be instituted, and unless also the holders of not less than ten per centum (10%) in aggregate principal amount of the bonds then outstanding shall have made written request of the Trustee after the right to exercise such powers or right of action, as the case may be, shall have accrued, and shall have afforded the Trustee a reasonable opportunity either to proceed to exercise the powers hereinabove granted or to institute such action, suit or proceeding in its or their name, and unless, also, there shall have been offered to the Trustee reasonable security and indemnity against the costs, expenses and liabilities to be incurred therein or thereby, and the Trustee shall have refused or neglected to comply with such request within a reasonable time; and such notification, request and offer of indemnity are hereby declared in every such case, at the option of the Trustee, to be conditions precedent to the execution of the powers and trusts of this Agreement or to any other remedy hereunder; provided, however, that notwithstanding the foregoing provisions of this Section and without complying therewith, the holders of not less than twenty per centum (20%) in aggregate principal amount of the bonds then outstanding may institute any such suit, action or proceeding in their own names for the benefit of all holders of bonds hereunder. It is understood and intended that, except as otherwise above provided, no one or more holders of the bonds hereby secured shall

have any right in any manner whatever by his or their action to affect, disturb or prejudice the security of this Agreement, or to enforce any right hereunder except in the manner herein provided, that all proceedings at law or in equity shall be instituted, had and maintained in the manner herein provided and for the benefit of all holders of such outstanding bonds and coupons, and that any individual right of action or other right given to one or more of such holders by law is restricted by this Agreement to the rights and remedies herein provided.

Section 809. Actions by Trustee. All rights of action under this Agreement or under any of the bonds secured hereby, enforceable by the Trustee, may be enforced by it without the possession of any of the bonds or the coupons appertaining thereto or the production thereof at the trial or other proceeding relative thereto, and any such suit, action or proceeding instituted by the Trustee shall be brought in its name for the benefit of all of the holders of such bonds and coupons, subject to the provisions of this Agreement.

Section 810. No remedy exclusive. No remedy herein conferred upon or reserved to the Trustee or to the holders of the bonds is intended to be exclusive of any other remedy or remedies herein provided, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder.

Section 811. No delay or omission construed to be a waiver. No delay or omission of the Trustee or of any holder of the bonds to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver of any such default or an acquiescence therein; and every power and remedy given by this Agreement to the Trustee and to the holders of the bonds, respectively, may be exercised from time to time and as often as may be deemed expedient.

The Trustee may, and upon written request of the holders of not less than a majority in principal amount of the bonds then outstanding shall, waive any default which in its opinion shall have been remedied before the entry of final judgment or decree in any suit, action or proceeding instituted by it under the provisions of this Agreement or before the completion of the enforcement of any other remedy under this Agreement, but no such waiver shall extend to or affect any other existing or any subsequent default or defaults or impair any rights or remedies consequent thereon.

Section 812. Notice of default. The Trustee shall mail to all registered owners of bonds at their addresses as they appear on the registration books and to all the bondholders of record, written notice of the occurrence of any event of default set forth in Section 802 of this Article within thirty (30) days after the Trustee shall have notice, pursuant to the provisions of Section 908 of this Agreement, that any such event of default shall have occurred. The Trustee shall not, however, be subject to any liability to any bondholder by reason of its failure to mail any such notice.

## **Article IX Concerning the Trustee**

Section 901. Acceptance of trusts. The Trustee accepts and agrees to execute the trusts imposed upon it by this Agreement, but only upon the terms and conditions set forth in this

Article and subject to the provisions of this Agreement, to all of which the parties hereto and the respective holders of the bonds agree.

Section 902. Trustee entitled to indemnity. The Trustee shall be under no obligation to institute any suit, or to take any remedial proceeding under this Agreement, or to enter any appearance or in any way defend in any suit in which it may be made defendant, or to take any steps in the execution of the trusts hereby created or in the enforcement of any rights and powers hereunder, until it shall be indemnified to its satisfaction against any and all costs and expenses, outlays and counsel fees and other reasonable disbursements, and against all liability; the Trustee may, nevertheless, begin suit, or appear in and defend suit, or do anything else in its judgment proper to be done by it as such Trustee, without indemnity, and in such case the Authority shall reimburse the Trustee from Revenues for all costs and expenses, outlays and counsel fees and other reasonable disbursements properly incurred in connection therewith. If the Authority shall fail to make such reimbursement, the Trustee may reimburse itself from any moneys in its possession under the provisions of this Agreement and shall be entitled to a preference therefor over any of the bonds or coupons outstanding hereunder.

Section 903. Limitation on obligations and responsibilities of Trustee. The Trustee shall be under no obligation to effect or maintain insurance or to renew any policies of insurance or to inquire as to the sufficiency of any policies of insurance carried by the Authority, or to report, or make or file claims or proof of loss for, any loss or damage insured against or which may occur, or to keep itself informed or advised as to the payment of any taxes or assessments, or to require any such payment to be made. The Trustee shall have no responsibility in respect of the validity, sufficiency, due execution or acknowledgement by the Authority of this Agreement, or, except as to the authentication thereof, in respect of the validity of the bonds or of the coupons or the due execution or issuance thereof. The Trustee shall be under no obligation to see that any duties herein imposed upon the Authority, the Consulting Engineers, the Independent Consultant, the Paying Agents, any Depositary, or any party other than itself, or any covenants herein contained on the part of any party other than itself to be performed, shall be done or performed, and the Trustee shall be under no obligation for failure to see that any such duties or covenants are so done or performed.

Section 904. Trustee not liable for failure of Authority to act or for deposits in other banks. The Trustee shall not be liable or responsible because of the failure of the Authority or of any of its employees or agents to make any collections or deposits or to perform any act herein required of the Authority or because of the loss of any moneys arising through the insolvency or the act or default or omission of any other Depositary in which such moneys shall have been deposited under the provisions of this Agreement. The Trustee shall not be responsible for the application of any of the proceeds of the bonds or any other moneys deposited with it and paid out, withdrawn or transferred hereunder if such application, payment, withdrawal or transfer shall be made in accordance with the provisions of this Agreement. The immunities and exemptions from liability of the Trustee hereunder shall extend to its directors, officers, employees and agents.

Section 905. Compensation and identification of Trustee. Subject to the provisions of any contract between the Authority and the Trustee relating to the compensation of the Trustee, the Authority shall, from the Revenues, pay to the Trustee reasonable compensation for all

services performed by it hereunder and also all its reasonable expenses, charges and other disbursements and those of its attorneys, agents and employees incurred in and about the administration and execution of the trusts hereby created and the performance of its powers and duties hereunder, and, from such Revenues only, shall indemnify and save the Trustee harmless against any liabilities which it may incur in the exercise and performance of its powers and duties hereunder. If the Authority shall fail to make any payment required by this Section, the Trustee may make such payment from any moneys in its possession under the provisions of this Agreement and shall be entitled to a preference therefor over any of the bonds or coupons outstanding hereunder.

Section 906. Monthly statement from Trustee. It shall be the duty of the Trustee, on or before the 10<sup>th</sup> day of each month, to file with the Authority a statement setting forth in respect of the preceding calendar month

(a) the amount withdrawn or transferred by it and the amount deposited with it on account of each Fund and Account held by it under the provisions of this Agreement,

(b) the amount on deposit with it at the end of such month to the credit of each such Fund and Account,

(c) a brief description of all obligations held by it as an investment of moneys in each such Fund and Account,

(d) the amount applied to the purchase or redemption of bonds under the provisions of Section 511 of this Agreement and a description of the bonds or portions of bonds so purchased or redeemed, and

(e) any other information which the Authority may reasonably request.

All records and files pertaining to the trusts hereunder in the custody of the Trustee shall be open at all reasonable times to the inspection of the Authority and its agents and representatives.

Section 907. Trustee may rely on certificates. In case at any time it shall be necessary or desirable for the Trustee to make any investigation respecting any fact preparatory to taking or not taking any action or doing or not doing anything as such Trustee, and in any case in which this Agreement provides for permitting or taking any action, the Trustee may rely conclusively upon any certificate, requisition, opinion or other instrument required or permitted to be filed with it under the provisions of this Agreement, and any such instrument shall be conclusive evidence of such fact to protect the Trustee in any action that it may or may not take or in respect of anything it may or may not do, in good faith, by reason of the supposed existence of such fact. Except as otherwise provided in this Agreement, any request, notice, certificate or other instrument from the Authority to the Trustee shall be deemed to have been signed by the proper party or parties if signed by the Executive Director or by any officer or employee of the Authority who shall be designated by the Authority by resolution for that purpose, and the Trustee may accept and rely upon a certificate signed by the Executive Director as to any action taken by the Authority.



Section 908. Notice of default. Except upon the happening of any event of default specified in clauses (a) and (b) of Section 802 of this Agreement, the Trustee shall not be obliged to take notice or be deemed to have notice of any event of default hereunder, unless specifically notified in writing of such event of default by the holders of not less than ten per centum (10%) in aggregate principal amount of the bonds hereby secured and then outstanding.

Section 909. Trustee may deal in bonds and take action as bondholder. The bank or trust company acting as Trustee under this Agreement, and its directors, officers, employees or agents, may in good faith buy, sell, own, hold and deal in any of the bonds or coupons issued under and secured by this Agreement, may join in any action which any bondholder may be entitled to take with like effect as if such bank or trust company were not the Trustee under this Agreement, may engage or be interested in any financial or other transaction with the Authority, and may maintain any and all other general banking and business relations with the Authority with like effect and in the same manner as if the Trustee were not a part to this Agreement; and no implied covenant shall be read into this Agreement against the Trustee in respect of such matters.

Section 910. Trustee not responsible for recitals. The recitals, statements and representations contained herein and in the bonds (excluding the Trustee's certificate of authentication on the bonds) shall be taken and construed as made by and on the part of the Authority and not by the Trustee, and the Trustee assumes and shall be under no responsibility for the correctness of the same.

Section 911. Trustee protected in relying on certain documents. The Trustee shall be protected and shall incur no liability in acting or proceeding, or in not acting or not proceeding, in good faith, reasonably and in accordance with the terms of this Agreement, upon any resolution, order, notice, request, consent, waiver, certificate, statement, affidavit, requisition, bond or other paper or document which it shall in good faith reasonably believe to be genuine and to have been adopted or signed by the proper board or person or to have been prepared and furnished pursuant to any of the provisions of this Agreement, or upon the written opinion of any attorney, engineer or accountant believed by the Trustee to be qualified in relation to the subject matter, and the Trustee shall be under no duty to make any investigation or inquiry as to any statements contained or matters referred to in any such instrument. The Trustee shall not be under any obligation to see to the recording or filing of this Agreement or otherwise to the giving to any person of notice of the provisions hereof.

Section 912. Resignation of Trustee. The Trustee may resign and thereby become discharged from the trusts hereby created, by notice in writing to be given to the Authority and published once in a daily newspaper of general circulation published in the Municipality of San Juan, Puerto Rico, and in a daily newspaper of general circulation or a financial journal published in the Borough of Manhattan, City and State of New York, not less than sixty (60) days before such resignation is to take effect, but such resignation shall take effect immediately upon the appointment of a new Trustee hereunder, if such new Trustee shall be appointed before the time limited by such notice and shall then accept the trusts hereof.

Section 913. Removal of Trustee. The Trustee may be removed at any time by an instrument or concurrent instruments in writing executed by the holders of not less than a

majority in principal amount of the bonds hereby secured and then outstanding and filled with the Authority. A facsimile copy of each such instrument shall be delivered promptly by the Authority to the Trustee. The Trustee may also be removed at any time for any breach of trust or for acting or proceeding in violation of, or for failing to act or proceed in accordance with, any provision of this Agreement with respect to the duties and obligations of the Trustee by any court of competent jurisdiction upon the application of the Authority pursuant to resolution or the holders of not less than ten per centum (10%) in aggregate principal amount of the bonds then outstanding under this Agreement.

**Section 914. Appointment of successor Trustee.** If at any time hereafter the Trustee shall resign, be removed, be dissolved or otherwise become incapable of acting, or the bank or trust company acting as Trustee shall be taken over by any governmental official, agency, department or board, the position of Trustee shall thereupon become vacant. If the position of Trustee shall become vacant for any of the foregoing reasons or for any other reason, the Authority shall appoint a Trustee to fill such vacancy. The Authority shall publish notice of any such appointment by it made once in each week for four (4) successive weeks in a daily newspaper of general circulation published in the Municipality of San Juan, Puerto Rico, and in a daily newspaper of general circulation or a financial journal published in the Borough of Manhattan, City and State of New York.

At any time within one year after any such vacancy shall have occurred, the holders of a majority in principal amount of the bonds hereby secured and then outstanding, by an instrument or concurrent instruments in writing, executed by such bondholders and filed with the Authority, may appoint a successor Trustee, which shall supersede any Trustee theretofore appointed by the Authority. Facsimile copies of each such instrument shall be delivered promptly by the Authority to the predecessor Trustee and to the Trustee so appointed by the bondholders.

If no appointment of a successor Trustee shall be made pursuant to the foregoing provisions of this Section within ten (10) days after the vacancy shall have occurred, the holder of any bonds outstanding hereunder or any retiring Trustee may apply to any court of competent jurisdiction within the Commonwealth of Puerto Rico or the State of New York to appoint a successor Trustee. Such court may thereupon, after such notice, if any, as such court may deem proper and prescribe, appoint a successor Trustee.

Any Trustee hereafter appointed shall be a bank or trust company having its principal office in the Borough of Manhattan, City and State of New York, duly authorized to exercise corporate trust powers and subject to examination by federal or state authority, of good standing, and having at the time of its appointment a combined capital and surplus aggregating not less than Fifty Million Dollars (\$50,000,000) (or whose obligations hereunder are guaranteed by a bank or trust company duly authorized to exercise corporate trust powers and subject to examination by federal or state authority, of good standing, and having at the time of the appointment of such Trustee, a combined capital and surplus of at least such amount).

**Section 915. Vesting of trusts in successor Trustee.** Every successor Trustee appointed hereunder shall execute, acknowledge and deliver to its predecessor, and also to the Authority, an instrument in writing accepting such appointment hereunder, and thereupon such successor Trustee, without any further act, shall become fully vested with all the rights, immunities, powers

and trusts, and subject to all the duties and obligations, of its predecessor, but such predecessor shall, nevertheless, on the written request of its successor or of the Authority, and upon payment of the expenses, charges and other disbursements of such predecessor which are payable pursuant to the provisions of Section 905 of this Article, execute and deliver an instrument transferring to such successor Trustee all the rights, immunities, powers and trusts of such predecessor hereunder, and every predecessor Trustee shall deliver all property and moneys held by it hereunder to its successor. Should any instrument in writing from the Authority be required by any successor Trustee for more fully and certainly vesting in such Trustee the rights, immunities, powers and trusts hereby vested or intended to be vested in the predecessor Trustee, any such instrument in writing shall and will, on request, be executed, acknowledged and delivered by the Authority.

Notwithstanding any of the foregoing provisions of this Article, any bank or trust company having power to perform the duties and execute the trusts of this Agreement and otherwise qualified to act as Trustee hereunder with or into which the bank or trust company acting as Trustee may be merged, converted or consolidated, or to which the assets and business of such bank or trust company may be sold, shall be deemed the successor of the Trustee.

#### **Article X**

##### **Execution of Instruments by Bondholders and Proof of Ownership of Bonds.**

Section 1001. Execution of instruments by bondholders. Any request, direction, consent or other instrument in writing required or permitted by this Agreement to be signed or executed by bondholders may be in any number of concurrent instruments of similar tenor and may be signed or executed by such bondholders or their attorneys or legal representatives. Proof of the execution of any such instrument and of the ownership of bonds shall be sufficient for any purpose of this Agreement and shall be conclusive in favor of the Trustee with regard to any action taken by it under such instrument if made in the following manner:

(a) The fact and date of the execution by any person of any such instrument may be proved by the verification of any officer in any jurisdiction who, by the laws thereof, has power to take affidavits within such jurisdiction, to the effect that such instrument was subscribed and sworn to before him, or by an affidavit of a witness to such execution. Where such execution is on behalf of a person other than an individual such verification or affidavit shall also constitute sufficient proof of the authority of the signer thereof.

(b) The fact of the holding of coupon bonds hereunder by any bondholder and the amount and the numbers of such bonds and the date of his holding the same may be proved by the affidavit of the person claiming to be such holder, if such affidavit shall be deemed by the Trustee to be satisfactory, or by a certificate executed by any trust company, bank, banker or any other depository, wherever situated, if such certificate shall be deemed by the Trustee to be satisfactory, showing that at the date therein mentioned such person had on deposit with or exhibited to such trust company, bank, banker or other depository the bonds described in such certificate. The Trustee may conclusively assume that such ownership continues until written notice to the contrary is served upon it. The ownership of registered bonds without coupons shall be proved by the registration books kept under the provisions of Section 206 of this Agreement.

But nothing contained in this Article shall be construed as limiting the Trustee to such proof, it being intended that the Trustee may accept any other evidence of the matters herein stated which it may deem sufficient. Any request or consent of the holder of any bond shall bind every future holder of the same bond in respect of anything done by the Trustee in pursuance of such request or consent.

Notwithstanding any of the foregoing provisions of this Section, the Trustee shall not be required to recognize any person as a holder of any bond or coupon or to take any action at his request unless such bond or coupon shall be deposited with it.

## **Article XI Supplemental Agreements.**

Section 1101. Supplemental agreements by Authority and Trustee. The Authority and the Trustee may, from time to time, enter into such agreements supplemental hereto as shall not be inconsistent with the terms and provisions hereof (which supplemental agreements shall thereafter from a part hereof)

(a) to cure any ambiguity, to correct or supplement any provision herein which may be inconsistent with any other provision herein, or to make any other provisions with respect to matters or questions arising under this Agreement which shall not be inconsistent with the provisions of this Agreement, provided such action shall not adversely affect the interest of the bondholders, or

(b) to grant to or confer upon the Trustee for the benefit of the bondholders any additional rights, remedies, powers, authority or security that may lawfully be granted to or conferred upon the bondholders or the Trustee, or

(c) to add to the conditions, limitations and restrictions on the issuance of bonds under the provisions of this Agreement other conditions, limitations and restrictions thereafter to be observed, or

(d) to add to the covenants and agreements of the Authority in this Agreement other covenants and agreements thereafter to be observed by the Authority or to surrender any right or power herein reserved to or conferred upon the Authority.

At least thirty (30) days prior to the execution of any supplemental agreement for any of the purposes of this Section, the Trustee shall cause a notice of the proposed execution of such supplemental agreement to be mailed, postage prepaid, to all registered owners of bonds at their addresses as they appear on the registration books and to all bondholders of record. Such notice shall briefly set forth the nature of the proposed supplemental agreement and shall state that copies thereof are on file at the principal office of the Trustee for inspection by all bondholders. A failure on the part of the Trustee to mail the notice required by this Section shall not affect the validity of such supplemental agreement.

Section 1102. Modification of Agreement with consent of 60% of bondholders. Subject to the terms and provisions contained in this Section, and not otherwise, the holders of not less than sixty per centum (60%) in aggregate principal amount of the bonds then outstanding shall

have the right, from time to time, anything contained in this Agreement to the contrary notwithstanding, to consent to and approve the execution by the Authority and the Trustee of such agreement or agreements supplemental hereto as shall be deemed necessary or desirable by the Authority for the purpose of modifying, altering, amending, adding to, repealing or rescinding, in any particular, any of the terms or provisions contained in this Agreement or in any supplemental agreement; provided, however, that nothing herein contained shall permit, or be construed as permitting, (a) an extension of the maturity of the principal of or the interest on any bond issued hereunder, or (b) a reduction in the principal amount of any bond or the redemption premium or the rate of interest thereon, or (c) the creation of a lien upon or a pledge of the Revenues other than any lien and pledge created or permitted by this Agreement, or (d) a preference or priority of any bond or bonds over any other bond or bonds, or (e) a reduction in the aggregate principal amount of the bonds required for consent to such supplemental agreement. Nothing herein contained, however, shall be construed as making necessary the approval by bondholders of the execution of any supplemental agreement as authorized in Section 1101 of this Article.

If at any time the Authority shall request the Trustee to enter into any supplemental agreement for any of the purposes of this Section, the Trustee shall, at the expense of the Authority, cause notice of the proposed execution of such supplemental agreement to be published once in each week for four (4) successive weeks in a daily newspaper of general circulation published in the Municipality of San Juan, Puerto Rico, and in a daily newspaper of general circulation or a financial journal published in the Borough of Manhattan, City and State of New York, and, on or before the date of the first publication of such notice, the Trustee shall also cause a similar notice to be mailed, postage prepaid, to all registered owners of bonds at their addresses as they appear on the registration books and all bondholders of record. Such notice shall briefly set forth the nature of the proposed supplemental agreement and shall state that copies thereof are on file at the principal office of the Trustee for inspection by all bondholders. The Trustee shall not, however, be subject to any liability to any bondholder by reason of its failure to mail the notice required by this Section, and any such failure shall not affect the validity of such supplemental agreement when consented to and approved as provided in this Section.

Whenever, at any time within one year after the date of the first publication of such notice, the Authority shall deliver to the Trustee an instrument or instruments in writing purporting to be executed by the holders of not less than sixty per centum (60%) in aggregate principal amount of the bonds then outstanding, which instrument or instruments shall refer to the proposed supplemental agreement described in such notice and shall specifically consent to and approve the execution thereof in substantially the form of the copy thereof referred to in such notice, thereupon, but not otherwise, the Trustee may execute such supplemental agreement in substantially such form, without liability or responsibility to any holder of any bond, whether or not such holder shall have consented thereto.

If the holders of not less than sixty per centum (60%) in aggregate principal amount of the bonds outstanding at the time of the execution of such supplemental agreement shall have consented to and approved the execution thereof as herein provided, no holder of any bond shall have any right to object to the execution of such supplemental agreement, or to object to any of the terms and provisions contained therein or the operation thereof, or in any manner to question

the propriety of the execution thereof, or to enjoin or restrain the Trustee or the Authority from executing the same or from taking any action pursuant to the provisions thereof.

Upon the execution of any supplemental agreement pursuant to the provisions of this Section, this Agreement shall be and be deemed to be modified and amended in accordance therewith, and the respective rights, duties and obligations under this Agreement of the Authority, the Trustee and all holders of bonds then outstanding shall thereafter be determined, exercised and enforced in all respects under the provisions of this Agreement as so modified and amended.

Section 1103. Trustee joining in supplemental agreement. The Trustee is authorized to join with the Authority in the execution of any such supplemental agreement and to make the further agreements and stipulations which may be contained therein. Any supplemental agreement executed in accordance with the provisions of this Article shall thereafter form a part of this Agreement, and all of the terms and conditions contained in any such supplemental agreement as to any provision authorized to be contained therein shall be and shall be deemed to be part of the terms and conditions of this Agreement for any and all purposes. In case of the execution and delivery of any supplemental agreement, express reference may be made thereto in the text of any bonds issued thereafter, if deemed necessary or desirable by the Trustee.

Section 1104. Responsibilities of Trustee under this Article. In each and every case provided for in this Article, the Trustee shall be entitled to exercise its discretion in determining whether or not any proposed supplemental agreement, or any term or provision therein contained, is desirable, having in view the purposes of such instrument, the needs of the Authority, the rights and interests of the bondholders, and the rights, obligations and interests of the Trustee, and the Trustee shall not be under any responsibility or liability to the Authority or to any bondholder or to anyone whomsoever for its refusal in good faith to enter into any such supplemental agreement if such agreement is deemed by it to be contrary to the provisions of this Article. The Trustee shall be entitled to receive, and shall be fully protected in relying upon, the opinion of any counsel approved by it, who may be counsel for the Authority, as evidence that any such proposed supplemental agreement does or does not comply with the provisions of this Agreement, and that it is or is not proper for it, under the provisions of this Article, to join in the execution of such supplemental agreement.

## **Article XII Defeasance.**

Section 1201. Release of Agreement. If, when the bonds secured hereby shall have become due and payable in accordance with their terms or otherwise as provided in this Agreement or shall have been duly called for redemption or irrevocable instructions to call the bonds for redemption or payment shall have been given by the Authority to the Trustee, the whole amount of the principal and the interest and the premium, if any, so due and payable upon all of the bonds and coupons then outstanding shall be paid or sufficient moneys, or Government Obligations or Prerefunded Municipals or Time Deposits, secured in the manner set forth in Section 601 of this Agreement, the principal of and the interest on which when due will provide sufficient moneys, shall be held by the Trustee or the Paying Agents for such purpose under the provisions of this Agreement, and provision shall also be made for paying all other sums payable

hereunder by the Authority, then and in that case the right, title and interest of the Trustee hereunder shall thereupon cease, determine and become void, and the Trustee in such case, on demand of the Authority shall release this Agreement and shall execute such documents to evidence such release as may be reasonably required by the Authority, and shall turn over to the Authority or to such officer, board or body as may then be entitled by law to receive the same any surplus in any account in the Sinking Fund and all balances remaining in any other funds or accounts other than moneys held for the redemption or payment of bonds or coupons; otherwise this Agreement shall be, continue and remain in full force and effect; provided, however, that in the event Government Obligations or Prerefunded Municipals or Time Deposits secured in the manner set forth in Section 601 of this Agreement shall be held by the Trustee as hereinabove provided, (i) in addition to the requirements set forth in Article III of this Agreement, the Trustee shall within thirty (30) days after such obligations shall have been deposited with it cause a notice signed by the Trustee to be published once in a daily newspaper of general circulation published in the Municipality of San Juan, Puerto Rico, and in a daily newspaper of general circulation or a financial journal published in the Borough of Manhattan, City and State of New York, setting forth (a) the date designated for the redemption of the bonds, (b) a description of the Government Obligations or Prerefunded Municipals or Time Deposits so held by it and (c) that this Agreement has been released in accordance with the provisions of this Section, and (ii) the Trustee shall nevertheless retain such rights, powers and privileges under this Agreement, as may be necessary and convenient in respect of the bonds for the payment of the principal, interest and any premium for which such Government Obligations or Prerefunded Municipals have been deposited or such Time Deposits have been made. For purposes of determining whether Variable Rate Bonds shall be deemed to have been paid prior to the maturity or redemption date thereof, as the case may be, the interest to come due on such Variable Rate Bonds on or prior to the maturity date or redemption date thereof, as the case may be, shall be calculated at the maximum rate permitted by the terms thereof.

Put Bonds and Extendible Maturity Bonds shall be deemed to have been paid only if there shall have been deposited with the Trustee moneys, Government Obligations, Prerefunded Municipals or Time Deposits, secured in the manner set forth in Section 601 of the Agreement, as applicable, in an amount which shall be sufficient to pay when due the maximum amount of principal of and premium, if any, and interest on such bonds which would become payable to the holders of such bonds upon the exercise of any options or extensions of maturity; provided, however, that, if at the time a deposit is made with the Trustee, such options or extensions are no longer exercisable, such bond shall not be considered a Put Bond or an Extendible Maturity Bond for purposes of this Section.

### **Article XIII Miscellaneous Provisions**

Section 1301. Successorship of Authority. All covenants, stipulations, obligations and agreements of the Authority contained in this Agreement shall be deemed to be covenants, stipulations, obligations and agreements of the Authority to the full extent authorized or permitted by the laws of the Commonwealth of Puerto Rico, and all such covenants, stipulations, obligations and agreements shall be binding upon the successor or successors thereof from time to time and upon any officer, board, body or commission to whom or to which any power or duty

affecting such covenants, stipulations, obligations and agreements shall be transferred by or in accordance with law.

No covenant, stipulation, obligation or agreement herein contained shall be deemed to be a covenant, stipulation, obligation or agreement of any present or future member, agent or employee of the Authority in his individual capacity, and neither the members of the Authority or of any other agency of the Commonwealth of Puerto Rico nor any officer thereof or of the Authority, present or future, executing the bonds shall be liable personally on the bonds or be subject to any personal liability or responsibility by reason of the issuance thereof.

The laws of the Commonwealth of Puerto Rico shall govern the construction of this Agreement, except that the rights, limitations of rights, immunities, duties and obligations of the Trustee shall be governed by the laws of the State of New York.

Section 1302. Manner of giving notice, etc. Any notice, demand, direction, request or other instrument authorized or required by this Agreement to be given to or filed with the Authority or the Trustee shall be deemed to have been sufficiently given or filed for all purposes of this Agreement if and when sent by first class mail:

(a) to the Authority, if addressed to the Executive Director, Puerto Rico Water Resources Authority, San Juan, Puerto Rico;

(b) to the Trustee, if addressed to it at its Corporate Trust Office, or to any successor Trustee, if addressed to it at its principal office.

Section 1303. Successorship of Paying Agents. Any bank or trust company with or into which any Paying Agent may be merged, converted or consolidated, or to which the assets and business of such Paying Agent may be sold, shall be deemed the successor of such Paying Agent for the purposes of this Agreement. If the position of any Paying Agent shall become vacant for any reason, the Authority shall, within thirty (30) days thereafter, appoint a bank or trust company located in the same city as Paying Agent to fill such vacancy; provided, however, that if the Authority shall fail to appoint such Paying Agent within such period, the Trustee shall make such appointment.

Section 1304. Parties and bondholders alone have rights under Agreement. Except as herein otherwise expressly provided, nothing in this Agreement expressed or implied is intended or shall be construed to confer upon any person, firm or corporation other than the parties hereto and the holders of the bonds issued under the provisions of this Agreement any right, remedy or claim, legal or equitable, under or by reason of this Agreement or any provisions hereof, this Agreement and all its provisions being intended to be and being for the sole and exclusive benefit of the parties hereto and the holders from time to time of the bonds issued hereunder.

Section 1305. Effect of partial invalidity. In case any one or more of the provisions of this Agreement or of the bonds or coupons issued hereunder shall for any reason be held to be illegal or invalid, such illegality or invalidity shall not affect any other provision of this Agreement or of the bonds or coupons, but this Agreement and the bonds and coupons shall be construed and enforced as if such illegal or invalid provision had not been contained therein. In case any covenant, stipulation, obligation or agreement contained in the bonds or in this



Agreement shall for any reason be held to be in violation of law, then such covenant, stipulation, obligation or agreement shall be deemed to be the covenant, stipulation, obligation or agreement of the Authority to the full extent permitted by law.

Section 1306. Substitute publication. If, because of the temporary or permanent suspension of publication of any newspaper or financial journal or for any other reason, the Trustee or the Authority shall be unable to publish in a newspaper or financial journal any notice required to be published by the provisions of this Agreement, the Trustee or the Authority, as the case may be, shall give such notice in such other manner as in its judgment shall most effectively approximate such publication thereof, and the giving of such notice in such manner shall for all purposes of this Agreement be deemed to be compliance with the requirement for the publication thereof.

In case, by reason of the suspension of regular mail service as a result of a strike, work stoppage or similar activity, it shall be impractical to mail notice of any event to bondholders of record when such notice is required to be given pursuant to any provision of this Agreement, any manner of giving notice as shall be satisfactory to the Trustee and the Authority shall be deemed to be a sufficient giving of such notice.

Section 1307. Other funds not prohibited. Nothing in this Agreement expressed or implied shall be construed as preventing the Authority, if then authorized or permitted by law, from financing the acquisition or construction of any land, building, structure or other facility by the issuance of obligations which are not issued under or secured by the provisions of this Agreement or the 1947 Indenture or by entering into any financing agreement or agreements relating to any such facility pursuant to which the Authority has the right to the use, occupancy and possession of such facility and is required to make periodic payments in an aggregate amount substantially equal to the cost of such facility and reasonable financing charges, regardless of the disposition of title to such facility.

Section 1308. Headings, etc., not part of the Agreement. Any headings preceding the texts of the several articles hereof, and any table of contents appended to copies hereof, shall be solely for convenience of reference and shall not constitute a part of this Agreement, nor shall they affect its meaning, construction or effect.

Section 1309. Multiple Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be regarded for all purposes as an original, and such counterparts shall constitute but one and the same instrument.

**[Original signature page; does not reflect renaming of  
Authority and appointment of successor trustee]**

IN WITNESS WHEREOF, Puerto Rico Water Resources Authority has caused this Agreement to be executed by its Executive Director and its corporate seal to be impressed hereon and attested by its Secretary or an' Assistant, Secretary and First National City Bank has caused this Agreement to be executed in its behalf by one of its Vice Presidents and its corporate seal to be impressed hereon and attested by one of its Associate Trust Officers, all as of the day and year first above written.

**PUERTO RICO WATER RESOURCES  
AUTHORITY**

By /s/ Julio Negrón  
*Executive Director*

[seal]

Attest:

/s/ R. Betancourt  
*Secretary*

**FIRST NATIONAL CITY BANK**

By /s/ D.C. McNeill  
*Vice President*

[seal]

Attest:

/s/ J.A. Olive  
*Associate Trust Officer*

**[Original acknowledgement page; does not reflect renaming of  
Authority or appointment of successor trustee]**

State of New York    )  
                                  )       ss.  
County of New York )

On the 7<sup>th</sup> day of January, 1974, before me personally came JULIO NEGRONI, to me known, who, being by me duly sworn, did depose and say that he resides at 269 Georgetown St., San Juan, Puerto Rico; that he is the Executive Director of Puerto Rico Water Resources Authority; and that he signed his name to the above instrument by order of the Authority, the Authority being the public corporation described in and which executed the above instrument.

/s/ Gundars Aperans  
*Notary Public*  
GUNDARS APERANS  
Notary Public, State of New York  
No. 31-5091740  
Qualified in New York County  
Commission Expires March 30, 1974

[seal]

State of New York    )  
                                  )       ss.  
County of New York )

On the 7<sup>th</sup> day of January, 1974, before me personally came D.C. MCNEILL, to me known, who, being by me duly sworn, did depose and say that he resides at 33 Ferris Hill Rd., New Canaan, Conn.; that he is a Vice President of First National City Bank, the banking association described in and which executed the above instrument; that he knows the seal thereof; that the seal affixed to said instrument is the corporate seal of said banking association; that it was so affixed by authority of said banking association; and that he signed his name thereto by like authority.

/s/ Gundars Aperans  
*Notary Public*  
GUNDARS APERANS  
Notary Public, State of New York  
No. 31-5091740  
Qualified in New York County  
Commission Expires March 30, 1974

[seal]

Expert Report of Agustín Irizarry-Rivera Pursuant

PROMESA Title III - No. 17 BK 3283-LTS and

PROMESA Title III - No. 17 BK 4780-LTS

United States District Court For the District of Puerto Rico

Submitted June 17, 2019

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## I. Introduction

The following organizations: Comité Diálogo Ambiental, Inc., El Puente de Williamsburg, Inc.- Enlace de Acción Climática, Comité Yabucoeño Pro-Calidad de Vida, Inc., Alianza Comunitaria Ambientalista del Sureste, Inc., Sierra Club Puerto Rico, Inc., Mayagüezanos por la Salud y el Ambiente, Inc., Coalición de Organizaciones Anti Incineración, Inc., Amigos del Río Guaynabo, Inc., and other parties-in-interest in this case, has asked that I review the Restructuring Support Agreement (RSA) for the Debt of the Puerto Rico Electric Power Authority (PREPA) dated May 3, 2019 and signed by Iván Garau González on behalf of the Puerto Rico Fiscal Agency and Financial Advisory Authority (FAFAA).

The RSA exists between the Puerto Rico Electric Power Authority (“PREPA”), the Puerto Rico Fiscal Agency and Financial Advisory Authority (“AAFAF”), the Financial Oversight and Management Board for Puerto Rico (“FOMB”), the members of the Ad Hoc Group of PREPA Bondholders (“Ad Hoc Group Members”), any other persons who beneficially own or control Uninsured Bonds (“Uninsured Supporting Holders”) and Assured Guaranty Corp. and Assured Guaranty Municipal Corp. (“Assured”).

I have been asked to assess the effect of the proposed RSA on the use of distributed renewable electric energy generation, on the currently operating systems and on future systems. My analysis includes: the need for electric energy itself, the historical nature of the electric utility industry and its regulation, the evolution of the nature of the electric utility industry due to the market driven technology change presented by distributed renewable generation and its effect on regulation or no regulation of this new market. I compare electric energy cost from the Utility to electric energy cost of self-generation plus energy storage considering the reliability and resiliency provided by both systems.

My conclusions are:

Conclusion 1 - All revenue bonds issued by PREPA have the same guarantee: electric energy sales. The proposed Restructuring Agreement (RSA) will issue new bonds that encumber the private generation of electric energy by an end-user of electricity using renewable energy systems purchased by the end-user. Thus the primary effect of the RSA is to replace PREPA’s outstanding bonds, a debt guaranteed by electric energy sales with new bonds, a new debt guaranteed by electric energy consumption.

Conclusion 2 - The “benefits from the use of the System” are used to justify the application of the proposed “transition charge” to the electric energy generated by behind-the-meter generator customers. Despite this “justification” the “benefits from the use of the System” are not defined in the otherwise exhaustive “Demand Protection Term Sheet”.

Conclusion 3 – The proposed Restructuring Agreement (RSA) will act as a guarantee of profit for the bondholders while public utilities in the US are only guaranteed *an opportunity* to make a profit. Why bond holders should be granted a guarantee of profit not afforded to the company that issued the debt?

Conclusion 4 - The proposed Restructuring Agreement (RSA) seeks to perpetuate a monopoly that, with the availability of renewable energy, no longer is a “natural monopoly”.

Conclusion 5 - The option “to permanently disconnect” provided in the Restructuring Agreement (RSA) to BTMG customers is not an option but an attempt to eliminate competition to the Utility and to bondholders from cleaner, more resilient, alternative and renewable electric energy generation technologies.

Conclusion 6 - In January 2019 the electric energy generation cost for PREPA was around 13 ¢/kWh, more than double of the small rooftop solar photovoltaic generation cost in 2018-19.

Conclusion 7 - Conservatively applying current cost trends by 2024, at retail price of \$1.5/W a small (2 kW) rooftop solar photovoltaic system will generate electric energy at a cost of about 4.33 ¢/kWh.

Conclusion 8 - If we assume a steady decline of just 3.5% in price over the next 5 years, the round-trip cost of electric energy will be about 16.5 ¢/kWh in 2024. The total generation plus storage cost of a small rooftop solar photovoltaic system with batteries will be about 21 ¢/kWh.

Conclusion 9 - The proposed Restructuring Agreement (RSA) makes ownership of a rooftop solar photovoltaic system far more expensive that it has to be. This action seriously restricts the residential customers’ ability to survive hurricanes in Puerto Rico, an island that lies squarely in the hurricane path of the Caribbean Sea.

Conclusion 10 - The only reasonable process to determine fair, market based, prices for grid services is to conduct an open and participatory process thru the Puerto Rico Energy Bureau to set appropriate rates for BTMG customers. Fair prices for grid services for BTMG customers require analysis as the basis for charges. The Restructuring Agreement (RSA) proposed “Transition charge” on the electric energy generated by behind-the-meter generator customers has no analytical basis.

Conclusion 11 - Significant grid defection could become a reality in Puerto Rico if the proposed RSA is implemented, thus rendering the proposed RSA useless.

Conclusion 12 - Only electricity consumed from the grid should be subject to a charge to pay the outstanding debt.

Conclusion 13 - Customers must be allowed, under all possible Restructuring Agreements, to receive electric services from the grid while keeping a separate portion of the residential load being serviced by a distributed renewable generation system. Residents of Puerto Rico require a resilient alternative to generate electricity during emergencies, such as after a hurricane or any other major disruption to the electric service from the grid.

A description of my qualifications and compensation is available in Section XIII of this Report.

## II. What is the RSA and how it impinges on distributed renewable electric energy?

The Puerto Rico Electric Power Authority (PREPA), a public electric utility with service territory including all inhabited islands of the Puerto Rico archipelago, is the issuer of power revenue bonds and power revenue refunding bonds issued and outstanding pursuant to a Trust Agreement, dated January 1, 1974, as amended and supplemented, between PREPA and U.S. Bank National Association. As of June 30, 2013, the outstanding debt under the 1974 Trust Agreement was \$8,048,485,000.<sup>1</sup>

A revenue bond is a special type of municipal bond distinguished by its guarantee of repayment solely from revenues generated by a specified revenue-generating entity associated with the purpose of the bonds, rather than for example a tax. Revenue bonds are issued to construct or expand upon revenue-generating entities, such as: water and wastewater (sewer) utilities, toll roads and bridges, transportation hubs such as airports and seaports, power plants and electric utilities, and others.

Unlike general obligation bonds, only the revenues specified in the legal contract between the bond holder and bond issuer are required to be used for repayment of the principal and interest of the bonds; other revenues, such as tax revenues, and the general credit of the issuing agency are not so encumbered.

**All revenue bonds issued by PREPA have the same guarantee: electric energy sales. The RSA will issue new bonds that encumber the private generation of electric energy by an end-user of electricity using renewable energy systems purchased by the end-user. Thus the primary effect of the RSA is to replace PREPA's outstanding bonds, a debt guaranteed by electric energy sales with new bonds, a new debt guaranteed by electric energy consumption.**

The "Recovery Plan Term Sheet" of the RSA defines a "Transition charge" to pay for the new bonds. This "transition charge" is not applied only to electric energy sales by PREPA, the current guarantee of the power revenue bonds, but it is also applied to electric energy generated by renewable energy systems owned by individuals electrically connected to Puerto Rico's electric power system.

This "Transition charge" supplements the currently active "Transition charge" of 1 ¢/kWh<sup>2</sup> in effect during Fiscal Years (FY) 2019 and 2020. The "Transition charge" described in the "Recovery Plan Term Sheet" is 2.768 ¢/kWh during FY 2021, 2022 and 2023, 2.957 ¢/kWh during FY 2024, 2025, 2026, 2027 and 2028, 3.242 ¢/kWh in FY 2029, and at this point it increases by approximately 2.5% every fiscal year until FY 2042 (12 years). In FY 2043 the "Transition charge" becomes 4.552 ¢/kWh and remains in effect until FY 2067.

Why is the "Transition charge" a burden on distributed renewable energy generation? According to the Schedule I-A of the RSA the "Demand Protection Term Sheet" the "Transition charge will be collected from all current and future Customers which have benefitted, are benefitting, or will

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<sup>1</sup> Fortieth Annual Report on the Electric Property of the Puerto Rico Electric Power Authority, URS Corporation, June 2013.

<sup>2</sup> 1 kWh is a measure of energy equivalent to 3.6 million Joules. kWh is the most common measure of electric energy used for the purpose of billing.



benefit from the use of the System and which have benefitted from PREPA's generation assets, as set forth in this Term Sheet." [Emphasis by the author of this Report]

**These "benefits from the use of the System" are conveniently not defined in the otherwise exhaustive "Demand Protection Term Sheet".**

Although these "benefits" are not defined the proposed measure of "the benefits from the use of the System" is electric energy consumption and not just consumption from the electric grid, otherwise known as "electric energy sales", but " **Consumption**" means, for any given time period, the amount of electricity consumed by a Customer, regardless of the source of such electricity, including thermal, solar, wind, geothermal or other renewable or recyclable sources, whether owned by PREPA or any successor, lessor or concessionaire, an independent power producer, municipality, cooperative or a Customer." [Emphasis by the author of this Report]

Two classes of customers are singled out in the RSA: Customers with a behind the meter generation ("BTMG Customers") system that was approved, in place, and operational prior to the Implementation Date (the "Grandfathered BTMG Customer") and All BTMG Customers other than Grandfathered BTMG Customers, including former BTMG Customers that cease to be Grandfathered BTMG Customers (the "Non-Grandfathered BTMG Customer").

These two types of "customers" are people who decided to invest their own money in a renewable energy generation system, in Puerto Rico the vast majority of these are solar photovoltaic systems, under a net metering agreement with PREPA.

Now instead of being charged a fair amount for grid services the existing and new net metering customers will pay debt charges on the electricity they generate simply because the RSA has change the guarantee of PREPA's outstanding bonds from electric energy sales to electric energy consumption.

The RSA, in the "Demand Protection Term Sheet", provides net metering customers one and only one option not to be charged the "Transition charge": to permanently disconnect from the electric system.<sup>3</sup>

In the following sections of this report we shall analyze the negative effects of the proposed RSA on the use of distributed renewable electric energy generation. To better understand the proposed change, we will initially frame the analysis within two basic concepts: the need of electric energy itself and the technological and historical reasons the electric energy industry have been regulated and why regulation may not be needed anymore.

Then we will compare electric energy cost from the Utility to the current electric energy cost of self-generation, using distributed renewable energy systems, plus energy storage. I will consider the reliability and resiliency provided by both systems and the economic and environmental effect of displacing fuel burning as the source of electric energy.

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<sup>3</sup> Footnote number 18, on page I-A-1, of Schedule I-A "Demand Protection Term Sheet".

### III. Regulated utilities have an opportunity to obtain revenue not a guarantee of profit

At the dawn of this millennium the United States National Academy of Engineering (NAE) reflected “on the ingenuity and inventions of the past”. The NAE ranked electrification as the number one of the Greatest Engineering Achievements of the Twentieth Century<sup>4</sup>. The purpose of electrification was to provide society with electric energy at reasonable cost.

It was Samuel Insull, the head of Chicago Edison Company and the president of the major trade association of the industry, the National Electric Light Association, who first proposed in 1898 that the emerging electric utility industry sought regulation in exchange for the ability to provide service as a monopoly.<sup>5</sup> Insull thought that franchise protection was worth giving authorities control over *cost-based rates* that in turn would lower interest costs, a huge cost item for public utilities.

The intrinsic advantage for industry of a cost-based rate is that the cost gets passed thru to the customer. Why Insull bet on this? Because in the United States a series of court decisions had already held that grain elevators, warehouses, and canals were monopoly providers of services “affected with the public interest”<sup>6</sup> and that their rates and terms of service could therefore be regulated.<sup>7,8</sup> And more to the point, and intention, of Mr. Insull the regulator could never set rates for services that will be “confiscatory”. All “reasonable costs” could be included in the rates.

As the “cost-of-service” principles of regulation continued to evolve it became clear, thru several notable US Supreme Court decisions<sup>9</sup>, that public utility regulation does not exist solely for the benefit of the utility companies. *“Public utility regulation purpose is the protection of consumers from abuses of monopoly power. The task of utility regulation is to serve as a substitute for competition. It is obvious, therefore that it will be inconsistent with the legislative purpose to assure utility companies a guaranteed profit, something companies in a competitive field do not have. On the other hand, the protection of consumers may not be carried to the point that they are in a better economic position than the customers of competitive companies.”*<sup>10</sup>

### **If public utilities are only guaranteed an opportunity to make a profit, why bond holders of such industries should be granted a guarantee of profit as the one described in the proposed Restructuring Agreement (RSA)?**

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<sup>4</sup> George Constable, et al. 2003. *A Century of Innovation: Twenty Engineering Achievements that Transformed our Lives*. Washington, DC: Joseph Henry Press.

<sup>5</sup> The Insull Speech of 1898: Call for Public Utility Regulation of Electricity (The origins of EEI’s support for cap-and-trade in today’s energy/climate bill), Robert Bradley Jr., April 29, 2010.

<https://www.masterresource.org/edison-electric-institute/the-insull-speech-of-1898/>

<sup>6</sup> The term “affected with a public interest” originated in England around 1670, in the treatises *De Portibus Maris and De Jure Maris*, by Sir Matthew Hale, Lord Chief Justice of the King’s Bench.

<sup>7</sup> Lazar, J. (2016). *Electricity Regulation in the US: A Guide. Second Edition*. Montpelier, VT: The Regulatory Assistance Project. <http://www.raponline.org/knowledge-center/electricityregulation-in-the-us-a-guide-2>

<sup>8</sup> *Munn v. Illinois*, 94 U.S. 113 (1877).

<sup>9</sup> Examples are: *Federal Power Commission v. Hope Natural Gas Company*, 320 US 591 (1944), *Bluefield Water Works and Improvement Company v. Public Service Commission*, 262 US 679 (1923).

<sup>10</sup> *The Law Governing the Fixing of Public Utility Rates: A Response to Recent Judicial and Academic Misconceptions*, Walter Pond, *Administrative Law Review*, Vol. 41, No. 1 (Winter 1989), pp. 1-32.

Furthermore, **do we still have a “natural monopoly”<sup>11</sup> on electric energy production?** The availability of electric energy from onsite facilities, such as solar photovoltaic and fuel cell generators, at prices competitive with the retail price of electricity from the electric grid forces us to confront the notion of whether an electric utility remains a “natural monopoly” in the face of this technological change.

**The proposed Restructuring Agreement seeks to perpetuate a monopoly that, with the availability of renewable energy, no longer is a “natural monopoly”. The RSA also seeks to guarantee profit for the bondholders, a guarantee that does not exist for anyone in the electric industry.**

#### **IV. The nature, and guarantee, of PREPA’s current outstanding bonds**

As said before PREPA is the issuer of power revenue bonds and power revenue refunding bonds issued and outstanding pursuant to a Trust Agreement, dated January 1, 1974, as amended and supplemented, between PREPA and U.S. Bank National Association. As of June 30, 2013, the outstanding debt under the 1974 Trust Agreement was \$8,048,485,000.<sup>12</sup>

A revenue bond is a special type of municipal bond distinguished by its guarantee of repayment solely from revenues generated by a specified revenue-generating entity associated with the purpose of the bonds. Revenue bonds are issued to build or expand upon revenue-generating entities such as: water and wastewater utilities, toll roads and bridges, transportation hubs such as airports and seaports, power plants and electric utilities, and others. Only the revenues specified in the legal contract between the bond holder and bond issuer are required to be used for repayment of the principal and interest of the bonds; other revenues, such as tax revenues, and the general credit of the issuing agency are not so encumbered.

**All revenue bonds issued by PREPA have the same guarantee: electric energy sales. If all electric energy customers in Puerto Rico decide to cease purchasing electricity from the utility the bond holders will not be paid. This is a risk every bond holder knew and assumed when they invested in power revenue bonds.**

The “Transition charge” in the RSA is to be used to pay the new bonds. The “transition charge” is not applied only to electric energy sales by PREPA, the current guarantee of the power revenue bonds, but it is also applied to electric energy generated by renewable energy systems owned by individuals electrically connected to Puerto Rico’s electric power system.

**The new bonds encumber the electric energy generated by a private end-user of electricity using renewable energy systems purchased by the end-user.**

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<sup>11</sup> “[a]n industry in which multi-firm production is more costly than production by a monopoly” Baumol, William J., 1977. “On the Proper Cost Tests for Natural Monopoly in a Multiproduct Industry”, *American Economic Review* 67, 809–22.

<sup>12</sup> Fortieth Annual Report on the Electric Property of the Puerto Rico Electric Power Authority, URS Corporation, June 2013.

## V. Electric energy consumption, from all sources, as the new guarantee for bonds

Why the new guarantee? What is the justification for this action? According to Schedule I-A of the RSA the “Demand Protection Term Sheet” the “transition charge will be collected from all current and future Customers which have benefitted, are benefitting, or will benefit from the use of the System and which have benefitted from PREPA’s generation assets”. [Emphasis by the Author of this Report]

Thus the RSA replaces the original bond guarantee, electric energy sales, for a new guarantee based on electric energy consumption because the renewable energy systems connected to the electric grid “benefit from the use of the System”. **These “benefits” are conveniently not defined in the otherwise exhaustive “Demand Protection Term Sheet”**. Since the benefits are not defined there is no attempt to value the benefits and no attempt to set a fair market value price for enjoying the un-specified benefits.

Furthermore, although these benefits are not defined there is a proposed measure of the benefits: electric energy consumption. And not just consumption from the electric grid, otherwise known as “electric energy sales”, the RSA defines “**Consumption**” means, for any given time period, the amount of electricity consumed by a Customer, regardless of the source of such electricity, including thermal, solar, wind, geothermal or other renewable or recyclable sources, whether owned by PREPA or any successor, lessor or concessionaire, an independent power producer, municipality, cooperative or a Customer.” [from the Demand Protection Term Sheet, emphasis by the Author of this Report]

### a. Customers with Behind the Meter Generation are single out

Two classes of customers are singled out in the RSA: Customers with behind the meter generation (“BTMG Customers”) are customers who own an approved, in place, and operational generation system prior to the proposed Implementation Date of September 30, 2020 (“Grandfathered BTMG Customer”) and All BTMG Customers other than Grandfathered BTMG Customers, including former BTMG Customers that cease to be Grandfathered BTMG Customers (“Non-Grandfathered BTMG Customer”).

These customers are people who decided to invest their own money in a renewable energy generation system, in Puerto Rico the vast majority of these are solar photovoltaic systems, under a net metering agreement with PREPA. Now instead of being charged a fair market based amount for “grid services” the existing and new net metering customers will pay debt charges on the electric energy they generate simply because the RSA has change the guarantee of PREPA’s outstanding bonds from electric energy sales to electric energy consumption.

It is important to emphasize that the definition of Consumption in the RSA clearly states that the source of electric energy consumed is irrelevant – “... regardless of the source of such electricity, including thermal, solar, wind, geothermal or other renewable or recyclable sources ...”. If you receive the un-specified, un-measured, un-priced, benefits of being connected to the electric grid your electricity is now a new guarantee to the bonds.

**The immediate and direct consequence of this definition is to establish an un-natural monopoly on electric energy generation/consumption in Puerto Rico for the next 47 years. This monopoly and this new guarantee on debt issued on power revenue bonds eliminates all risk to the utility and bondholders from the entrance in the market of a variety of alternative technologies to produce electric energy.**

What options are provided to the BTMG Consumers? They can permanently disconnect from the electric grid.

Footnote number 18, on page I-A-1, of Schedule I-A “Demand Protection Term Sheet”) of the RSA states that:

“A Customer shall not include any permanently disconnected service location or premise that does not benefit from any agreement that requires the System to provide the Customer with electricity under any condition, including without limitation, an obligation to provide power on a standby, maintenance, emergency, or similar basis. For the purposes of this definition, “permanently disconnected” means any service location or premises, including one connected to a microgrid, municipal utility or electric cooperative, not capable of receiving any electricity from, delivering electricity to, or being synchronized with, the System, including, but not limited to, for standby, maintenance, emergency, or similar purposes, or providing electricity to the System.”

**Therefore, if you chose to generate your own electric energy you are excluded from the utility service unless you accept to carry the full burden of a debt originally not guaranteed by your privately generated electric energy.**

**b. Is “permanent disconnection” a reasonable alternative for BTMG Customers?**

Is this a reasonable alternative? Do we have an example of an industry “affected with a public interest” that is given the option not to serve a customer how finds an economic alternative to the services provided by said industry? The transportation of goods in the United States provides an example of how the United States Congress dealt with technological changes changing a “natural monopoly” into a competitive environment.

When railroads were established in the US, in the second half of the 19th century, state railroad commissions and the Interstate Commerce Commission emerged to regulate this private industry and later trucking. Once the United States Congress determined that truck freight presented a competitive alternative to rail freight it dissolved the Interstate Commerce Commission as it deemed that neither required economic regulation<sup>13</sup>. Nowadays state and federal economic regulation of transportation is almost nonexistent, because there is competition and therefore no natural monopoly exist.

Do railroad operators deny their rail freight services to a customer that normally uses truck freight, or viceversa? Are these operators allowed to impose such burden into the general public as a method to force the public to permanently select one over the other? The answer is no and must

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<sup>13</sup> Both are still regulated regarding other aspects of industrial performance, e.g. safety.

remain no since granting such power could eliminate competition in an industry “affected with a public interest” that was unregulated precisely because competition became available.

**The option “to permanently disconnect” provided in the RSA to customers with behind the meter generation is not an option but an attempt to eliminate competition to the Utility and to bondholders from cleaner, more resilient, alternative and renewable electric energy generation technologies.**

## **VI. Distributed, renewable electric energy generation is cost effective in Puerto Rico**

In 2008-2009 a study was conducted at the University of Puerto Rico-Mayagüez (UPRM)<sup>14</sup> to estimate each renewable energy resource, and related technologies, available in Puerto Rico for electricity production. The study included; biomass - including waste-to-energy, micro hydro, ocean – in the form of waves, tides, currents and ocean thermal, solar radiation, to be used thru photovoltaic technology and solar thermal technologies, wind – to be exploited at the utility level as well as small wind. The estimate also included a preliminary assessment on the use of fuel cell technology.

This estimate was restricted using realistic constraints such as: estimated availability of the resource under consideration, estimated required surface area or “foot print”, seasonal cycles, state of available technology (commercial and prototype) and estimated capital costs. This study provided the quantitative means to compare among renewable electricity production alternatives based on the amount of electricity that each resource may provide.

The least intrusive renewable energy resource technology considered was roof top installed solar photovoltaic. We selected this approach based on Puerto Rico’s high population density and historic single family housing trends.

Approximately 65% of residential roofs could provide the total electrical energy, not power, that was needed in Puerto Rico in 2006. According to the “Banco de Desarrollo Económico de Puerto Rico” in 2006 Puerto Rico demanded 20,600 million kWh of electricity.

The energy generation potential is so significant that even 10% of the households can provide close to 20% of the overall 2006 energy demand. Developments in energy storage technologies and significant reduction in the cost of energy storage provide an opportunity for even greater penetration of photovoltaics.

The retail price of installing a grid-tied photovoltaic system in Puerto Rico has reduced significantly in 10 years. In 2009 the retail price of a small, 2 kW, installed grid-tied photovoltaic system was around \$7.85/W, thus a 2 kW system will cost \$15,700. In 2012 the retail price of the same system

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<sup>14</sup> “Achievable Renewable Energy Targets for Puerto Rico's Renewable Energy Portfolio Standard”, A.A. Irizarry Rivera, J. Colucci-Ríos, E. O’Neill-Carillo, Report to the Puerto Rico’s Energy Affairs Administration under contract number 2008-132009, 2009.

was around \$3.5/W. In 2019 the same system retail price is around \$2/W, thus the 2 kW system cost \$4,000.<sup>15</sup>

This price has been reducing at a rate of -0.20 \$/W per year.<sup>16</sup> If we conservatively assume that the price reduces only at -0.10 \$/W in just five years (2024) we should install small rooftop grid tied solar PV systems in Puerto Rico at retail price of \$1.5/W.

Another study from UPRM<sup>17</sup> show that in 2018 these small rooftop solar photovoltaic systems generate electric energy at a cost of 6 ¢/kWh.<sup>18</sup> This is clean, on-site residential generation of electric energy, with no emissions. There are no T&D costs, such as power losses.

**In five years, 2024, at a retail price of \$1.5/W these small rooftop solar photovoltaic system will generate electric energy at a cost of about 4.33 ¢/kWh.**

During January 2019<sup>19</sup> PREPA reported a fuel only cost of 11.96 ¢/kWh<sup>20</sup>. This does not include operational cost at the generation plant, usually around 1 ¢/kWh in PREPA oil burning generation stations. Thus **in January 2019 the generation cost for PREPA was around 13 ¢/kWh, more than double of the small rooftop solar photovoltaic generation cost in 2018-19.** And these 13 ¢/kWh are at Transmission level and at the generation plant. The electric energy must travel over the T&D system to get to the customer site, an additional cost. The current price of residential electricity from PREPA is approximately 21 ¢/kWh.

In the 2018 UPRM study<sup>17</sup> the round-trip<sup>21</sup> storage cost of electric energy, in lead acid batteries, is calculated at 23 ¢/kWh<sup>22</sup>. Thus a small rooftop solar photovoltaic system with batteries currently produces reliable and clean<sup>23</sup> electric energy in Puerto Rico with a cost of approximately 29 ¢/kWh.

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<sup>15</sup> From the Author personal records. These prices are consistent with the prices reported in "U.S. Solar Photovoltaic System Cost Benchmark: Q1 2017", R. Fu, D. Feldman, R. Margolis, M. Woodhouse, and K. Ardani, National Renewable Energy Laboratory, Technical Paper-6A20-68925, August 2017.

<sup>16</sup> Price decline calculated over the last 7 years, from 2012 to 2019. If the price decline is calculated using the values reported in NREL's report (previous footnote) the decline is -0.34 \$/W per year from 2012 to 2017.

<sup>17</sup> "Characteristics of Electric Batteries for Residential Use and Better Integration with the Electric Distribution System", Master Thesis, Karen Vanessa Montaña-Martínez, University of Puerto Rico, Mayagüez, 2018.

<sup>18</sup> This is the Levelized Cost of Energy over 20 years and retail price cost for solar PV system components.

<sup>19</sup> Monthly Report to the Governing Board, January 2019. Available: <https://aepr.com/es-pr/investors/Financiamiento/Monthly%20Reports/2019/January%202019.pdf>

<sup>20</sup> Cost calculated from the reported \$70/BBL of oil, 6.3 MMBTU/BBL and average monthly Heat Rate of 10,765 BTU/kWh.

<sup>21</sup> Round-trip refers to the cost of putting the energy into the storage medium and then retrieving it for later use. It takes into consideration the inefficiencies of the storage system as well as maximum discharge and life cycles.

<sup>22</sup> The cost is calculated considering initial investment, replacement cost and installation cost. A discount of 3% in the replacement battery bank cost, consistent with current past and current trends, is assumed as well as a fixed installation cost of \$500.

<sup>23</sup> EPA estimated that in 2015, the recycling rate for lead in lead acid batteries, as well as the polypropylene battery casings, was 99 percent.

And the retail price of batteries also continues to decline. In 2017 deep cycle lead acid batteries had a retail price in Puerto Rico of \$167/kWh after Hurricane Maria (this is capital cost of the battery and not to be confused with round-trip storage cost). In 2018 retail price was \$128/kWh, in 2019 it is \$110/kWh, a 14% decline in just one year.

**If we assume a steady decline of just 3.5% in price over the next 5 years, the round-trip cost of electric energy will be about 16.5 ¢/kWh in 2024. The total generation plus storage cost of a small rooftop solar photovoltaic system with batteries will be about 21 ¢/kWh.**

In 2024 the proposed “transition charge” will be 2.957 ¢/kWh. If fuel prices remain at the same level during the next five years, the total cost of electricity from PREPA will be about 24 ¢/kWh in 2024.

## **VII. Is the public guaranteed continuity of electric service under the RSA?**

Is the public guaranteed continuity of electric service under the RSA? No.

The RSA does not mention reliability<sup>24</sup> of electric energy service, nor it explain how the “transition charge”, effectively a proposed rate change, will provide for a resilient<sup>25</sup> electric power system for the public<sup>26</sup>. Thus the RSA completely ignores the primary reason the Utility has been granted a monopoly in exchange for cost-based regulated rates, the obligation to serve and provide an essential service.<sup>27</sup>

The “transition charge” sole purpose is to collect money to pay old debt. The “transition charge” collects no money to invest on the electric grid in order to make it more reliable and resilient.

### **a. Puerto Rico’s electric energy delivery infrastructure is weak**

Puerto Rico’s electric energy delivery infrastructure, the Transmission and Distribution (T&D) network, is weak as shown by its failed performance during a series of events prior to Hurricanes

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<sup>24</sup> NERC is the North American Electric Reliability Corporation, the entity certified by the Federal Energy Regulatory Commission (FERC) to establish and enforce reliability standards for the interconnected bulk power system in North America ([www.nerc.com](http://www.nerc.com)). NERC’s definition of reliability is the degree of performance of the elements of the bulk electric system that results in electricity being delivered to customers within accepted standards and in the amount desired. Reliability may be measured by the frequency, duration, and magnitude of adverse effects on the electric supply.

<sup>25</sup> From the Presidential Policy Directive (PPD) 21 “the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions. Resilience includes the ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats or incidents.”

<sup>26</sup> “without some numerical basis for assessing resilience, it would be impossible to monitor changes or show that community resilience has improved. At present, no consistent basis for such measurement exists. We recommend therefore that a National Resilience Scorecard be established.”

*-Disaster Resilience: A National Imperative, National Academy of Sciences*

<sup>27</sup> In the United States electric energy is not called an essential service but rather a “critical commodity which the residential, commercial and industrial sectors rely on.” [Source: US Department of Energy] Despite this “the ability to provide public services” is an ever present indicator of resiliency in the US National Laboratories effort to develop a numerical basis for assessing resiliency.



Irma and María<sup>28</sup>, and by its performance after Hurricane María itself<sup>29</sup>. The current residential electric energy cost in Puerto Rico is about 21 ¢/kWh. **Thus the new rate of electricity, including the “transition charge”, will provide un-reliable electricity at a cost of approximately 24.5 to 25 ¢/kWh if the current fuel prices remain as they are now.**

How much money is necessary to invest in the T&D network to obtain a reliable electric energy supply? The following Table<sup>30</sup> summarizes the estimated rebuild cost needed to “harden and enhance the resiliency of PREPA’s system”.

Table E-1. Rebuild Cost Summary

Item	Rebuild Recommendations	Total (millions, US\$)
1	Overhead Distribution (includes 38 kV)	\$5,268
2	Underground Distribution	\$35
3	Transmission - Overhead	\$4,299
4	Transmission - Underground	\$601
5	Substations – 38 kV	\$856
6	Substations – 115 kV & 230 kV	\$812
7	System Operations	\$482
8	Distributed Energy Resources	\$1,455
9	Generation	\$3,115
10	Fuel Infrastructure	\$683
	<b>Total Estimated Cost</b>	<b>\$17,6064</b>

Items 1 thru 6, inclusive, total \$11,871 million US, almost \$12 billion or 1.5 times the current debt of \$8 billion proposed to be paid by the “transition charge”. Assuming the new debt is issued at a similar 5.25% interest Puerto Rico customers will pay an additional 6.828 ¢/kWh to cover the new debt. The new residential electric energy cost could be 32.4 ¢/kWh (= 21 + 4.552 + 6.828).

Does this investment guarantee continuity of electric service after a strong Hurricane? No. It is virtually impossible to protect every element of the T&D system from falling trees, flying debris, landslides due to flooding, and the most severe hurricane winds.

Is there an alternative? Yes. Distributed and renewable electric energy generation plus electric storage provides a better investment in Puerto Rico and in places with high electricity costs, severe local reliability challenges or both. As presented in the previous section of this report in 5 years electric energy plus storage will cost around 21 ¢/kWh while the transition charge plus grid investment shall produce a cost of 32.4 ¢/kWh.

<sup>28</sup> Prior to Hurricane María a fire at the switchyard of Aguirre generation station caused a complete blackout in Puerto Rico that lasted days.

<sup>29</sup> I. Umair, “Puerto Rico’s blackout, the largest in American history, explained,” Vox, 08-May-2018. [Online]. Available: <https://www.vox.com/2018/2/8/16986408/puerto-rico-blackout-power-hurricane>.

<sup>30</sup> Table adapted from the Executive Summary of “Build Back Better: Reimagining and Strengthening the Power Grid of Puerto Rico”, Puerto Rico Energy Resiliency Working Group members and Navigant Consulting, Inc., A Report for Governor Andrew Cuomo, New York, Governor Ricardo Rosselló, Puerto Rico and William Long, Administrator FEMA, December 2017. [www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/PRERWG\\_Report\\_PR\\_Grid\\_Resiliency\\_Report.pdf](http://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/PRERWG_Report_PR_Grid_Resiliency_Report.pdf)

Are rooftop solar photovoltaic systems impervious to hurricanes? No. But our experience during Hurricane María show that when properly installed even a modest rooftop photovoltaic system can provide resiliency and continuity of electric service post a major hurricane.

### VIII. Resiliency thru Distributed Renewable Energy

A recently published article<sup>31</sup> describes a case study of residential electric service resiliency thru the adaptation of a relatively small existing residential photovoltaic system, originally grid-tied under a net metering agreement with the utility, to a stand-alone system with batteries to provide continuity of service after Hurricane María destroyed Puerto Rico's electric transmission and distribution system.

A modest rooftop photovoltaic system with batteries (1 kW in solar panel capacity, 10 kWh of energy storage, total cost of \$2,812) provided resiliency and continuity of electric service post hurricane María. The electric service from the grid, at the location under study, stopped 20 September 2017 and was restored 132 days later, on 30 January 2018. It took 31 days of old fashioned "walk around" to obtain the necessary equipment (charge controllers, batteries, off-grid inverter) to adapt the net metering system into a stand-alone system<sup>32</sup>. The rooftop solar photovoltaic system operated uninterrupted for 101 days.

In the study we also contrast the cost of buying and operating the photovoltaic system to the cost of buying and operating a gasoline emergency generator to supply the same amount of energy. The cost of using a set of gasoline generators to provide the same energy is less only if electricity from the grid is available within four months of the blackout. This cost comparison does not include labor and transportation cost of procuring fuel and oil, and the labor cost of performing oil changes and refueling the generator. Nor we assigned a monetary value to lost sleep re-fueling the generator in the middle of the night.

This is one case study out of hundreds, if not thousands, of rooftop solar photovoltaic systems that help the people of Puerto Rico survive a severe natural disaster. **The proposed RSA is designed to make ownership of a rooftop solar photovoltaic system far more expensive that it has to be and therefore to impede the ability to survive hurricanes in Puerto Rico, an island that lies squarely in the hurricane path of the Caribbean Sea** as shown in Figures 1 and 2.

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<sup>31</sup> A. Irizarry-Rivera, K.V. Montano-Martinez, S. Alzate-Drada, F. Andrade, "A Case Study of Residential Electric Service Resiliency thru Renewable Energy Following Hurricane María", Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion (MEDPower), Dubrovnik (Cavtat) Croatia, November 12-15 2018.

<sup>32</sup> There was no electricity nor communications, therefore no Internet, in Puerto Rico for close to a month after Hurricane María.

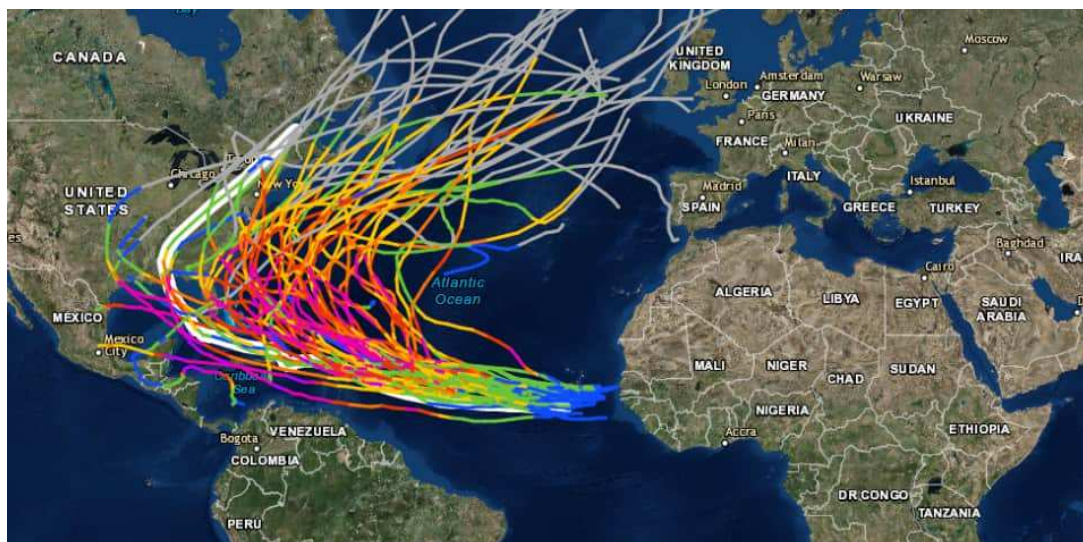


Figure 1. Category 4 and 5 hurricane tracks from 1851-2016 in the East Atlantic Ocean basin.<sup>33</sup>

Twenty-four (24) hurricanes have cross nearby Puerto Rico during 1851-2017. Seventeen (17) have made landfall during the same period, as shown in Figure 2. Ten (10) were category 3 and higher hurricanes, in the Saffir-Simpson scale, with nine (9) making landfall. Hurricanes categories 3 and higher are described as major hurricanes where near-total to total power loss is likely for weeks.<sup>34</sup>

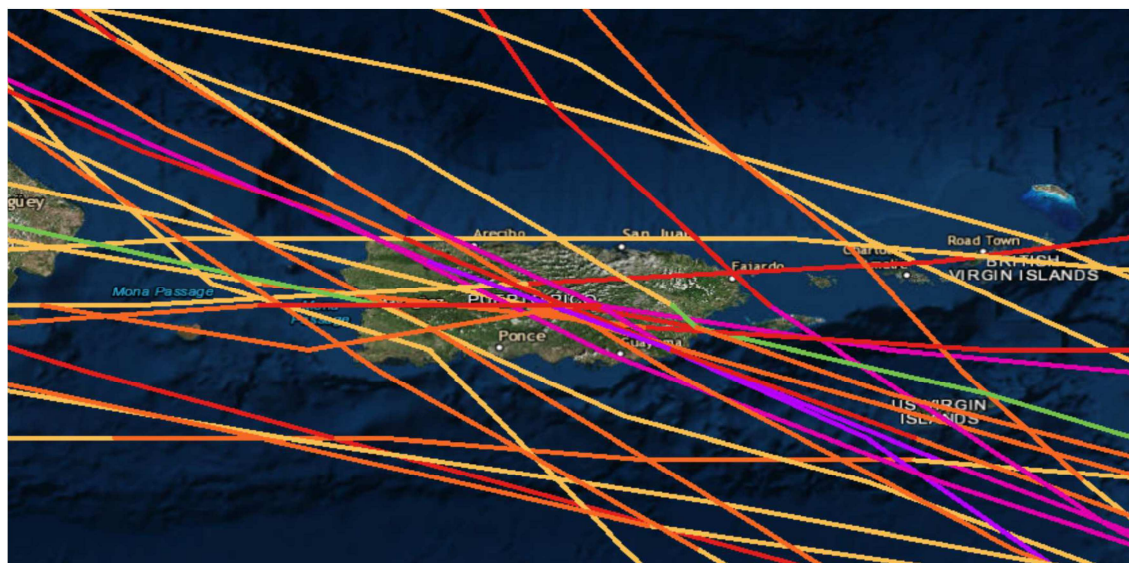


Figure 2. The path of the twenty-four (24) hurricanes from 1851-2017 crossing nearby Puerto Rico; seventeen (17) made landfall.<sup>24</sup>

**The people of Puerto Rico should not be penalize for taking advantage of a market driven technological change**, the significant drop in the retail price of solar photovoltaic systems and

<sup>33</sup> National Ocean Service, National Oceanic and Atmospheric Administration (NOAA), Historical Hurricane Tracks, available at [oceanservice.noaa.gov/news/historical-hurricanes](https://oceanservice.noaa.gov/news/historical-hurricanes).

<sup>34</sup> T. Schott, C. Landsea, G. Hafele, J. Lorens, A. Taylor, H. Thurm, B. Ward, M. Willis, and W. Zaleski, "The Saffir-Simpson Hurricane Wind Scale", National Oceanic and Atmospheric Administration (NOAA), 2012.

batteries, **that allows them to use their clean indigenous resources**, their rooftop and the sun that falls on it, **to generate the totality or a portion of their electric energy needs**. Furthermore **this technological change provides for increased resiliency of electric energy services after a major hurricane and breaks the “natural monopoly” of the traditional electric utility business**.

#### **IX. Fair prices for well-defined grid services to be established by the Energy Bureau**

We do not dispute that there are a number of benefits of being connected to the electric grid for a behind the meter generation customer that use renewable energy to generate electric energy. Perhaps the most significant are to store energy into the electric grid for later use under a net metering agreement and to receive standby service<sup>35</sup> from the grid if the renewable resource is not available for a prolonged time period or in case of malfunction of the renewable energy system.

Furthermore, we do not dispute that the cost of providing ancillary services<sup>36</sup> to all customers may increase due to behind the meter generation, or may decrease these costs in some cases.

**The only reasonable process to determine fair, market based, prices for grid services is to conduct an open and participatory process thru the Puerto Rico Energy Bureau to set appropriate rates for BTMG customers.**

The above is the operating principle followed by the National Association of Regulatory Utility Commissioners (NARUC) regarding distributed energy resources. From NARUC’s distributed energy resources (DER) manual, “without a study of the actual costs of additional reserves required for system reliability, it is possible that a naïve calculation of the standby charge may overstate the actual costs to the system and the needs of the customers. Any charge would need to be justified directly and not be allowed to discourage the investment by customers”.<sup>37</sup>

If through a study a Utility or Public Utility Commission determines that reliability would suffer without increased reserves due to the introduction of DERs, then DER customers should pay for the service, but not otherwise.<sup>37</sup>

Are these fair prices impossible or “too difficult” to assess? No. There are ancillary service markets, at “wholesale” or transmission level, in North America<sup>38</sup> where these services are sold and bought and therefore their price is well established at the transmission level.

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<sup>35</sup> Standby services are services provided by a utility to one of their customers with on-site generation, where the utility agrees to provide power in instances where the customer’s generation is unable to completely supply their electricity demand.

<sup>36</sup> Ancillary services are a broad array of services (for example regulation, frequency response, operating reserve, that help system operators maintain a reliable grid with sufficient power quality.

<sup>37</sup> “NARUC Manual on Distributed Energy Resources Rate Design and Compensation”, Staff Subcommittee on Rate Design, 2016. Available: <https://pubs.naruc.org/pub/19DF48B-AA57-5160-DBA1-BE2E9C2F7EA0>

<sup>38</sup> “Survey of U.S. Ancillary Services Markets”, Z. Zhou, T. Levin, and G. Conzelmann, Center for Energy, Environmental, and Economic Systems Analysis, Energy Systems Division, Argonne National Laboratory January 2016.

Are the transmission level prices equal to distribution level prices? No. But there are a number of Utilities who have proposed to their Public Utilities Commission special rates for BTMG customers in order to charge fair prices for grid services<sup>39</sup> and there are a variety of methods that a Utility can follow to recuperate its cost when facing increased penetration BTMG.<sup>40</sup>

**Fair prices for grid services for BTMG customers require analysis as the basis for charges. The RSA proposed “Transition charge” has no analytical basis.**

#### **X. The proposed RSA could defeat its purpose by creating grid defection**

As we have argued before the imposition of the proposed “transition charge” with the subsequent electric energy price increase, a price increase associated to un-reliable electric power, and the declining prices of rooftop solar photovoltaic systems plus batteries will soon force many customers to seriously consider to permanently disconnect from the electric grid. This is called “grid defection”.

A 2014 study<sup>41</sup> shows that in places like Hawaii the conditions for grid defection are already present. The 2018 average price of residential electricity in Hawaii varies from 31 ¢/kWh to 37 ¢/kWh. As we have calculated in this report the cost of semi-reliable electric energy in Puerto Rico, after significant expending in T&D “hardening” plus the proposed “transition charge” will exceed 32 ¢/kWh.

**Significant grid defection could become a reality in Puerto Rico if the proposed RSA is implemented.**

#### **XI. Important points to be considered in a new restructuring agreement**

The proposed RSA should be rejected and a new RSA should be designed. The new RSA should consider a number of important points that are completely absent in the proposed RSA. A list follows:

- a. **Only electricity consumed from the grid should be subject to a charge to pay the outstanding debt.** There is no need for additional, probably expensive, meter to measure the consumption of electricity from the grid since the meters used today for net metering perform this function.

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<sup>39</sup> “Review of Standby and Ancillary Services in the Context of Behind-the-Meter Photovoltaics”, P. Gagnon and A. Holm, National Renewable Energy Laboratory (NREL) Report PR-6A20-71165, April 1, 2018.

<sup>40</sup> “Cost Recovery for Standby and Ancillary Services for Distributed Generation Considerations for New Mexico” D. Preziuso, J. Homer, Pacific Northwest National Laboratory, PNNL-27664 , July 2018.

<sup>41</sup> “The Economics of Grid Defection: When and Where Distributed Solar Generation Plus Storage Competes with Traditional Utility Service”, The Rocky Mountain Institute and others, 2014.

- b. **Customers must be allowed to receive electric services from the grid while keeping a separate portion of the residential load being serviced by a distributed renewable generation system.** The “separate portion” could be (1) permanently disconnected from the electric system, with no charges whatsoever, or (2) could be “transferable” between the renewable energy system and the electric grid. In the second option it is reasonable not to allow injection of renewable electric energy into the grid and to charge a fee, based on analysis, for stand-by services. **This must be allowed under all possible RSA simply because residents of Puerto Rico require a resilient alternative to generate electricity during emergencies, such as after a hurricane or any other major disruption to the electric service from the grid.**
- c. Where are the \$3,353,593,134<sup>42</sup>, scheduled to pay debt service and collected from customers since 2014, when debt service stopped?

## XII. Summary of conclusions

Conclusion 1 - All revenue bonds issued by PREPA have the same guarantee: electric energy sales. The proposed Restructuring Agreement (RSA) will issue new bonds that encumber the private generation of electric energy by an end-user of electricity using renewable energy systems purchased by the end-user. Thus the primary effect of the RSA is to replace PREPA’s outstanding bonds, a debt guaranteed by electric energy sales with new bonds, a new debt guaranteed by electric energy consumption.

Conclusion 2 - The “benefits from the use of the System” are used to justify the application of the proposed “transition charge” to the electric energy generated by behind-the-meter generator customers. Despite this “justification” the “benefits from the use of the System” are not defined in the otherwise exhaustive “Demand Protection Term Sheet”.

Conclusion 3 – The proposed Restructuring Agreement (RSA) will act as a guarantee of profit for the bondholders while public utilities in the US are only guaranteed *an opportunity* to make a profit. Why bond holders should be granted a guarantee of profit not afforded to the company that issued the debt?

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<sup>42</sup> Puerto Rico Electric Power Authority, Power Revenue Bonds Series 2012A and Power Revenue Refunding Bonds Series 2012B Prospectus. The Debt Service Requirements Table on page 69 shows the scheduled Debt Service payment for each year ending June 30. From 2014 thru 2019 these are:

Year ending June 30th	Outstanding Bonds Debt Service
2014	\$561,856,727
2015	\$561,856,905
2016	\$540,510,293
2017	\$563,003,310
2018	\$563,002,786
2019	\$563,363,113

Conclusion 4 - The proposed Restructuring Agreement (RSA) seeks to perpetuate a monopoly that, with the availability of renewable energy, no longer is a “natural monopoly”.

Conclusion 5 - The option “to permanently disconnect” provided in the Restructuring Agreement (RSA) to BTMG customers is not an option but an attempt to eliminate competition to the Utility and to bondholders from cleaner, more resilient, alternative and renewable electric energy generation technologies.

Conclusion 6 - In January 2019 the electric energy generation cost for PREPA was around 13 ¢/kWh, more than double of the small rooftop solar photovoltaic generation cost in 2018-19.

Conclusion 7 - Conservatively applying current cost trends by 2024, at retail price of \$1.5/W a small (2 kW) rooftop solar photovoltaic system will generate electric energy at a cost of about 4.33 ¢/kWh.

Conclusion 8 - If we assume a steady decline of just 3.5% in price over the next 5 years, the round-trip cost of electric energy will be about 16.5 ¢/kWh in 2024. The total generation plus storage cost of a small rooftop solar photovoltaic system with batteries will be about 21 ¢/kWh.

Conclusion 9 - The proposed Restructuring Agreement (RSA) makes ownership of a rooftop solar photovoltaic system far more expensive that it has to be. This action seriously restricts the residential customers’ ability to survive hurricanes in Puerto Rico, an island that lies squarely in the hurricane path of the Caribbean Sea.

Conclusion 10 - The only reasonable process to determine fair, market based, prices for grid services is to conduct an open and participatory process thru the Puerto Rico Energy Bureau to set appropriate rates for BTMG customers. Fair prices for grid services for BTMG customers require analysis as the basis for charges. The Restructuring Agreement (RSA) proposed “Transition charge” on the electric energy generated by behind-the-meter generator customers has no analytical basis.

Conclusion 11 - Significant grid defection could become a reality in Puerto Rico if the proposed RSA is implemented, thus rendering the proposed RSA useless.

Conclusion 12 - Only electricity consumed from the grid should be subject to a charge to pay the outstanding debt.

Conclusion 13 - Customers must be allowed, under all possible Restructuring Agreements, to receive electric services from the grid while keeping a separate portion of the residential load being serviced by a distributed renewable generation system. Residents of Puerto Rico require a resilient alternative to generate electricity during emergencies, such as after a hurricane or any other major disruption to the electric service from the grid.

## Signature

I declare, under penalty of perjury, under the laws of the United States of America, that the foregoing is true and correct. Signed this 17<sup>th</sup> day of June 2019, in Mayagüez, Puerto Rico,



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Agustín Irizarry-Rivera, Ph.D., P.E.

### **XIII. Expert Witness Background**

Agustín A. Irizarry-Rivera obtained his bachelor, Magna Cum Laude, at Universidad de Puerto Rico Mayagüez (UPRM) (1988), masters at University of Michigan, Ann Arbor (1990) and Ph.D. at Iowa State University, Ames (1996) all in electrical engineering. Since 1997 he has been Professor at the Electrical and Computer Engineering (ECE) Department UPRM where he teaches graduate and undergraduate courses such as: Electric Systems Analysis, Fundamentals of Electric Power Systems, Power System Analysis, Electric Machines, Electrical Systems Design, Advanced Energy Conversion, Power Systems Dynamics and Control and Transmission and Distribution Systems Design.

He has been elected member of the Electrical and Computer Engineering Department Personnel Committee and the School of Engineering Personnel Committee in three occasions and has served as President of both Committees twice. He has been elected Academic Senator to represent the School of Engineering in the Academic Senate. Dr. Irizarry-Rivera has served as Assistant Dean of Academic Affairs and Associate Director for Academic Affairs of the Electrical and Computer Engineering Department at UPR Mayagüez.

Dr. Irizarry-Rivera conducts research in the topic of renewable energy and how to adapt the existing power grid to add more of these resources in our energy portfolio. He had a research internship at Plataforma Solar de Almería, Tabernas, Spain from 2008 to 2009 to study concentrated solar thermal systems. He contributed to the development of dynamic models to simulate the interaction between these plants and the electric grid. He has served as Consultant on renewable energy and energy efficiency projects to Puerto Rico's Government agencies, municipalities, private developers and consulting firms in and outside Puerto Rico. He has also served as expert witness in civil court cases involving electric hazard, shock or electrocution.

Dr. Irizarry-Rivera conducts research in the topic of renewable energy and how to adapt the existing power grid to add more of these resources into our energy portfolio. He had a research internship at Plataforma Solar de Almería, Tabernas, Spain from 2008 to 2009 to study concentrated solar thermal systems. During this research internship he contributed to the



development of dynamic models to simulate the interaction between these plants and the electric grid. A few examples of funded research and education projects are:

**GEARED (Grid Engineering for Accelerated Renewable Energy Deployment)** – (2013-2018) A \$929,000 project (UPRM budget out of \$6.9 million for the Consortium) to develop and run a Distributed Technology Training Consortium in the Eastern United States, led by the Electric Power Research Institute (EPRI) in collaboration with four U.S. universities (University of Puerto Rico Mayaguez, Georgia Institute of Technology, Clarkson University, University of North Carolina at Charlotte) and seventeen utilities and system operators. The Consortium will leverage utility industry R&D results with power engineering educational expertise to prepare power engineers in management and integration of renewable energy and distributed resources into the grid.

**Streamlined and Standardized Permitting and Interconnection Processes for Rooftop Photovoltaic (PV) in Puerto Rico** (2012-2013) (Investigator) A \$301,911 project sponsored by the US Energy Department that seeks to improve the PV energy market of rooftop systems up to 300 kW in Puerto Rico. The project strives to create not only a standardized framework for PV deployment, but also streamlined: organized, lean permitting and interconnection processes where most residential and small commercial PV systems can be installed safely and quickly.

**Design of a Renewable Energy Track within the Electrical Engineering Program at Universidad APEC, Dominican Republic** (2011-2012) A \$29,000 award to design a Renewable Energy Track within the existing Electrical Engineering Program of UNAPEC.

**IGERT: Wind Energy Science, Engineering and Policy (WESEP)** (2011-2015) A \$171,600 sub-award from Iowa State University, the lead Institution, to fund master students doing research in wind technology, science, and policy as they relate to accomplishing three objectives: (a) increase the rate of wind energy growth; (b) decrease the cost of wind energy; and (c) extend penetration limits.

**Achievable Renewable Energy Targets For Puerto Rico's Renewable Energy Portfolio Standard** (2007-2009) A \$327,197 project sponsored by the Puerto Rico Energy Affairs Administration (Administración de Asuntos de Energía), to produce an estimate, based in realistic boundaries and limitations, of renewable energy available in Puerto Rico for electricity production. The renewable energy resources studied were: biomass - including waste-to-energy, micro hydro, ocean - waves, tides, currents and ocean thermal, solar - photovoltaic and solar thermal, wind – utility as well as small wind, and fuel cells. The purpose of producing these estimates was to establish adequate targets, as a function of time, for Puerto Rico's Renewable Portfolio Standard.

**Colegio San Ignacio - Ejemplo de Sostenibilidad** (2007-2008) A \$73,332 project to match the energy needs of Colegio San Ignacio with its available renewable energy sources. Demonstration projects with a strong educational component were designed for the School with the participation of the School Faculty and students. The philosophy of the program was of sustainable development.

**Programa Panamericano de Capacitación en Ingeniería de Potencia Eléctrica** (2006-2008) A \$97,370 educational project to deliver a Web-broadcast master program in electric power engineering to engineers at UNAPEC University in the Dominican Republic. Courses in this program

responded to the reality and necessities of the Dominican Republic electric power industry and were aimed for sustainable development.

**Caguas Sustainable Energy Showcase, Phase I** (2006-2007) A \$90,055 project sponsored by the Municipality of Caguas, Puerto Rico to assess the current electric energy consumption profile, by sector; residential, commercial, industrial and governmental, of Caguas and to propose achievable goals (percentages of demand), by sector, to be satisfied using renewable energy sources.

**Intelligent Power Routers for Distributed Coordination in Electric Energy Processing Networks** (2002-2005) A \$499,849 project sponsored by the National Science Foundation (NSF) and the Office for Naval Research (ONR) to develop a model for the next generation power network using a distributed concept based on scalable coordination by an *Intelligent Power Router* (IPR). Our goal was to show that by distributing network intelligence and control functions using the IPR, we will be capable of achieving improved survivability, security, reliability, and re-configurability. Our approach builds on our knowledge from power engineering, systems, control, distributed computing, and computer networks.

He has served as Consultant on renewable energy, energy efficiency and electric grid performance and operation to Puerto Rico's Government agencies, municipalities, private developers and consulting firms in and outside Puerto Rico. He has also served as expert witness in civil court cases involving electric hazard, shock or electrocution.

He is author or coauthor of over 50 refereed publications including two book chapters (see complete list in the CV section). A licensed professional engineer in Puerto Rico since 1991 and member of IEEE he has organized local and international conferences such as the Tenth International Conference on Probabilistic Methods Applied to Power Systems (PMAPS 2008) in Rincón, Puerto Rico. PMAPS Conferences provide a regular forum for engineers and scientists worldwide to interact around the common theme of power engineering decision problems under uncertainty.

Dr. Irizarry-Rivera has received several awards and honors: **Distinguished Engineer 2013** from Puerto Rico's Professional Engineers Society (CIAPR) and **Distinguished Electrical Engineer 2005** from the Electrical Engineering Institute of CIAPR in recognition of services rendered to the profession and outstanding professional achievements in electrical engineering, the **2009 Distinguished Alumni Award** from UPRM Alumni Association, the **2004 Professional Progress in Engineering Award** from Iowa State University, in recognition of outstanding professional progress and personal development in engineering as evidenced by significant contributions to the theory and practice of engineering, distinguished service rendered to the profession, appropriate community service, and/or achievement in a leadership position and the 2003-2004 ECE **Outstanding Faculty Award** from UPRM's School of Engineering.

In May 2012 he was elected, by the consumers, to the Board of Directors of the Puerto Rico Electric Power Authority, in the first election of this kind in Puerto Rico, to represent the interests of consumers. He was President of the Board's Audit Committee and an active member of the Engineering and Infrastructure, Legal and Labor Affairs and Consumer's Affairs Committees. In 2013 Board Members elected him Vice President of the Board and he served in this capacity until September 2014 when his term expired.

He is Member of the Board of Directors, in the Interest of Consumers, of PREPA Holdings, LLC, a company registered in Delaware, whose sole owner is PREPA. PREPA Holdings owns PREPANET a communications network infrastructure provider that uses an optical network platform in Puerto Rico to provide wholesale telecommunication services.

Dr. Irizarry Rivera is being paid \$150 per hour for his services in this case.

#### **XIV. Expert Witness CV**

Please refer to attached CV.



**FINANCIAL OVERSIGHT AND MANAGEMENT BOARD  
FOR PUERTO RICO**

**May 3, 2019**

**UNANIMOUS WRITTEN CONSENT APPROVING EXECUTION OF DEFINITIVE  
RESTRUCTURING SUPPORT AGREEMENT OF PUERTO RICO ELECTRIC POWER  
AUTHORITY**

WHEREAS, on June 30, 2016, the federal *Puerto Rico Oversight, Management, and Economic Stability Act* (“PROMESA”) was enacted; and

WHEREAS, section 101 of PROMESA created the Financial Oversight and Management Board for Puerto Rico (the “FOMB”); and

WHEREAS, on July 2, 2017, the FOMB filed a Title III petition on behalf of the Puerto Rico Electric Power Authority (“PREPA”) in the United States District Court for the District of Puerto Rico, commencing a case under PROMESA Title III (“PREPA’s Title III Case”); and

WHEREAS, the FOMB is the representative of PREPA in PREPA’s Title III Case pursuant to PROMESA section 315(b);

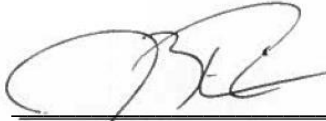
WHEREAS, on July 30, 2018 (i) PREPA, (ii) the Puerto Rico Fiscal Agency and Financial Advisory Authority (“AAFAF”), (iii) the FOMB, (iv) the members of the Ad Hoc Group of PREPA Bondholders, entered into the Preliminary RSA; and

WHEREAS, attached hereto as Exhibit A is a proposed Definitive Restructuring Support Agreement (“Definitive RSA”) to be entered into by and among: (i) PREPA, (ii) AAFAF, (iii) the FOMB, (iv) the members of the Ad Hoc Group of PREPA Bondholders identified on Annex A to the Definitive RSA, as such members may change from time to time in accordance with Section 6(c)(vii) of the Definitive RSA (collectively, the “Ad Hoc Group”), (v) any other persons who beneficially own or control Uninsured Bonds (as defined in the Definitive RSA) and are party to the Definitive RSA or execute and deliver a Joinder Agreement in the form of Exhibit A to the Definitive RSA (such persons, together with the Ad Hoc Group, the “Uninsured Supporting Holders”) and (vi) Assured Guaranty Corp. and Assured Guaranty Municipal Corp. (collectively, “Assured” and together with the Uninsured Supporting Holders, the “Supporting Holders”); and a

WHEREAS, after substantial deliberations and consultations with its advisors, the FOMB has determined to enter into the Definitive RSA;

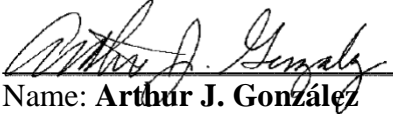
NOW, THEREFORE, IT IS HEREBY RESOLVED THAT the FOMB authorizes its Executive Director to execute the Definitive RSA on behalf of the FOMB

Agreed and authorized as of the date first  
set forth above.

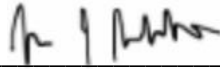
By:   
Name: **José B. Carrión**  
Title: Chair and Member

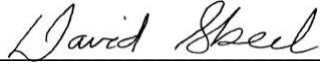
By:   
Name: **Andrew G. Biggs**  
Title: Member

By:   
Name: **Carlos M. García**  
Title: Member

By:   
Name: **Arthur J. González**  
Title: Member

By:   
Name: **José R. González**  
Title: Member

By:   
Name: **Ana J. Matosantos**  
Title: Member

By:   
Name: **David A. Skeel, Jr.**  
Title: Member

**Exhibit A**

Definitive Restructuring Support Agreement

## DEFINITIVE RESTRUCTURING SUPPORT AGREEMENT

This Definitive Restructuring Support Agreement (together with the annexes, exhibits and schedules attached hereto, as each may be amended, restated, supplemented, or otherwise modified from time to time in accordance with the terms hereof, this “**Agreement**” or the “**Definitive RSA**”), dated as of May 3, 2019, is entered into by and among: (i) the Puerto Rico Electric Power Authority (“**PREPA**”), (ii) the Puerto Rico Fiscal Agency and Financial Advisory Authority (“**AAFAF**”), (iii) the Financial Oversight and Management Board for Puerto Rico (“**FOMB**”), (iv) the members of the Ad Hoc Group of PREPA Bondholders identified on Annex A hereto, as such members may change from time to time in accordance with Section 6(c)(vii) (collectively, the “**Ad Hoc Group Members**” or the “**Ad Hoc Group**,” and each individually, an “**Ad Hoc Group Member**”), (v) any other persons who beneficially own or control Uninsured Bonds and are party to this Agreement or execute and deliver a Joinder Agreement in the form of Exhibit A hereto (such persons, together with the Ad Hoc Group Members, the “**Uninsured Supporting Holders**”) and (vi) Assured Guaranty Corp. and Assured Guaranty Municipal Corp. (collectively, “**Assured**” and together with the Uninsured Supporting Holders, the “**Supporting Holders**”). This Agreement collectively refers to FOMB, AAFAF, PREPA, and the Supporting Holders as the “**Parties**” and each individually as a “**Party**.”

**WHEREAS**, PREPA is the issuer of power revenue bonds and power revenue refunding bonds (together, the “**Bonds**,” and persons who beneficially own or control Bonds, “**Bondholders**”) issued and outstanding pursuant to that certain Trust Agreement, dated as of January 1, 1974, as amended and supplemented (the “**Trust Agreement**”), between PREPA and U.S. Bank National Association (in its capacity as successor trustee, the “**Trustee**”).

**WHEREAS**, in connection with the issuance of certain of the Bonds (such Bonds, the “**Insured Bonds**”), PREPA entered into various insurance agreements with the Trustee corresponding to insurance policies issued by certain monoline insurers (such monoline insurers, the “**Insurers**”, such insurance policies to which any of such Insurers is currently a party, and the insurance agreements related thereto, collectively, the “**Bond Insurance Agreements**” and, together with the Trust Agreement, the Bonds, the resolutions approving the Bonds, and any other agreements, supplements, amendments, or other documents executed, adopted, or delivered in connection with the issuance or maintenance of the Bonds, the “**Bond Documents**”). Any Bonds that are not Insured Bonds are referred to herein as “**Uninsured Bonds**.”

**WHEREAS**, the total principal amount of Uninsured Bonds that are beneficially owned by each member of the Ad Hoc Group and each other Supporting Holder as of the date hereof is set forth on their respective signature pages hereto.

**WHEREAS**, as of the date hereof, the total principal amount of Bonds that are beneficially owned or that are insured by Assured under the Bond Insurance Agreements is [REDACTED].

**WHEREAS**, on June 30, 2016, the Puerto Rico Oversight, Management, and Economic Stability Act was signed into law by the President of the United States (P.L. 114-187, “**PROMESA**”).

**WHEREAS**, PROMESA created FOMB with certain powers over the finances and

restructuring process with respect to the Commonwealth of Puerto Rico and its instrumentalities as provided for in PROMESA, and FOMB has designated PREPA as a Covered Territorial Instrumentality (as defined in PROMESA).

**WHEREAS**, pursuant to Act 2-2017, AAFAF was granted authority over reaching agreements with creditors on any debt issued by any government entity of the Commonwealth of Puerto Rico.

**WHEREAS**, on July 2, 2017, FOMB filed a Title III petition on behalf of PREPA (together with related adversary proceedings, the “**Title III Case**”) in the Title III Court.

**WHEREAS**, FOMB is the representative of PREPA in the Title III Case pursuant to PROMESA section 315(b) with the sole authority to file and seek confirmation of a Plan for PREPA.

**WHEREAS**, the Parties have engaged in good faith, arms-length negotiations regarding the principal terms of a proposed restructuring of the Bonds subject to this Agreement to be implemented in a manner to be mutually agreed upon and as set forth in this Agreement.

**WHEREAS**, FOMB and AAFAF consent to PREPA’s entering into this Agreement and to PREPA exercising its rights under this Agreement (including its rights to terminate this Agreement and/or its right to consent to any waiver or amendment in accordance with the provisions of this Agreement).

**WHEREAS**, on July 30, 2018, certain of the Parties entered into the Preliminary RSA (as defined below), with the intent of entering into this Agreement that shall replace, supersede and terminate any of the obligations and covenants in the Preliminary RSA.

**WHEREAS**, the Parties desire to express to each other their mutual support and commitment with respect to the Restructuring, including matters discussed in this Agreement.

**NOW, THEREFORE**, in consideration of the promises and the mutual covenants and agreements set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, agree as follows:

**Section 1     Certain Definitions & Rules of Interpretation.**

(a)     Definitions. Each undefined capitalized term shall have the meaning given to it in the Bankruptcy Code as incorporated into PROMESA if defined therein. As used in this Definitive RSA, the following terms have the following meanings:

- (i)     “**9019 Order**” means an order approving the 9019 Settlement.
- (ii)    “**9019 Settlement**” has the meaning given to such term in Section 2(b).
- (iii)   “**AAFAF**” has the meaning given to such term in the Preamble.



(iv) “**Acceleration Price**” has the meaning given to such term in the Recovery Plan Term Sheet.

(v) “**Act 4-2016**” means the Puerto Rico Electric Power Authority Revitalization Act 4-2016, as amended through the date hereof.

(vi) “**Adequate Protection Payments**” has the meaning given to such term in Section 2(e)(vii).

(vii) “**Ad Hoc Group**” has the meaning given to such term in the Preamble.

(viii) “**Ad Hoc Group Member(s)**” has the meaning given to such term in the Preamble.

(ix) “**Ad Hoc Group Waiver and Support Fee**” has the meaning given to such term in Section 4(a).

(x) “**Additional Definitive Documents**” or “**Additional Definitive Documentation**” means all documents, including agreements, resolutions, instruments, legislation, rules, regulations, opinions, and orders, (other than Definitive Documents) that are necessary or desirable to implement, or otherwise relate to, this Definitive RSA or the Restructuring, including any Plan (including any supplements thereto), qualifying modification, restructuring, or exchange documents, any disclosure statement (including the Disclosure Statement), any order approving such disclosure statement (including the Disclosure Statement Order) and any information materials required pursuant to PROMESA, the Confirmation Order, filings with PREB concerning the Transition Charge, the PREB Order, and shall include any attachments, exhibits, schedules, or other addendums to such documents, and any documents ancillary to such documents.

(xi) “**Administrative Claim**” has the meaning given to such term in Section 2(d)(iii).

(xii) “**Administrative Claim Commencement**” means (a) May 1, 2019 for (x) Assured Insured Bonds, (y) Uninsured Bonds that are subject to this Definitive RSA within twenty-one (21) days from the date of this Agreement and (z) for purposes of Administrative Claims accruing on Waiver and Support Fees, (b) the date of entry of the 9019 Order for Uninsured Bonds that become subject to the Definitive RSA between the date that is twenty-one (21) days from the date of this Agreement and the date of entry of the 9019 Order, (c) September 1, 2019 for Uninsured Bonds made subject to this Definitive RSA after the date of entry of the 9019 Order and prior to September 1, 2019, and (d) the first day of the month after the end of any Joinder Period for Uninsured Bonds made subject to this Definitive RSA during such Joinder Period; provided that if the Settlement Motion is denied or reversed on appeal and a Stipulated Treatment Termination results, no Administrative Claim shall have accrued.

(xiii) “**Agreement**” has the meaning given to such term in the Preamble.

(xiv) “**Allowed Claim**” has the meaning given to such term in Section 2(c)(i).

(xv) “**Applicable Bond Claim**” means, in respect of any Bond, the principal amount of such Bond plus interest accrual at the contract rate through May 1, 2019.

(xvi) “**Assured**” has the meaning given to such term in the Preamble.

(xvii) “**Assured Acceleration Price Payment Option**” has the meaning given to such term in the Recovery Plan Term Sheet.

(xviii) “**Assured Bondholder Elections**” has the meaning given to such term in the Recovery Plan Term Sheet.

(xix) “**Assured Election**” has the meaning given to such term in the Recovery Plan Term Sheet.

(xx) “**Assured Insurance Policies**” has the meaning given to such term in the Recovery Plan Term Sheet.

(xxi) “**Assured Insured Bonds**” means the Bonds insured by Assured other than Bonds insured by Assured on a secondary basis (the “**Assured/Syncora Secondary Bonds**”) that are primarily insured by Syncora Guarantee Inc. (“**Syncora**”).<sup>1</sup>

(xxii) “**Assured Insured Interest Rate Swaps**” means (i) that certain International Swap and Derivatives Association, Inc. Master Agreement, including its related Schedule and Credit Support Annex, each dated as of April 18, 2007, by and between PREPA and JPMorgan Chase Bank, N.A., and a transaction entered into pursuant to such documents and reflected in that certain confirmation dated April 27, 2007, insured by Assured pursuant to that certain Financial Guaranty Insurance Policy, #218491A-SWP, issued on May 3, 2007, and secured by PREPA’s “Subordinate Obligations Fund” established and governed by the Trust Agreement; and (ii) that certain International Swap and Derivatives Association, Inc. Master Agreement, including its related Schedule and Credit Support Annex, each dated as of April 18, 2007, by and between PREPA and UBS AG, and a transaction entered into pursuant to such documents and reflected in that certain confirmation dated as of April 18, 2007 and insured by Assured pursuant to that certain Financial Guaranty Insurance Policy, No. 208491B-SWP, dated as of May

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<sup>1</sup> With respect to the Assured/Syncora Secondary Bonds, the Government Parties agree to work collaboratively with Assured on a treatment consistent with the Assured Treatment for such Assured/Syncora Secondary Bonds prior to the Disclosure Statement filing date.

3, 2007, and secured by PREPA's "Subordinate Obligations Fund" established and governed by the Trust Agreement.

(xxiii) "**Assured Securitization Bonds**" means Securitization Bonds allocable to holders of Assured Insured Bonds, Securitization Bonds allocable to Assured as a beneficial owner of Uninsured Bonds identified on Assured's signature page hereto, or Securitization Bonds that Assured is otherwise entitled to receive, in each case in accordance with the terms of this Definitive RSA.

(xxiv) "**Assured Treatment**" means the treatments set forth in the Recovery Plan Term Sheet with respect to Assured on the account of the Assured Insured Bonds, the Uninsured Bonds identified on Assured's signature page hereto that are beneficially owned by Assured and the Assured Insured Interest Rate Swaps.

(xxv) "**Bankruptcy Code**" means title 11 of the United States Code, as amended, §101, *et seq.*

(xxvi) "**Bankruptcy Rule(s)**" means the Federal Rules of Bankruptcy Procedure.

(xxvii) "**Bond(s)**" has the meaning given to such term in the Recitals.

(xxviii) "**Bond Claim**" means the Claim(s) in respect of any Bond.

(xxix) "**Bond Counsel**" means U.S. nationally recognized bond counsel retained by SPV.

(xxx) "**Bond Documents**" has the meaning given to such term in the Recitals.

(xxxi) "**Bond Insurance Agreements**" has the meaning given to such term in the Recitals.

(xxxii) "**Bond Qualified Transferee**" has the meaning given to such term in Section 6(c)(i).

(xxxiii) "**Bondholder(s)**" has the meaning given to such term in the Recitals.

(xxxiv) "**Bondholder Breach**" shall mean, whether prior to or after a Securitization Termination (a) any Supporting Holder commences or joins a Bondholder Litigation; (b) a Supporting Holder takes any action that has a material adverse effect on any Transformation Transaction; or (c) a breach by a Supporting Holder of any of the Bondholder Breach Covenants, or any of the representations set forth in Section 11 are untrue as to such Supporting Holder in any material respect, which in the case of each of clauses (a)-(c), remains uncured for a period

of twenty (20) business days after the receipt by such Supporting Holder of notice in accordance with Section 27 of such breach from any Government Party.

(xxxv) “**Bondholder Breach Covenants**” means the covenants of the Supporting Holders set forth in Sections 2(a), 2(f)(ii), 3(a), 3(b), 3(c), 3(l), 3(n), 5(a), 5(b), 6(a)(i), 6(b), 6(c)(i) (subject to the provisions of Section 6(c)(ii)), and 6(d) of this Agreement.

(xxxvi) “**Bondholder Litigation**” means (A) any litigation, action, or claim (including, without limitation, the Monoline Motion) by the Trustee, a Bondholder or insurer of Bonds involving or directly relating to PREPA or the Transformation Transaction, including appeals related thereto, in any court of competent jurisdiction including, but not limited to, the Title III Court, (a) seeking relief from the automatic stay for any purpose, including to allow Bondholders to seek appointment of a receiver or to exercise any rights or remedies under the Trust Agreement or the Puerto Rico Electric Power Authority Act (Act 83-1941), as amended (including actions as a Bondholder on account of the Bonds and including seeking adequate protection (other than the Adequate Protection Payments if required under this Definitive RSA or the 9019 Order)), or under any other law, rule, or regulation relating to PREPA, the Transformation Transaction or the Bonds, (b) pursuing such rights or remedies with or without such stay relief, (c) seeking adequate protection (other than the Adequate Protection Payments if required under this Definitive RSA or the 9019 Order) or other payments under the Trust Agreement (including under section 922(d) of the Bankruptcy Code (if applicable)), or (d) directing the Trustee to do any of the foregoing, and (B) the Supporting Holders providing legal or financial advice or assistance to any other party pursuing any Bondholder Litigation. “Bondholder Litigation” shall not include actions taken by Supporting Holders in capacities other than their capacities as Bondholders or insurers of Bonds, and shall also not include participation in any litigation related to the Appointments Clause; provided that no Supporting Holder shall oppose the Settlement Motion in any capacity, and doing so shall constitute Bondholder Litigation.

(xxxvii) “**Chosen Court**” has the meaning given to such term in Section 15.

(xxxviii) “**Claim**” has the meaning given to such term in section 101(5) of the Bankruptcy Code.

(xxxix) “**Confirmation Order**” means a court order pursuant to Title III of PROMESA approving the Plan as satisfying the requirements of Title III of PROMESA, any proposed version of which shall implement the Definitive RSA and provide necessary findings and legal conclusions to support the Transformation Transaction.

(xl) “**CUSIP**” means a Committee on Uniform Securities Identification Procedures number.

(xli) “**Demand Protections**” means the protections set forth on Schedule I-A to the Securitization Term Sheet.

(xlii) “**Definitive Documents**” or “**Definitive Documentation**” means the Settlement Motion, the 9019 Order, the Tolling Agreement, the Securitization Documents, IRS Private Letter Ruling Request (if any), IRS Private Letter Ruling (if any), Amended Act (as defined in the Securitization Term Sheet), and any agreements, instruments, schedules, resolutions, exhibits, supplements, annexes, appendices, opinions, legislation, rules, regulations, and orders related to the foregoing.

(xliii) “**Delayed Implementation Date**” has the meaning given to such term in Section 2(e)(i).

(xliv) “**Disclosure Statement**” means the disclosure statement in respect of the Plan, approved by an order of the Title III Court as containing adequate information under section 1125(b) of the Bankruptcy Code, and disseminated to creditors of PREPA in connection with the solicitation of votes on the Plan.

(xlv) “**Disclosure Statement Order**” means the order to be entered by the Title III Court authorizing the use of the Disclosure Statement for soliciting votes on the Plan and establishing solicitation procedures.

(xlvi) “**Dismissal Motion**” has the meaning given to such term in Section 3(a).

(xlvii) “**DSRF**” has the meaning given to such term in the Recovery Plan Term Sheet.

(xlviii) “**Effective Date**” means the date upon which all the conditions to the effectiveness of the Plan have been satisfied or waived in accordance with its terms, which conditions precedent shall include the provision of the Securitization Bond Treatment or Stipulated Treatment, as applicable, subject to the Definitive Documents and the Additional Definitive Documents.

(xlix) “**EMMA**” means the Municipal Securities Rulemaking Board’s Electronic Municipal Market Access system at [www.emma.msrb.org](http://www.emma.msrb.org).

(l) “**Exchange Ratio**” has the meaning given to such term in the Recovery Plan Term Sheet.

(li) “**Financial Indebtedness**” means any Bonds or any funded debt owed to the fuel line lenders.

(lii) “**Fiscal Plan**” means the certified fiscal plan (as defined in PROMESA) for PREPA, as may be amended and certified in accordance with PROMESA.

(liii) “**FOMB**” has the meaning given to such term in the Preamble.

(liv) “**Force Majeure Event**” has the meaning given to such term in Section 8.

(lv) “**Government Parties**” means collectively AAFAF, FOMB, and PREPA, and each of AAFAF, FOMB, and PREPA is referred to individually as a “**Government Party**.”

(lvi) “**Increased Settlement Charge**” has the meaning given to such term in Section 2(e)(i).

(lvii) “**Increased Settlement Payment**” has the meaning given to such term in Section 2(e)(ii).

(lviii) “**Individual Termination**” has the meaning given to such term in Section 9(d)(v).

(lix) “**Insured Bonds**” has the meaning given to such term in the Recitals.

(lx) “**Insurers**” has the meaning given to such term in the Recitals.

(lxi) “**IRS**” means the United States Internal Revenue Service.

(lxii) “**IRS Private Letter Ruling**” means all private letter rulings or closing agreements, if any, that Bond Counsel requires in order to deliver an unqualified opinion that interest on all or a portion of the Securitization Bonds is excludable from gross income for federal income tax purposes and exempt from all state and Puerto Rico taxes.

(lxiii) “**IRS Private Letter Ruling Request**” means any documents submitted to the IRS requesting or supporting an IRS Private Letter Ruling and any related material submissions, if any, including any written pre-submission communications.

(lxiv) “**Joinder Agreement**” means a joinder agreement in the form of Exhibit A hereto.

(lxv) “**Joinder Period**” has the meaning given to such term in Section 2(c)(iii).

(lxvi) “**Lien Challenge**” means any action that a Government Party (including, without limitation, as to FOMB, any future or successor to FOMB and any members thereof) may bring to challenge the liens and claims (including the validity, priority, nature or extent of any liens or security interests) related to the Bonds.

(lxvii) “**Market Fixed Rate**” has the meaning given to such term in the Recovery Plan Term Sheet.

(lxviii) “**Monoline Motion**” means the Motion of National Public Finance Guarantee Corporation, Assured Guaranty Corp., Assured Guaranty Municipal Corp., and Syncora Guarantee Inc. for Relief from the Automatic Stay to Allow Movants to Enforce their Statutory Right to Have a Receiver Appointed [Case No. 17-04780, Dkt. No. 975].

(lxix) “**Other Insured Bonds**” has the meaning given to such term in Section 6(d)(i).

(lxx) “**Outside Date**” means June 30, 2020.

(lxxi) “**Parties**” has the meaning given to such term in the Preamble.

(lxxii) “**Permitted Objection**” means an objection by a Supporting Holder to a Plan, qualifying modification, exchange, or restructuring of Bonds subject to this Agreement (i) solely on the grounds that it does not comply with this Agreement or does not provide the Stipulated Treatment, as applicable, (ii) in the case of an Uninsured Supporting Holder that holds Other Insured Bonds, a limited objection to its treatment solely on account of its Insured Bonds with respect to the treatment of the Bond Insurance Agreements, including the terms, conditions, and structure of any custodial trust or escrow arrangement relating to such Bond Insurance Agreements, if such treatment is unreasonable or violates the rights of the beneficial holders of the Other Insured Bonds under the Bond Insurance Agreements and to the extent it would have been able to file such objection if it were not a Supporting Holder or (iii) in the case of an Uninsured Supporting Holder that holds Assured Insured Bonds, a limited objection to its treatment solely on account of its Assured Insured Bonds with respect to the treatment of the Bond Insurance Agreements, including the terms, conditions, and structure of any custodial trust or escrow arrangement relating to such Bond Insurance Agreements, if such treatment violates the rights of the beneficial holders of the Assured Insured Bonds under the Bond Insurance Agreements and to the extent it would have been able to file such objection if it were not a Supporting Holder. Notwithstanding anything herein to the contrary, a Permitted Objection shall not be considered a Bondholder Litigation or a Bondholder Breach.

(lxxiii) “**Permitted Puerto Rico Objection**” means an objection by AAFAF to a Plan proposed by FOMB, including an objection to the treatment or classification of any Claims under the Plan, other than an objection that relates to the classification or treatment of the Bond Claims or Bonds.

(lxxiv) “**PIK Payments**” has the meaning given to such term in the Recovery Plan Term Sheet.

(lxxv) “**Plan**” means the plan of adjustment (including any supplements thereto) for PREPA pursuant to Title III of PROMESA.

(lxxvi) “**PREB**” means the Puerto Rico Energy Bureau.

(lxxvii) “**PREB Order**” means any order(s) from PREB concerning this Agreement.

(lxxviii) “**Preliminary RSA**” means that certain Preliminary Restructuring Support Agreement (including the exhibits and annex thereto), dated as of July 30, 2018, by and among PREPA, AAFAF, FOMB and the Bondholders who are or were parties to such agreement, as extended from time to time.

(lxxix) “**PREPA**” has the meaning given to such term in the Preamble

(lxxx) “**PROMESA**” has the meaning given to such term in the Recitals.

(lxxxii) “**Qualified Marketmaker**” means an entity that (x) holds itself out to the market as standing ready in the ordinary course of its business to purchase from customers and sell to customers debt securities such as the Bonds or enter with customers into long and short positions in debt securities such as the Bonds, in its capacity as a dealer or market maker in such Bonds; (y) is in fact regularly in the business of making a market in debt securities; and (z) if transacting with respect to Bonds, is registered with the SEC and Financial Institutions Regulatory Authority..

(lxxxiii) “**Recovery Plan Term Sheet**” means the term sheet attached Exhibit C hereto.

(lxxxiv) “**Required Holders**” means the Required Uninsured Holders and Assured.

(lxxxv) “**Required Parties**” means at any time (i) each Government Party that is party to this Definitive RSA at such time, (ii) the Required Uninsured Holders, and (iii) Assured.

(lxxxvi) “**Required Threshold**” means (A) no later than two (2) business days prior to hearing on the Settlement Motion (i) Uninsured Supporting Holders holding a minimum of 60% in aggregate principal amount of the Uninsured Bonds or (ii) Supporting Holders holding or insuring a minimum of 60% in aggregate principal amount of all Bonds and (B) no later than September 1, 2019 (and continuing thereafter) (i) Uninsured Supporting Holders holding a minimum of 67% in aggregate principal amount of the outstanding Uninsured Bonds and (ii) Supporting Holders holding or insuring a minimum of 67% in aggregate principal amount of all outstanding Bonds.

(lxxxvii) “**Required Uninsured Holders**” means, as of any date of determination, Ad Hoc Group Members that beneficially own or control at least a majority in principal amount of the aggregate amount of the Uninsured Bonds beneficially owned or controlled by all Ad Hoc Group Members as of such date.



(lxxxvii) “**Restructuring**” means the proposed restructuring of the Bonds subject to this Agreement as provided in this Agreement.

(lxxxviii) “**RSA Execution Date**” means the date on which counterpart signature pages to this Definitive RSA shall have been executed and delivered by PREPA, AAFAF, FOMB, Assured and the members of the Ad Hoc Group.

(lxxxix) “**RSA Marketmaker**” means a Qualified Marketmaker acting in its capacity as a Qualified Marketmaker that is party to an RSA Marketmaker Joinder approved by the Required Uninsured Holders and each Government Party.

(xc) “**RSA Marketmaker Joinder**” means a joinder agreement in the form attached as Exhibit B hereto, with such modifications as are acceptable to the Required Uninsured Holders and each Government Party. The Ad Hoc Group and Government Parties agree to work together in good faith to agree on reasonable modifications to such form of joinder agreement to address any concerns that may be raised by a Qualified Marketmaker.

(xci) “**RSA Marketmaker List**” means a list of RSA Marketmakers, an updated version of which shall be available at a dedicated URL and also posted on EMMA. The RSA Marketmaker List shall be promptly updated (A) to add any new RSA Marketmaker that signs an RSA Marketmaker Joinder and (B) to remove any RSA Marketmaker that (x) fails to materially comply with the requirements of the RSA Marketmaker Joinder or (y) is no longer regularly in the business of making a market in Uninsured Bonds subject to this RSA. The dedicated URL for the RSA Marketmakers List shall be posted on EMMA. The initial RSA Marketmaker List shall be delivered to the Supporting Holders party hereto at the time of such delivery and shall include the date on which the RSA Marketmaker Period starts.

(xcii) “**RSA Marketmaker Period**” means the period after the date set forth on the initial RSA Marketmaker List delivered to the Supporting Holders (which shall not be earlier than the 15<sup>th</sup> day following the RSA Execution Date).

(xciii) “**SEC**” means the United States Securities and Exchange Commission.

(xciv) “**Securitization Bonds**” or “**Securitization Instruments**” means the Tranche A Bonds and Tranche B Bonds.

(xcv) “**Securitization Bond Treatment**” means the issuance of Securitization Bonds on the terms and conditions set forth in this Definitive RSA. The Securitization Bonds shall be issued on the Effective Date of the Plan and shall not be issued pursuant to a Title VI qualifying modification or similar structure without the consent of the Government Parties and Required Holders.

(xcvi) “**Securitization Documents**” means all documents, resolutions, certificates, and opinions, relating to the Securitization Instruments or Transition Charge, including, without limitation, any resolutions, trust agreements, insurance

or surety documents, servicing agreements, depository agreements, the Securitization Instruments, governing documents of SPV, and any documents entered into or adopted by SPV or PREPA affecting the Securitization Instruments or the holders thereof.

(xcvii) “**Securitization Protections Term Sheet**” means Schedule I-B to the Securitization Term Sheet.

(xcviii) “**Securitization Termination**” has the meaning given to such term in Section 9(b).

(xcix) “**Securitization Term Sheet**” means the Term Sheet attached as Annex A to the Recovery Plan Term Sheet.

(c) “**Settlement Charge**” means a charge of 1 c/kWh to be implemented by PREPA and included in its customer bills by July 1, 2019.

(ci) “**Settlement Motion**” has the meaning given to such term in Section 2(a).

(cii) “**Settlement Payments**” means commencing August 30, 2019 and continuing through the earliest of (A) a Stipulated Treatment Termination, (B) a termination pursuant to Section 9(d)(vi) as to PREPA or AAFAF, (C) the Effective Date, or (D) dismissal of PREPA’s Title III Case, monthly settlement payments to be made by PREPA equal to (i) the number of kilowatt hours PREPA billed during the previous month, multiplied by (ii) 92% (representing the projected collection percentage and certain statutory exceptions), multiplied by (iii) the Settlement Charge.

(ciii) “**Solicitation**” means the solicitation of votes for the Plan pursuant to, and in compliance with, PROMESA or any applicable nonbankruptcy law, rule, or regulation governing the adequacy of disclosure in connection with such solicitation.

(civ) “**SPV**” or “**Issuer**” means a bankruptcy remote special purpose vehicle (which may be the Puerto Rico Electric Power Authority Revitalization Corporation, or another entity as agreed by the Required Parties, established by the Government of Puerto Rico, and used for the Restructuring).

(cv) “**Stay Motion**” has the meaning given such term in Section 3(b).

(cvi) “**Stipulated Treatment**” has the meaning given such term in Section 2(c)(ii).

(cvii) “**Stipulated Treatment Termination**” has the meaning given such term in Section 9(c)(i).

(cviii) “**Super Majority Holders**” means the Super Majority Uninsured Holders and Assured.

(cix) “**Super Majority Uninsured Holders**” means, as of the date of determination, Ad Hoc Group Members that beneficially own or control at least two-thirds in principal amount of the aggregate amount of the Uninsured Bonds beneficially owned or controlled by all the Ad Hoc Group Members as of such date.

(cx) “**Supporting Holder(s)**” has the meaning given to such term in the Preamble.

(cxi) “**Surviving Administrative Claim**” has the meaning given to such term in Section 2(c)(iv).

(cxii) “**Swap MTM Amount**” has the meaning given to such term in the Recovery Plan Term Sheet.

(cxiii) “**TC Cap**” has the meaning given to such term in the Recovery Plan Term Sheet.

(cxiv) “**Title III Case**” has the meaning given to such term in the Recitals.

(cxv) “**Title III Court**” means the United States District Court for the District of Puerto Rico in its capacity as the court presiding over the Title III Case.

(cxvi) “**Tolling Agreement**” has the meaning given to such term in Section 3(c).

(cxvii) “**Tracking Mechanics Term Sheet**” has the meaning given to such term in Section 2(f)(i).

(cxviii) “**Tranche A Bonds**” has the meaning given to such term in the Recovery Plan Term Sheet.

(cxix) “**Tranche B Bonds**” has the meaning given to such term in the Recovery Plan Term Sheet.

(cxx) “**Transfer**” has the meaning given to such term in Section 6(c)(i).

(cxxi) “**Transformation Transaction**” means any and all transactions supported by the Government Parties whereby PREPA or the Government of Puerto Rico establishes one or more sales, leases, public-private partnerships, management contracts, concessions, or similar arrangements or transactions related to any of PREPA’s functions, assets, services, or facilities, including without limitation, any “PREPA Transaction” as defined in the *Puerto Rico Electric Power System Transformation Act*, Act 120-2018 (approved June 21, 2018).

(cxxii) “**Transition Charge**” has the meaning given to such term in the Recovery Plan Term Sheet.

(cxxiii) “**Transition Charge Termination**” has the meaning given to such term in the Recovery Plan Term Sheet.

(cxxiv) “**Triggering Event**” means (i) a Stipulated Treatment Termination, (ii) the continuation of the Monoline Motion or commencement of any other Bondholder Litigation, provided, however, that if any Bondholder Litigation is commenced by any party, the Parties shall work in good faith to have such Bondholder Litigation dismissed, stayed, or withdrawn and a Triggering Event shall not occur as a result of such Bondholder Litigation until three (3) business days after any Government Party provides notice in accordance with Section 27 to the Required Holders and the Trustee that it has determined in good faith in its sole discretion that commencing a Lien Challenge is necessary to protect the rights of any Government Party, or (iii) when the Government Parties determine in good faith that pursuit of a Lien Challenge is necessary as part of the plan formulation process (e.g., in response to an actual or anticipated disclosure statement or plan objection) to provide the Supporting Holders the Securitization Bond Treatment or to provide the Stipulated Treatment after a Securitization Termination.

(cxxv) “**Trust Agreement**” has the meaning given to such term in the Recitals.

(cxxvi) “**Trustee**” has the meaning given to such term in the Recitals.

(cxxvii) “**Uninsured Bond(s)**” has the meaning given to such term in the Recitals.

(cxxviii) “**Uninsured Supporting Holders**” has the meaning give to such term in the Preamble.

(cxxix) “**Waiver and Support Fees**” means the fees set forth in Sections 4(a)-(c).

(cxxx) “**Withdrawal Event**” has the meaning given to such term in Section 9(a).

(b) Rules of Interpretation.

(i) Except as expressly set forth herein, nothing contained herein shall be construed to alter, waive or otherwise affect the respective powers, rights, or responsibilities of FOMB, AAFAF, or PREPA, whether such powers, rights, or responsibilities arise under PROMESA or other applicable law.

(ii) Each Supporting Holder is a party hereto solely in its capacity as the beneficial owner or insurer of Bonds issued by PREPA; provided that no Supporting Holder shall oppose the Settlement Motion in any capacity.

(iii) When a reference is made in this Definitive RSA to a Section, Exhibit, or Schedule, such reference shall be to a Section, Exhibit, or Schedule, respectively, of or attached to this Definitive RSA unless otherwise indicated. Each of the exhibits, annexes and schedules to this Definitive RSA is expressly incorporated herein and made a part of this Definitive RSA, and all references to this Agreement or this Definitive RSA (including by use of words such as “herein”) shall include such exhibits, annexes and schedules. Unless the context of this Definitive RSA otherwise requires, (a) words using the singular or plural number also include the plural or singular number, respectively, (b) the terms “hereof,” “herein,” “hereby” and derivative or similar words refer to this Definitive RSA, (c) the words “include,” “includes” and “including” when used herein shall be deemed in each case to be followed by the words “without limitation,” (d) the word “or” shall not be exclusive and shall be read to mean “and/or,” (e) the word “person” shall be understood to refer to any individual, corporation, limited liability company, estate, partnership, joint venture, association, joint stock company, trust (including any beneficiary thereof), unincorporated organization, or government, or agency, instrumentality, or political subdivision thereof, (f) “business day” shall refer to any day other than a Saturday, Sunday or any other day on which banks located in New York, New York or San Juan, Puerto Rico are closed for business as a result of a federal, state, or local holiday, and (g) “writing,” “written,” and comparable terms refer to printing, typing, and other means of reproducing words (including electronic media) in a visible form, and any requirement that any notice, consent, or other information shall be provided in “writing” shall include email.

(iv) All Definitive Documents must be consistent with this Agreement and (other than in the case of the IRS Private Letter Ruling Request, which is subject to the consultation rights set forth in Section 7(b)(ii)) in form and substance mutually agreed upon by the Required Parties. If a Definitive Document must be entered by the Title III Court, enacted into law, or issued by the IRS, the as-entered, as-enacted, as-confirmed, or as-issued version of such Definitive Document must be consistent with this Agreement, and in form and substance reasonably acceptable to the Required Parties. Notwithstanding the foregoing, after a Securitization Termination, the form and substance of the Definitive Documents shall be deemed to be reasonably acceptable to the Required Uninsured Holders and Assured if such Definitive Documents provide the Stipulated Treatment and other required payments and otherwise comply with the surviving requirements of this Definitive RSA. Any reference in this Agreement to a Definitive Document means a Definitive Document that meets the standards in this Section 1(b)(iv).

(v) The Additional Definitive Documents or Additional Definitive Documentation must be in form and substance reasonably acceptable to each of the Government Parties and, if an Additional Definitive Document must be entered by the Title III Court, enacted into law, or issued by the IRS or PREB, the as-entered, as-enacted, as-confirmed, or as-issued version must be in form and substance reasonably acceptable to each of the Government Parties; provided that if the Additional Definitive Documents are not reasonably acceptable to AAFAF or PREPA and FOMB proceeds without such consent, nothing herein shall prevent

AAFAF from filing a Permitted Puerto Rico Objection. In addition, any portion of an Additional Definitive Document that materially relates to the treatment of the Bond Claims of Supporting Holders (including any portion relating to the Securitization Bonds, the Transition Charge or the Demand Protections) shall be consistent with this Agreement and in form and substance mutually agreed upon by the Required Parties, and nothing else in the Additional Definitive Documentation shall be materially inconsistent with this Agreement. If an Additional Definitive Document must be entered by the Title III Court, enacted into law, or issued by the IRS or PREB, then any portion of such Additional Definitive Document that relates to the treatment of the Bond Claims of Supporting Holders (including any portion relating to the Securitization Bonds, the Transition Charge or the Demand Protections) contained in the as-entered, as-enacted, as-confirmed, or as-issued version of such Additional Definitive Document must be in form and substance reasonably acceptable to the Required Parties, and nothing else in such Additional Definitive Document shall be materially inconsistent with this Agreement. Notwithstanding the foregoing, after a Securitization Termination, the form and substance of any portion of the Additional Definitive Documents that directly relates to the treatment of the Bond Claims of Supporting Holders shall be deemed to be reasonably acceptable to the Required Uninsured Holders and Assured if such portions of the Additional Definitive Document provide the Stipulated Treatment and other required payments and otherwise comply with the surviving requirements of this Definitive RSA. Any reference in this Agreement to an Additional Definitive Document (including provisions requiring such documents to be mutually agreed upon by, or acceptable to, the Required Parties) means an Additional Definitive Document that meets the standards in this Section 1(b)(v).

(vi) FOMB is a party hereto solely in its capacity as the representative of PREPA under PROMESA section 315(b), and AAFAF is a party hereto solely in its capacity as a representative of PREPA pursuant to Act 2-2017; provided that, without limiting the above, PREPA is entitled to exercise its rights under this Agreement (including its rights to terminate this Agreement and/or its right to consent to any waiver or amendment in accordance with the provisions of this Agreement) and provided further, that for purposes of determining whether a termination pursuant to Section 9 has occurred, (i) all actions of FOMB shall be treated only as actions of FOMB, and (ii) all actions of AAFAF shall be treated only as actions of AAFAF.

## **Section 2     9019 Settlement.**

(a) FOMB shall file a motion (the “**Settlement Motion**”) together with a draft 9019 Order with the Title III Court seeking approval of this Definitive RSA and 9019 Settlement within ten (10) business days after the execution of this Definitive RSA by the Government Parties, the Ad Hoc Group Members and Assured. Within five (5) business days of the filing of the Settlement Motion, the Ad Hoc Group and Assured shall direct the Trustee, pursuant to the Trust Agreement, to join the Settlement Motion. By signing the RSA after the RSA Execution Date, a Supporting Holder shall be deemed to have joined in such direction. None of the Supporting Holders or the Government Parties shall be required by this Definitive RSA to provide any

indemnity to the Trustee and any relief requested under the Settlement Motion shall be contingent on the entry of the 9019 Order that includes a full exculpation of the Trustee and the directing Supporting Holders for any liability for joining the Settlement Motion and entering into the Tolling Agreement or providing direction in respect of the same. Concurrently with the filing of the Settlement Motion, the FOMB shall file a motion (the “**Dismissal Motion**”) and form of order seeking dismissal of the Monoline Motion, which Dismissal Motion and form of order shall be in form and substance reasonably acceptable to the Required Parties.

(b) Once approved by the Title III Court, the 9019 Order shall constitute (A) a settlement of (i) the Bondholder Litigation including, without limitation, the Monoline Motion (which shall be settled as to the Supporting Holders and dismissed without prejudice to the renewal of any motion similar to the Monoline Motion by the Supporting Holders in the event of a Stipulated Treatment Termination or an Individual Termination as to Assured only (unless the Individual Termination is rescinded by the Government Parties as if such termination never occurred) and, in the event of such renewal, without prejudice to the Government Parties’ right to defend such motion) by all Supporting Holders, (ii) the Supporting Holders’ ability to exercise or assert any rights or remedies under the Trust Agreement or other applicable law (including seeking to lift the stay or to accomplish any of the foregoing) or to direct the Trustee or provide legal or financial advice or assistance to support any other parties in connection with any of the foregoing, and (iii) the Supporting Holders’ asserted right to receive any current payment or adequate protection payments on the Bonds (other than, in the case of Insured Bonds, payment from the Insurers under the Bond Insurance Agreements); (B) a tolling (including, without limitation, as to FOMB, any future or successor to FOMB and any members thereof) of all unexpired statutes of limitations for any causes of action related to the Bonds, including any Lien Challenge and any potential Bondholder Litigation, until forty-five (45) days after a Stipulated Treatment Termination; and (C) approval and authorization of (x) the Settlement Charge, the Settlement Payments, the Increased Settlement Charge, the Increased Settlement Payments, the Waiver and Support Fees, the Adequate Protection Payments, and the incurrence of the Administrative Claims, and (y) the right of the Supporting Holders to receive the Stipulated Treatment (collectively, the “**9019 Settlement**”). The 9019 Settlement shall terminate as to all Supporting Holders upon a Stipulated Treatment Termination and as to applicable individual Supporting Holder upon an Individual Termination.

(c) Allowed Claim and Stipulated Treatment.

(i) The 9019 Order shall provide that, if a Securitization Termination has occurred, then, except as otherwise set forth in this Definitive RSA in the event of an Individual Termination (as to such terminated Supporting Holder) or a Stipulated Treatment Termination (as to all Supporting Holders), each of the Supporting Holders shall be deemed to have an allowed secured claim in a face amount equal to (i) 73.25 % of the Applicable Bond Claim of the outstanding Bonds held or insured by such Supporting Holder, plus (ii) such Supporting Holder’s allocated share (if any) of the Waiver and Support Fees inclusive of interest accrual at the contract rate through Administrative Claim Commencement, plus (iii) in the case of Assured, to the extent that Assured’s Stipulated Treatment is required to be adjusted as described in Section 2(c)(ii) to compensate Assured for the loss of the

value of any portion of the Assured Treatment, the amount of such loss of value (the “**Allowed Claim**”).

(ii) The 9019 Order shall provide that, if a Securitization Termination occurs, then, except as set forth below in the event of an Individual Termination (as to such applicable holder) or a Stipulated Treatment Termination (as to all Supporting Holders), and solely for purposes of settlement and without prejudice to the rights of the Parties in any other context, (i) the Supporting Holders’ Allowed Claim shall be treated as if it were an allowed secured claim against the Net Revenues (as defined in the Trust Agreement) of PREPA in any subsequent Plan that is confirmed after a Securitization Termination, secured by collateral worth at least the amount of the Allowed Claim as of the Effective Date of such Plan, (ii) the foregoing shall be included in any Plan, qualifying modification, exchange, or other restructuring of Bonds subject to this Agreement, and (iii) in the case of Assured, Assured shall be provided the opportunity to wrap debt securities being issued on account of the Assured Insured Bonds, to provide a DSRF surety for such debt securities and receive the related premiums to the same extent as set forth in the Assured Treatment below; provided that if Assured is not offered the opportunity to provide such wrap, to provide such DSRF surety and receive such premiums, then Assured’s Stipulated Treatment shall be adjusted to compensate Assured for the loss of that value; and, provided further, that if Assured is offered the opportunity to provide such wrap, to provide such DSRF surety and receive such premiums, and it declines to do so, Assured’s stipulated treatment shall not be adjusted to include such value (collectively, the “**Stipulated Treatment**”).

(iii) If at any time after September 1, 2019, the Supporting Holders who have not committed a Bondholder Breach hold or insure less than the applicable Required Threshold, then upon notice in accordance with Section 27 from any of the Required Holders or any of the Government Parties, the remaining Supporting Holders shall have 60 days to obtain signatures to this Definitive RSA from additional Bondholders or acquire additional Uninsured Bonds such that the Bonds subject to this Definitive RSA equal or exceed the Required Threshold (each such 60 day period, a “**Joinder Period**”) and the Government Parties shall cooperate with the Supporting Holders in connection therewith including posting appropriate notices on EMMA; provided, however, that any such Joinder Period shall terminate no later than ten (10) days prior to the date of the hearing on the Disclosure Statement. Any Uninsured Bond that becomes subject to this Definitive RSA during a Joinder Period shall begin receiving its first pro rata share of any Settlement Payments and accruing Administrative Claims as of the applicable Administrative Claim Commencement. Bonds that have a particular Administrative Claim Commencement shall be identified by a separate CUSIP in accordance with Section 2(f) or, if mutually agreed to by the Required Parties, be subject to a special administrative claim bar date under the Plan. Uninsured Bonds purchased by Supporting Holders after September 1, 2019, at any period other than during a Joinder Period shall not be entitled to Administrative Claims, Settlement Payments, Increased Settlement Payments, or Adequate Protection Payments but



shall be subject to this Definitive RSA for all other purposes, including voting obligations and entitlement to the Stipulated Treatment.

(iv) The 9019 Order shall provide that in the event of a Securitization Termination then, and unless the Title III Case has been dismissed, until the occurrence of an Individual Termination (as to such applicable Bondholder) or a Stipulated Treatment Termination (as to all Supporting Holders), Settlement Payments (or Increased Settlement Payments or Adequate Protection Payments, as applicable) shall continue to be made to the Supporting Holders and the Administrative Claims shall continue to accrue. In the event of an Individual Termination (as to such applicable holder) or a Stipulated Treatment Termination (as to all Supporting Holders), any accrued and unpaid Administrative Claim shall be disallowed; provided that, with regard to a Stipulated Treatment Termination under Section 9(c)(i)(6), Supporting Holders will be entitled to an Administrative Claim that will have accrued through the date the Title III Court first denied confirmation of a Plan where such denial is not solely on grounds raised in an objection by PREPA or AAFAF (“**Surviving Administrative Claim**”).

(d) Settlement Payments and Administrative Claims.

(i) Subject to entry of the 9019 Order, the Government Parties shall implement and collect the Settlement Charge and make the Settlement Payments.

(ii) Subject to approval of the Title III Court, the Settlement Payments shall be made solely on account of Bonds subject to this Definitive RSA at the time such Settlement Payment is made on a pro rata basis based on the outstanding principal amounts of the Bonds subject to this Definitive RSA; provided that no Settlement Payment shall be made on any Bond that is not subject to this Definitive RSA by September 1, 2019 (unless such Bond is an Uninsured Bond that becomes subject to this Definitive RSA during a subsequent Joinder Period) and no Bondholder shall receive any Settlement Payments on account of Bonds held by such Bondholder after an Individual Termination as to such Bondholder. Any Settlement Payments made on account of Assured Insured Bonds shall be made to Assured.

(iii) If a Bond is subject to this Definitive RSA prior to Administrative Claim Commencement and the 9019 Order is entered (and a Stipulated Treatment Termination does not occur subsequently as a result of the 9019 Order being reversed on appeal), such Bond subject to this Definitive RSA shall be entitled to a stipulated administrative expense claim for

(x) an amount equivalent to the Tranche A Bond interest payments accrued in respect of such Bond (including accruals at the same rate on such interest payments that would have been due on any interest payment date for Tranche A Bonds if such bonds were issued as if such interest payments were paid in kind), less

(y) the amount of Settlement Payments or Increased Settlement Payments that are made on account of such Bond (such claim, the “**Administrative Claim**”)

from and after the Administrative Claim Commencement applicable to such Bond until the earliest of (A) a Stipulated Treatment Termination, (B) with respect to a Supporting Holder, an Individual Termination with respect to such Supporting Holder, or (C) the Effective Date of a Plan in PREPA’s Title III Case. The Administrative Claims shall also include accrual and payment-in-kind of interest on the Waiver and Support Fees.

(iv) In lieu of Settlement Payments and/or cash payment of Administrative Claims on the Effective Date of a Plan (to the extent the Government Parties elect to pay Administrative Claims in cash), an individual Supporting Holder may elect to receive Tranche A Bonds for its Administrative Claims at the Exchange Ratio for Administrative Claims; provided that such election shall be structured as between the Supporting Holders and in a manner that does not increase the aggregate Administrative Claim or Transition Charge that would otherwise be payable under this Definitive RSA. If no agreement is reached by the Required Holders on implementing the election as provided herein, then no such election shall be available.

(v) Effective on the earlier of May 1, 2019 and the date of entry of the 9019 Order, solely for purposes of the 9019 Settlement and recoveries under this Definitive RSA, interest accrual on the Bonds shall be deemed to terminate. In the event of a Stipulated Treatment Termination or an Individual Termination, all Parties reserve all rights regarding post-petition interest.

(e) Delayed Implementation Date.

(i) If a Title III plan for PREPA has not been confirmed and has not gone effective (and no other transaction has been consummated pursuant to which the Stipulated Treatment or the Securitization Bonds have been provided) by March 31, 2021 (the “**Delayed Implementation Date**”), and subject to and conditioned upon issuance or enactment of all required legislative and regulatory approvals, PREPA shall put into effect a charge equal to the Transition Charge that would have gone into effect on that date assuming the Effective Date occurred and Securitization Bonds were issued on such date, which charge shall thereafter increase from time to time as if the Securitization Bonds were outstanding (the “**Increased Settlement Charge**”).

(ii) Collections on account of the Increased Settlement Charge shall be (A) paid monthly (the “**Increased Settlement Payments**”), pro rata on account of Bonds that are subject to this Definitive RSA and became subject to this Definitive RSA prior to September 1, 2019 or, in the case of Uninsured Bonds, during a Joinder Period, unless otherwise mutually agreed to by the Required Parties on terms mutually agreed to by the Required Parties, and (B) applied (y) first on

account of accrued and unpaid Administrative Claims (subject to any election to receive the Administrative Claims in Tranche A Bonds as set forth in this Definitive RSA), and (z) after payment of the Administrative Claims, to reduction of the Allowed Claim or amount of the Tranche A Bonds (as applicable); provided, however, only amounts actually collected by PREPA on account of the Increased Settlement Charge are required to be distributed.

(iii) On and after the Delayed Implementation Date, the obligation to make Settlement Payments shall be replaced by the obligation to make Increased Settlement Payments.

(iv) On and after the Delayed Implementation Date, the accrual of Administrative Claims in favor of the eligible Bonds held or insured by Supporting Holders shall continue, to the extent not paid by the Increased Settlement Charge, for an amount equal to the higher of (i) an amount equivalent to Tranche A interest payments (including accruals on unpaid Administrative Claims as if such unpaid Administrative Claims were paid in kind semi-annually) and (ii) an amount equal to the difference between (A) the amount of any Increased Settlement Payments or Adequate Protection Payments that would have been required to have been made as set forth above and (B) the amount of any Increased Settlement Payments or Adequate Protection Payments actually received in respect of such Bond. If the payment (whether in cash or in Tranche A Bonds) of any resulting Administrative Claim under clause (ii) exceeds the amount in clause (i), the Allowed Claim or the principal amount of Tranche A Bonds to be issued at Effective Date, as applicable, shall be reduced by the amount of such excess.

(v) To the extent the Securitization Bond Treatment or the Stipulated Treatment is provided after the Delayed Implementation Date, the terms of such Securitization Bonds or Stipulated Treatment, including maturity of the Tranche B Bonds and accrual of the Tranche B Bond amounts between the Delayed Implementation Date and the Effective Date, if applicable, shall be adjusted in a manner mutually agreed upon by the Required Parties (or if no such agreement can be reached, as ordered by the Title III Court) to take into account the Increased Settlement Payments made prior to the date of issuance of the Securitization Bonds or the provision of the Stipulated Treatment so that the cost to the Government Parties (and recovery on account of any Bond) is no greater (and no less) than that of the 9019 Settlement (including with respect to the maturity of the Securitization Bonds or the Stipulated Treatment to be provided under this Definitive RSA, as applicable).

(vi) On and after the Delayed Implementation Date, no Increased Settlement Payments shall be made if an Individual Termination (as to such applicable Bondholder) or if a Stipulated Treatment Termination (as to all Supporting Holders) occurs or has occurred, and any Administrative Claim accrued by such Supporting Holders under this Definitive RSA shall be expunged and disallowed as a result of an Individual Termination (as to such applicable Bondholder) or a Stipulated Treatment Termination (as to all Supporting Holders),

other than the Surviving Administrative Claim. In addition, the obligation to make Increased Settlement Payments shall terminate on the earliest of (i) a termination pursuant to Section 9(d)(vi) as to PREPA or AAFAF, (ii) the Effective Date of a Plan (or the effective date of another transaction pursuant to which the Securitization Bond Treatment or Stipulated Treatment is provided), or (iii) dismissal of the Title III Case.

(vii) The 9019 Order shall provide that, if the Delayed Implementation Date occurs and PREPA has not implemented the Increased Settlement Charge to the extent required by this Definitive RSA, or in the event the Delayed Implementation Date occurs or has passed and PREPA is no longer a party to the RSA due to a termination pursuant to Section 9(d)(vi), then PREPA shall be obligated pursuant to the 9019 Order to make cash adequate protection payments (the “**Adequate Protection Payments**”) on a monthly basis in an amount equal to the amount of Increased Settlement Payments (as defined below) that would have been required had the Increased Settlement Charge been implemented on such date and assuming that all Increased Settlement Payments would have been made to eligible Bonds subject to this Definitive RSA. PREPA’s obligation to make Adequate Protection Payments shall terminate on the earliest of (i) the date the Increased Settlement Charge is implemented, (ii) the Effective Date of a Plan (or the effective date of another transaction pursuant to which the Securitization Bond Treatment or Stipulated Treatment is provided), (iii) in the case of an individual Supporting Holder, an Individual Termination, or (iv) in the case of all Supporting Holders, a Stipulated Treatment Termination.

(f) Tracking Provisions.

(i) Uninsured Bonds held by Supporting Holders shall be assigned alternative identifying CUSIPs to allow such Uninsured Bonds to be freely transferable and remain subject to the provisions of this Definitive RSA. The Supporting Holders shall, and to the extent necessary shall direct the Trustee to, cooperate with the Government Parties in obtaining the alternative identifying CUSIPs. The details of the foregoing, as well as other mechanisms for implementing, tracking and disclosing the different payments and claims that Bonds are entitled to hereunder, shall be set forth on a term sheet to be mutually agreed upon by the Required Parties and filed with the Title III Court prior to entry of the 9019 Order (the “**Tracking Mechanics Term Sheet**”). Such mechanisms shall be set up in such a manner such that they do not have an adverse effect on the enforceability, validity, tax exemption, or other rights of the Bonds, or on the lawful transferability of the Bonds under applicable securities laws.

(ii) The Supporting Holders shall (A) to the extent necessary, direct the Trustee to cooperate with the Government Parties in obtaining the alternative identifying CUSIPs, and (B) take the related actions agreed upon in the Tracking Mechanics Term Sheet.

### **Section 3 Litigation Stay and Forbearance.**

The Parties agree as follows:

(a) The Ad Hoc Group shall support dismissal of the Monoline Motion. Assured shall not oppose the Dismissal Motion and shall withdraw from the Monoline Motion upon the granting of the Settlement Motion.

(b) Unless all applicable deadlines on the Monoline Motion are extended as mutually agreed by the Parties and the other movants, the Ad Hoc Group, Assured, and the Government Parties shall jointly file an urgent motion(s) (or separate motions and/or joinders thereto) with the Title III Court as soon as practicable seeking to stay all applicable deadlines for the Monoline Motion (the “**Stay Motion**”) until five (5) business days after the later of the date of entry of the 9019 Order and the date of entry of the order resolving the Dismissal Motion.

(c) The Government Parties, Ad Hoc Group, Assured, and the Trustee shall execute an agreement tolling all unexpired statutes of limitations for all causes of action related to the Bonds, including any Lien Challenge and any potential Bondholder Litigation (the “**Tolling Agreement**”) and request Title III Court approval of such Tolling Agreement. By signing this RSA after the RSA Execution Date, a Supporting Holder shall be deemed to have joined the Tolling Agreement.

(d) If a Bondholder Litigation (as defined below) is commenced or continued, the Parties shall work in good faith to have such Bondholder Litigation dismissed, stayed, or withdrawn; provided that, so long as the Ad Hoc Group and Assured are in compliance with this covenant, only Supporting Holders that are represented by counsel that has appeared in the Title III Case shall be required to file a pleading pursuant to this covenant but all Supporting Holders will be required to otherwise work in good faith.

(e) The Government Parties shall not commence a Lien Challenge except in the following circumstances: (i) if an order granting the Stay Motion has not been entered by May 3, 2019 (or such later date as the Government Parties’ response to the Monoline Motion is required to be filed); (ii) a Triggering Event has occurred; (iii) if any applicable statute of limitations is expiring within the next seven (7) days; (iv) FOMB’s authority to prosecute PREPA’s Title III Case is expiring; or (v) with the written consent of the Required Holders; provided that in the case of clause (iii) or (iv) above, none of the Government Parties shall commence a Lien Challenge so long as the applicable statute of limitations is (and remains) tolled (including, without limitation, as to FOMB, any future or successor to FOMB, and any members thereof) by an order of the Title III Court in form and substance acceptable to each of the Required Parties. If any of the Government Parties files a Lien Challenge permitted by clause (iii) or (iv) above, the Government Parties shall use commercially reasonable efforts to stay any further proceedings in respect of such Lien Challenge (including extending all relevant deadlines and otherwise forbearing from pursuit of such Lien Challenge) if they are able to do so in a manner that does not prejudice their ability to resume or prosecute the Lien Challenge after expiration or termination of such stay. If any of the Government Parties files a Lien Challenge permitted by clause (i) above, the Government Parties shall seek a stay of such Lien Challenge (including extending all relevant deadlines and otherwise forbearing from pursuit of such Lien Challenge) concurrently with any filing of an

adversary complaint related to the Lien Challenge, and request that the stay shall continue until the Government Parties would have otherwise been permitted to commence a Lien Challenge under the terms hereof; provided that such stay shall only go into effect if the Stay Motion is granted and the Government Parties shall be permitted to prosecute the Lien Challenge until the Stay Motion is granted or the Monoline Motion is denied or dismissed.

(f) Except as otherwise permitted by this Agreement (including Sections 3(g) and 3(h)), Supporting Holders cannot contest or defend against a Lien Challenge on any grounds. In the event a Lien Challenge is commenced at any time prior to entry of the 9019 Order and such Lien Challenge has not been stayed, the Supporting Holders reserve all rights regarding such Lien Challenge, nothing herein shall constitute an admission by the Supporting Holders as to the Government Parties' authority or standing to prosecute such Lien Challenge or the merits of their claims, and, subject to any right herein of any Government Party to declare a Stipulated Treatment Termination prior to entry of the 9019 Order, the Supporting Holders shall have the right to contest and defend against such Lien Challenge on any grounds, including bringing counterclaims related to such Lien Challenge, which defense or counterclaims shall be withdrawn without prejudice upon entry of the 9019 Order, and, notwithstanding anything herein to the contrary, such contest or defense prior to entry of the 9019 Order by the Supporting Holders shall not be considered to have been a Bondholder Litigation or Bondholder Breach.

(g) If a Lien Challenge is brought by the Government Parties at any time in violation of the terms hereof, the Supporting Holders shall have the right to contest and defend against such Lien Challenge on any grounds, including bringing counterclaims related to such Lien Challenge, and, notwithstanding anything herein to the contrary, such contest or defense by the Supporting Holders shall not be considered a Bondholder Litigation or Bondholder Breach and shall not be grounds for the Government Parties to declare a Stipulated Treatment Termination.

(h) Notwithstanding anything to the contrary herein, upon the commencement of any Lien Challenge, Assured and the Ad Hoc Group shall have the right to file briefs and participate in oral argument with respect to such Lien Challenge and to otherwise appeal any legal issues implicated in such Lien Challenge, and such participation by Assured and the Ad Hoc Group in any Lien Challenge shall not be considered to have been a Bondholder Litigation or a Bondholder Breach, and shall not be grounds for the Government Parties to declare an Individual Termination or a Stipulated Treatment Termination; provided, however, that Assured and the Ad Hoc Group shall not have the right to participate in discovery in such Lien Challenge.

(i) The 9019 Order shall provide that no person or entity (including a person or entity acting on behalf of a Government Party) other than the Government Parties shall have standing or otherwise be permitted to bring a Lien Challenge.

(j) Subject to Sections 7(a)(i) - (ii), the Transformation Transaction structure shall be in the sole discretion of the Government Parties.

(k) The Supporting Holders shall support and not interfere with Transformation Transaction to the extent such Transaction is consistent with Sections 7(a)(i) - (ii).

(l) To the extent any consents are required for a Transformation Transaction from the Supporting Holders, such consent shall not be unreasonably withheld or delayed, subject to a good faith determination that such Transformation Transaction will not adversely affect its Stipulated Treatment and is otherwise in compliance with Sections 7(a)(i) - (ii).

(m) The Supporting Holders may take actions reasonably necessary to protect their rights and treatment under this Definitive RSA, including the value of the recovery thereunder, which actions may include, without limitation, opposing any request by the Government Parties for approval of any priming post-petition financing arrangement; provided that such actions shall not include (i) seeking appointment of a receiver, (ii) exercising any rights or remedies under the Trust Agreement or the Puerto Rico Electric Power Authority Act (Act 83-1941), as amended (including actions as a Bondholder on account of the Bonds and including seeking adequate protection), or (iii) preventing or seeking to prevent the Government Parties from providing the Supporting Holders with the Stipulated Treatment; provided that the preceding clause (iii) shall not prevent Supporting Holders from objecting to a Plan, qualifying modification, exchange, or restructuring through a Permitted Objection. Nothing herein shall prevent a Supporting Holder from challenging any action to prime the Bonds subject to this Agreement; provided that Supporting Holders shall not be permitted to seek appointment of a receiver (or seek to lift the stay to seek a receiver) as part of such a challenge. Notwithstanding anything herein to the contrary, any action permitted pursuant to this paragraph shall not constitute a Bondholder Litigation or Bondholder Breach.

(n) The Supporting Holders shall not take any actions preventing or seeking to prevent the Government Parties from providing the Supporting Holders with the Stipulated Treatment; provided that this subsection (n) shall not prevent Supporting Holders from taking actions expressly permitted under the terms of this Agreement, including objecting to a Plan, qualifying modification, exchange, or restructuring through a Permitted Objection.

(o) Supporting Holders hereby consent to an amendment to the Trust Agreement (the “**TA Amendment**”) to increase certain thresholds for certain Bondholder action or direction under Sections 502, 804 and 808 of the Trust Agreement to no more than a majority in aggregate principal amount of the outstanding Bonds if and to the extent that the Required Parties deem the TA Amendment to be reasonable and appropriate to facilitate implementation of the RSA. Upon the request of the Required Parties, Supporting Holders agree to take commercially reasonable efforts to promptly confirm and transmit such consent to any parties necessary to ratify the TA Amendment.

#### **Section 4 Waiver and Support Fees.**

(a) On the Effective Date and concurrently with the issuance of the Securitization Bonds, the Ad Hoc Group members shall receive a waiver and support fee in the form of Tranche A Bonds, which, as of May 1, 2019, equals 1.9350% of the par amount of PREPA Bonds held as of July 1, 2018 by the Ad Hoc Group (as defined in the Preliminary RSA) members in the aggregate (the “**Ad Hoc Group Waiver and Support Fee**”). The Ad Hoc Group Waiver and Support Fee shall be allocated among the members of the Ad Hoc Group as set forth on Annex B hereto, which Annex B shall be in the sole discretion of the Ad Hoc Group. Once Annex B is finalized, counsel to the Ad Hoc Group shall notify counsel to the Government Parties, and

following finalization, Annex B cannot be amended without the consent of every Supporting Holder listed therein.

(b) On the Effective Date and concurrently with the issuance of the Securitization Bonds, Assured shall receive a waiver and support fee in the form of Tranche A Bonds initially equal to 1.8850% of the par amount of PREPA Bonds held or insured by Assured as of May 1, 2019.

(c) Additional support (and potential waiver) fee in the form of Tranche A Bonds initially equal to 0.8360% of par amount of total outstanding PREPA Bonds as of May 1, 2019, to be provided to Supporting Holders, including additional signatories, in a manner to be mutually agreed upon by the Required Parties.

(d) Any unpaid fee payable at any time to any Ad Hoc Group Member or other Supporting Holder (including Administrative Claims accruing on Waiver and Support Fees) shall not be paid to such Ad Hoc Group Member or other Supporting Holder if there has been an Individual Termination as to such Ad Hoc Group Member or other Supporting Holder, and such unpaid fee shall be reallocated among the Ad Hoc Group (in the case of a termination as to an Ad Hoc Group Member) or the Supporting Holders.

## **Section 5 Mutual Obligations and Acknowledgments.**

(a) Each Party shall work collaboratively and in good faith with the other Parties to finalize, document, and implement the 9019 Settlement and Plan incorporating the terms and conditions described in this Agreement and such other terms, conditions, and documents necessary or appropriate to implement and effectuate the 9019 Settlement and the Plan based on, and consistent with, this Agreement, including without limitation the Definitive Documents and the Additional Definitive Documents. The Definitive Documents shall meet the standards set forth in Section 1(b)(iv) herein. The Additional Definitive Documents shall meet the standards set forth in Section 1(b)(v) herein.

(b) Each Party shall refrain from promoting or supporting (by providing legal or financial advice or assistance), or entering into any agreement, in each case that is materially inconsistent with the Restructuring or this Definitive RSA, that would materially and adversely affect the ability of the Government Parties to comply with their respective obligations under this Definitive RSA, the Definitive Documents, or the Additional Definitive Documents (to the extent relating to treatment of Bonds subject to the RSA), or that would prevent the Government Parties from providing the Securitization Bond Treatment or the Stipulated Treatment, as applicable. Except as set forth herein, nothing in this Agreement shall prevent any Government Party from discharging its statutory duties, including by amending the Fiscal Plan or budget or commencing or defending any litigation against any party (other than the Supporting Holders, solely in their capacity as Bondholders).

(c) The Parties shall use commercially reasonable efforts to cause each of the below milestones to occur by the dates specified therein:

(i) the filing of the Settlement Motion no later than ten (10) business days after execution of this Agreement by the Required Parties;



- (ii) the entry of the 9019 Order by June 30, 2019;
- (iii) the implementation of the Settlement Charge by July 1, 2019;
- (iv) the commencement of the Settlement Payments by August 30, 2019;
- (v) the enactment of all legislation necessary to support the Restructuring by the date the Plan is filed;
- (vi) the filing of the Plan by March 31, 2020;
- (vii) the occurrence of the Effective Date and issuance of the Securitization Bonds or Stipulated Treatment by the Outside Date.

(d) Except as expressly provided herein, this Agreement shall not require any Supporting Holder to expend any cash resources or assume any additional risk or liability (including, for the avoidance of doubt, indemnifying the Trustee) in support of the Plan or this Agreement.

**Section 6 Agreements of the Supporting Holders.**

(a) Agreement to Vote and other Covenants. Subject to the terms and conditions hereof, each Supporting Holder agrees that it shall:

(i) subject to the receipt by such Supporting Holder of the Disclosure Statement, vote or cause to be voted its Claims with respect to Bonds (and, in relation to Assured, Claims with respect to the Assured Insured Interest Rate Swaps) beneficially owned or controlled (including pursuant to a Bond Insurance Agreement) by it for voting purposes, whenever acquired, to accept a Plan that is consistent with the Definitive RSA by delivering its duly executed and completed ballots accepting the Plan on a timely basis and not object to such Plan other than through a Permitted Objection; provided that, in the case of Insured Bonds, an Uninsured Supporting Holder shall only be obligated to vote the Insured Bonds beneficially owned or controlled by it if the conditions set forth in Section 6(d) are satisfied; provided, further, with respect to votes contemplated by this Section 6(a)(i) or 6(b), in the event of a declaration of a Stipulated Treatment Termination or an Individual Termination (or, in the case of this Section 6(a)(i), a Securitization Termination) as to any Supporting Holder prior to the Effective Date, then (A) the votes of such Supporting Holder, if the voting deadline has not passed, shall be immediately and automatically revoked and deemed void *ab initio*, and (B) if the voting deadline has passed, nothing shall prevent such Supporting Holder from petitioning the Title III Court (or other applicable court) to allow it to change or withdraw its vote;

(ii) support and take any and all commercially reasonable, necessary, or appropriate actions to facilitate, implement, and consummate the Restructuring, including, without limitation, by working cooperatively with the Government Parties, Assured, the Ad Hoc Group, and the other Supporting Holders to prepare

and execute any documentation necessary (including the Definitive Documents and Additional Definitive Documents) and by giving any notices, orders, instructions, or directions that are commercially reasonable, necessary, or appropriate to support, facilitate, implement, or consummate, or otherwise give effect to, the Restructuring; provided, however, that nothing in this Agreement shall require any Party to indemnify any person; and

(iii) at the reasonable request of any of the Government Parties, the Supporting Holders shall support the confirmation of the Plan, including by supporting the Government Parties' efforts to defend against objections to confirmation and other Plan-related litigation; provided that nothing herein shall require a Supporting Holder to file pleadings adverse to (A) itself in any capacity or (B) its rights under Bond Insurance Agreements; and provided further that, so long as the Ad Hoc Group and Assured are in compliance with this covenant, only Supporting Holders that are represented by counsel that has appeared in the Title III Case shall be required to file a pleading pursuant to this covenant but all Supporting Holders will be required to otherwise support confirmation of the Plan.

(b) Agreement to Vote for Stipulated Treatment. If a Supporting Holder is entitled to the Stipulated Treatment and such Stipulated Treatment is offered in any Plan, qualifying modification, exchange, or restructuring of the Bonds after a Securitization Termination, then, subject to the receipt by such Supporting Holder of appropriate disclosure documents, such Supporting Holder shall vote or cause to be voted, or provide consent on behalf of, its Bonds or Claims with respect to Bonds (and, in relation to Assured, Claims with respect to the Assured Insured Interest Rate Swaps) beneficially owned or controlled (including pursuant to a Bond Insurance Agreement) by it for voting purposes to accept or consent to such Plan, qualifying modification, exchange, or restructuring by delivering its duly executed and completed ballots or consents to such Plan, qualifying modification, exchange, or restructuring on a timely basis and not object to such Plan, qualifying modification, exchange, or restructuring other than through a Permitted Objection; provided that such vote is subject to revocation on the terms set forth in Section 6(a)(i).

(c) Transfers.

(i) No Supporting Holder shall sell, assign, transfer or otherwise pledge or dispose of (“**Transfer**”) any Uninsured Bonds beneficially owned by such Supporting Holder, or any voting, consent, or direction rights related to such Uninsured Bonds, provided, however, that such Transfer may be made (A) if the transferee is a Supporting Holder at the time of the Transfer or (B) if the transferee is not a Supporting Holder at the time of the Transfer, such transferee delivers to counsel to the Ad Hoc Group, PREPA, AAFAF, and FOMB, at or prior to the consummation of the Transfer, the Joinder Agreement attached hereto as Exhibit A, pursuant to which such transferee shall assume all rights and obligations (other than the right to the Waiver and Support Fees) of such Supporting Holder transferor hereunder with respect to the transferred Bonds (such transferee (a “**Bond Qualified Transferee**”), if any, shall also be a Supporting Holder hereunder). Subject to Section 6(c)(iv), any additional Bonds held by such Bond Qualified

Transferee at the time it joins this Definitive RSA shall become subject to this Definitive RSA. To the extent that a Transfer violates the provisions of this Section 6, the Transfer shall be void *ab initio* and the applicable Uninsured Bonds and the Supporting Holder attempting the Transfer of the Uninsured Bonds shall continue to remain subject to the terms of this Agreement and count towards the Required Threshold if the Supporting Holder can demonstrate to the satisfaction of the Government Parties in their sole discretion that they retain control of such Bond.

(ii) Qualified Marketmaker. Notwithstanding anything contained in this Agreement to the contrary,

(1) solely prior to the RSA Marketmaker Period or any other time during which there are no RSA Marketmakers listed on the RSA Marketmakers List, a Supporting Holder may Transfer any right, title or interest in the Uninsured Bonds to a Qualified Marketmaker, acting in its capacity as a Qualified Marketmaker, without the requirement that such Qualified Marketmaker be or become a Supporting Holder; provided that such Qualified Marketmaker subsequently Transfers such right, title or interest in the Uninsured Bonds to a Supporting Holder or a Bond Qualified Transferee within the date that is thirty (30) business days after such Qualified Marketmaker's acquisition of such right, title or interest, and in any event no later than ten (10) business days prior to the voting deadline on the Plan, qualifying modification, exchange, or other restructuring of the Uninsured Bonds pursuant to which the Securitization Bond Treatment or the Stipulated Treatment is being offered (the "Marketmaker Holding Period"). For the avoidance of doubt, upon expiration of the Marketmaker Holding Period, if the Qualified Marketmaker has not Transferred such right, title or interest in the Uninsured Bonds to a Supporting Holder or a Bond Qualified Transferee, the Qualified Marketmaker shall be required to sign the Joinder Agreement attached hereto as Exhibit A, which Joinder Agreement shall be binding with respect to any Uninsured Bonds subject to this Definitive RSA that are held by such Qualified Marketmaker in its capacity as a Qualified Marketmaker. Whether the Qualified Marketmaker signs a Joinder Agreement or not, upon expiration of the Marketmaker Holding Period, the Qualified Marketmaker (by accepting or otherwise participating in the Transfer of Uninsured Bonds subject to this Definitive RSA) will be deemed to have agreed to comply with the voting obligations set forth in Sections 6(a) and (b) hereto; provided, however, that such obligations shall be replaced by the obligations in the RSA Marketmaker Joinder if such Qualified Marketmaker subsequently becomes an RSA Marketmaker. If a Qualified Marketmaker does not comply with the foregoing procedures, such failure by such Qualified Marketmaker to comply shall not be considered a Bondholder Breach by such Transferring Supporting Holder unless (i) the Supporting Holder transferring such Uninsured Bonds does not inform the Qualified Marketmaker that such Uninsured Bonds are subject to the RSA and (ii) the Qualified Marketmaker fails to vote the subject Uninsured Bonds as required under this Agreement,

in which case such failure shall be deemed to be a Bondholder Breach by the Transferring Supporting Holder;

(2) during the RSA Marketmaker Period, so long as at least one RSA Marketmaker appears on the RSA Marketmakers List, a Supporting Holder may transfer any right, title or interest in the Uninsured Bonds to either (x) another Supporting Holder or other Bond Qualified Transferee in accordance with Section 6(c)(i) or (y) an RSA Marketmaker (and not any other Qualified Marketmaker), acting in its capacity as a Qualified Marketmaker, without the requirement that such RSA Marketmaker be or become a Supporting Holder; provided that such RSA Marketmaker pursuant to clause (y) above shall be obligated to comply with its obligations under its RSA Marketmaker Joinder; provided further that failure of such RSA Marketmaker to comply with its obligations shall not be considered a Bondholder Breach by a Transferring Supporting Holder unless (i) the Supporting Holder transferring such Uninsured Bonds does not inform the RSA Marketmaker that such Uninsured Bonds are subject to the RSA and (ii) the RSA Marketmaker fails to vote the subject Uninsured Bonds as required under its RSA Marketmaker Joinder; provided, that after voting, if the class in which the Bonds are classified has not accepted a Plan providing the Securitization Bond Treatment or Stipulated Treatment due to failure of one or more RSA Marketmakers to vote Uninsured Bonds subject to this Definitive RSA in compliance with the provisions of the Definitive RSA, then a two (2) week Joinder Period shall be declared (during which time the Parties shall work together to cause the RSA Marketmaker to vote Uninsured Bonds it holds), and if the requisite votes have not been received upon expiration of such Joinder Period (or, if later, a new voting deadline), then any of the Government Parties can declare a Stipulated Treatment Termination pursuant to Section 9(c)(i)(3);

(3) to the extent that a Supporting Holder is acting in its capacity as a Qualified Marketmaker, it may Transfer any right, title or interest in the Bonds that the Qualified Marketmaker acquires from a holder of the Bonds that is not a Supporting Holder without the requirement that the transferee be or become a Supporting Holder; and

(4) a Qualified Marketmaker may, with the consent of the Government Parties, which consent shall not be unreasonably withheld, join this Definitive RSA solely on behalf of a specific trading desk.

(iii) Notice of Transfers. In connection with any Transfer of an Uninsured Bond by a Supporting Holder, such Supporting Holder shall (A) give notice to its direct transferee that the Uninsured Bonds it is Transferring are Uninsured Bonds subject to this Definitive RSA, and (B) give notice to counsel to the Ad Hoc Group and counsel to each of the Government Parties of (i) the CUSIP (or, when available, alternative identifying CUSIP) of Uninsured Bonds it is Transferring, (ii) the principal amount being Transferred, and (iii) the name of the

Supporting Holder or Qualified Marketmaker that is the direct transferee. Failure to give such notices shall not constitute a Bondholder Breach, nor shall it invalidate such Transfer.

(iv) Additional Bonds. Any Supporting Holder may purchase additional Bonds, and any Bondholder may become a Supporting Holder by signing a Joinder Agreement; provided that (A) any such acquired Bonds (and any Bonds held by such joining Bondholder) shall automatically and immediately be deemed subject to all of the terms of this Definitive RSA (including, in the case of Uninsured Bonds, the obligations of the Supporting Holders under this Section 6); provided that (x) Uninsured Bonds that become subject to this Definitive RSA after September 1, 2019, at any period other than during a Joinder Period, shall not be entitled to Administrative Claims, Settlement Payments, Increased Settlement Payments, or Adequate Protection Payments but shall be subject to this Agreement for all other purposes, including voting obligations and entitlement to the Stipulated Treatment, and (y) Other Insured Bonds shall not be entitled to any rights or distributions under this Definitive RSA and (B) on the first of each month, all Supporting Holders shall notify counsel for the Ad Hoc Group (who shall notify the Government Parties) of the amounts and types of Uninsured Bonds acquired during the previous month and the date of such acquisition.

(v) Reporting. Upon the reasonable request of a Required Party, each Supporting Holder shall provide its holdings to counsel to each Required Party.

(vi) Holdings Confidential. Any disclosure by any Supporting Holder to any other Party of its holdings of Bonds shall be treated as confidential information by such other Party unless such other Party receives such information through other means that are not subject to a duty of confidentiality. The foregoing shall not prohibit disclosure of the aggregate principal amount of Bonds held by the Ad Hoc Group or all Supporting Holders collectively and shall not limit the duty of any Party to disclose holdings as required by law, including pursuant to Bankruptcy Rule 2019 or as otherwise required by the Title III Court.

(vii) The Ad Hoc Group. The Ad Hoc Group Members as of the date hereof are listed on Annex A hereto. The members of the Ad Hoc Group may change from time to time upon delivery by counsel to the Ad Hoc Group of a notice to FOMB, PREPA, AAFAF, and Assured with an updated Annex A, and, in the case of the addition of a person to the Ad Hoc Group who is not otherwise party to this Agreement, execution by such person of a Joinder Agreement and delivery of such Joinder Agreement to counsel to FOMB, PREPA, and AAFAF.

(viii) Joinders. In the event a Party to this Agreement receives a Joinder Agreement that was not sent to counsel to the Ad Hoc Group, PREPA, AAFAF and FOMB, then such Party shall forward such Joinder Agreement to counsel to the aforementioned Parties that did not receive such Joinder Agreement.

(d) Insured Bonds Held by Uninsured Supporting Holders.

(i) Assured shall have all of the rights and obligations related to any Assured Insured Bonds and the Assured Insured Interest Rate Swaps, including without limitation the exclusive right to vote such Assured Insured Bonds and Assured Insured Interest Rate Swaps on account of any Plan, other than as expressly set forth in this Section 6(d), Section 9(c) and Section VII(b) of the Recovery Plan Term Sheet, and the 9019 Order shall provide the same. In addition, the Bonds insured by any other monoline insurer (the “**Other Insured Bonds**”) shall not be entitled to any rights or distributions under this Definitive RSA or the 9019 Order.

(ii) The obligations of Uninsured Supporting Holders with respect to any Insured Bonds held by such Supporting Holder shall be as follows:

(1) With respect to Assured Insured Bonds, the Uninsured Supporting Holders shall be subject to the obligations concerning Bondholder Litigation and Bondholder Breach and, if there is a court order providing that the Uninsured Supporting Holders are entitled to vote such Assured Insured Bonds and that such vote shall not adversely affect its rights under the Bond Insurance Agreements, each Uninsured Supporting Holder shall be obligated to vote any Assured Insured Bonds held by such Uninsured Supporting Holders as of the record date in accordance with this Definitive RSA; provided that such Uninsured Supporting Holder may file a Permitted Objection. The Uninsured Supporting Holders shall not have any other obligations with respect to Assured Insured Bonds under this Definitive RSA or the 9019 Order, and shall be permitted to transfer such bonds without any requirement that the transferee sign a Joinder Agreement. Nothing in this Definitive RSA or the 9019 Order shall prejudice the rights of the beneficial holders of any Assured Insured Bonds against Assured.

(2) With respect to the Other Insured Bonds, the Uninsured Supporting Holders shall be subject to the obligations concerning Bondholder Litigation and Bondholder Breach and, if there is a court order providing that its vote shall not adversely affect its rights under the Bond Insurance Agreements, each Uninsured Supporting Holder shall be obligated to vote any Other Insured Bonds held by such Uninsured Supporting Holders as of the record date in accordance with this Definitive RSA; provided that such Uninsured Supporting Holder may file a Permitted Objection. The Uninsured Supporting Holders shall not have any other obligations with respect to Other Insured Bonds under this Definitive RSA or the 9019 Order, and shall be permitted to transfer such bonds without any requirement that the transferee sign a Joinder Agreement. Nothing in this Definitive RSA or the 9019 Order shall prejudice the rights of the beneficial holders of any Insured Bonds against such other monoline insurers.

**Section 7 Agreements of FOMB, PREPA, and AAFAF.**

(a) Each Government Party agrees that:

(i) prior to the Effective Date of a Plan and the issuance of the Securitization Bonds or the Stipulated Treatment, as applicable, and except with consent of the Required Parties, (x) a Transformation Transaction with regard to the transmission and distribution assets shall not close, and (y) PREPA shall not sell any of its generation assets to the extent used or useful in PREPA's operations.

(ii) the Government Parties shall not proceed with a Transformation Transaction that would prevent the Government Parties from providing the Stipulated Treatment;

(iii) the Government Parties shall use commercially reasonable efforts to cause any vacancies of independent board members to be filled promptly with other independent candidates selected and appointed in accordance with the criteria and procedures set forth in Act 4-2016, as amended;

(iv) PREPA shall provide the Supporting Holders (or, to the extent necessary, their advisors) with the following reports on a monthly basis, unless otherwise mutually agreed to by the Required Parties: (1) a 13-week cash flow, (2) a FEMA flash report, and (3) an account balance report;

(v) FOMB and AAFAF shall provide, within ten (10) business days, written notice to the Ad Hoc Group and Assured, between the date hereof and the Effective Date, of receipt of any notice that is not publicly available of any judicial proceeding commenced or threatened in writing against any Government Party related to PREPA, which could reasonably be expected to have a material, adverse impact on the treatment of the Supporting Holders under this Agreement;

(vi) each Government Party shall use commercially reasonable efforts to provide the Supporting Holders with periodic updates and current information regarding the progress of and details concerning the Transformation Transaction (with a level of detail similar to the information previously provided in the bi-weekly PREPA mediation call); provided that the Government Parties shall not be required to provide any non-public or confidential information unless the Supporting Holder or its advisors has executed a non-disclosure agreement with the Government Parties and the Puerto Rico Public Private Partnership Authority that contains customary restrictions on the ability to disclose or otherwise use such information in litigation; provided, further, that such failure to provide such information shall only entitle Supporting Holders to enforce this provision and no other remedies will be available;

(vii) each Government Party shall (A) act in good faith and use commercially reasonable efforts to support and complete successfully the Solicitation in accordance with the terms of this Agreement, (B) use commercially reasonable efforts to confirm the Plan and consummate the Restructuring and the transactions contemplated thereby in accordance with, and within the time frames contemplated by, this Agreement, (including preparing and executing any documentation necessary (including the Definitive Documents and the Additional

Definitive Documents (to the extent relating to treatment of Bonds subject to the RSA)), securing any necessary IRS Private Letter Ruling, and giving any notices, orders, instructions, or directions that are commercially reasonable, necessary, or appropriate to support, facilitate, implement, consummate, or otherwise give effect to the Restructuring, and (C) not take any action that would prevent the Government Parties from providing the Securitization Bond Treatment or Stipulated Treatment contemplated by this Agreement;

(viii) each of the Government Parties shall use commercially reasonable efforts to provide counsel to the Ad Hoc Group and Assured draft copies of material motions, applications, and other documents relating to the Bonds subject to this Agreement, the Restructuring, or this Agreement that such Government Party intends to file in the Title III Case with sufficient time to respond to and comment thereon;

(ix) FOMB shall amend PREPA's Fiscal Plan and certified budget as required to facilitate the Restructuring; and

(x) the Government Parties shall not enter into any restructuring support or similar agreement related to the Financial Indebtedness other than by amendment to this Agreement, unless consented to by the Required Parties.

(b) Each Government Party agrees that:

(i) to the extent the Government Parties, each acting in its sole discretion and after consultation with a designee of the Ad Hoc Group and a designee of Assured (provided such designees are subject to a non-disclosure agreement acceptable to the Government Parties), determine to apply for ratings on the Securitization Bonds, the Government Parties shall use their commercially reasonable efforts to obtain ratings on the Securitization Bonds, including promptly responding in good faith to documentary or other requests, as soon as reasonably practicable as determined solely by the Government Parties, following consultation with the aforementioned mentioned designee of the Ad Hoc Group and a designee of Assured. To the extent practicable the Government Parties shall provide counsel to the Ad Hoc Group and counsel to Assured drafts of written submissions related to such rating with sufficient time to comment thereon; provided that such counsel for the Ad Hoc Group and Assured are subject to a non-disclosure agreement acceptable to the Government Parties; and

(ii) the Government Parties shall consult with counsel for the Ad Hoc Group and counsel for Assured regarding any IRS Private Letter Ruling Request, including, if practicable, providing drafts of written materials related thereto with sufficient time to comment thereon; provided that such counsel for the Ad Hoc Group and Assured are subject to a non-disclosure agreement acceptable to the Government Parties.



**Section 8** **Force Majeure.** If an event beyond the control of the Government Parties (including hurricanes, fires, explosion, earthquakes, drought, tidal waves, floods, war, or terrorism) (such event, a “**Force Majeure Event**”) prevents any Government Party from complying with any of its obligations under this Agreement, a delay in performance by such Government Party of such obligation shall not be considered a breach of this Agreement through the later of (i) the first day of the month following a restoration of electric service to 85% of the pre-Force Majeure Event levels, or (ii) if any of the Government Parties, Assured, or the Required Uninsured Holders request a hearing on the issue, the date determined by the Title III Court to be reasonable in light of then-prevailing circumstances; provided that the Administrative Claims shall continue to accrue, but Settlement Payments, Increased Settlement Payments, and Adequate Protection Payments, as applicable, shall not be owed, during the period from the occurrence of a Force Majeure Event through the earlier of the dates set forth in clauses (i) and (ii) of this Section 8.

**Section 9** **Termination of and Withdrawal from Definitive RSA.**

(a) Rights of Withdrawal. If

(i) the economic terms of this Agreement are materially amended, modified, supplemented or waived (including pursuant to Section 10) without the written consent of a Supporting Holder that causes a material reduction in the economic value of the recovery to be received by such Supporting Holder; or

(ii) any other provision of this Agreement is materially amended, modified, supplemented, or waived (including pursuant to Section 10) without the written consent of a Supporting Holder in a manner disproportionately and materially adverse to such Supporting Holder in its capacity as a Bondholder,

(any of the preceding clauses of this Section 9(a), a “**Withdrawal Event**”), then in each case, such Supporting Holder shall have the right to withdraw from this Agreement within five (5) business days of receiving notice of such Withdrawal Event (which may be provided through an EMMA notice) by delivering notice of such withdrawal (including the reason for such withdrawal) to counsel to FOMB, PREPA, AAFAF, Assured and the Ad Hoc Group in accordance with Section 27. Such withdrawal shall be effective immediately after delivery of such notice of withdrawal (to the extent such withdrawal is not rescinded), whereupon an Individual Termination shall be deemed to have occurred as to such Supporting Holder.

(b) Securitization Termination.

(i) A Government Party may terminate this Agreement to the extent set forth in clause (iii) of this Section 9(b) (a “**Securitization Termination**”) by delivering notice of such termination in accordance with Section 27 if any of FOMB, the governing board of PREPA, or AAFAF determines that the terms and conditions of the Restructuring will impede or have an adverse impact on the Transformation Transaction or that the terms of the Restructuring are inconsistent with the Transformation Transaction.

(ii) A Government Party may declare a Securitization Termination on or after March 15, 2020 if (A) the Required Parties have not reached agreement on

the Definitive Documents after working collaboratively and in good faith and (B) all legislation necessary to support the Restructuring has not been enacted; provided, that upon a Securitization Termination under this subsection (b)(ii), the Government Parties shall use commercially reasonable efforts to provide the Supporting Holders with a market utility securitization as the Stipulated Treatment.

(iii) Upon the occurrence of a Securitization Termination, the obligation of the Government Parties to provide the Securitization Bond Treatment shall terminate and all other rights and obligations of the Parties under the RSA related to the Securitization Bonds or the Securitization Bond Treatment shall terminate to the extent related to the Securitization Bonds or the Securitization Bond Treatment. The remaining terms of this Agreement, including without limitations, the Government Parties' obligations to provide the Stipulated Treatment, Allowed Claim, Settlement Payments, Increased Settlement Payments, Adequate Protection Payments, and Administrative Claims, the Supporting Holders' obligations to vote in favor of a Plan that provides them with the Stipulated Treatment, and the litigation stay provisions of this Definitive RSA, shall otherwise survive.

(c) Stipulated Treatment Termination.

(i) A Government Party (or, in the case of subsection (4) below, either a Government Party or the Required Holders) may terminate this Agreement and elect not to provide the Stipulated Treatment (a "**Stipulated Treatment Termination**") by delivering notice in accordance with Section 27 (except in the case of subsection (5) below which Stipulated Treatment Termination shall be automatic) if:

(1) The then applicable Required Threshold has not been met (including, without limitation, if Assured defaults on a payment obligation under its Bond Insurance Agreements and such default is determined by the court to cause it to lose its right to vote the Assured Insured Bonds) by the date of entry of the 9019 Order;

(2) The then applicable Required Threshold has not been met (including, without limitation, if Assured defaults on a payment obligation under its Bond Insurance Agreements and such default is determined by the court to cause it to lose its right to vote the Assured Insured Bonds) by September 1, 2019;

(3) The then applicable Required Threshold has not been met (including, without limitation, if Assured defaults on a payment obligation under its Bond Insurance Agreements and such default is determined by the court to cause it to lose its right to vote the Assured Insured Bonds) upon the expiration of any Joinder Period;

(4) The 9019 Order is reversed on appeal; provided that in the event of reversal of the 9019 Order on appeal either a Government Party or

the Required Holders may elect within sixty (60) days of the reversal to declare a Stipulated Treatment Termination pursuant to this subsection (4); provided that the Parties shall work together for such sixty (60) days to find a mutually agreeable solution that addresses the cause of such reversal;

(5) The Title III Case is dismissed;

(6) Confirmation of a Plan that complies with this Definitive RSA is denied; provided that no Stipulated Treatment Termination shall occur under this subsection (6) until the Parties have worked in good faith and used their commercially reasonable efforts to agree on amendments or modifications to the Plan in order to achieve confirmation of such Plan for a period of forty-five (45) days, and FOMB has used its commercially reasonable efforts to seek confirmation of such amended or modified plan of adjustment that is consistent with this Definitive RSA and takes into account the Title III Court's ruling denying confirmation of the prior Plan, and confirmation of such amended or modified Plan has also been denied; provided, that if confirmation of a Plan is denied solely as a result of a Permitted Puerto Rico Objection there shall not be a Stipulated Treatment Termination pursuant to this subsection (6) until FOMB has used its commercially reasonable efforts to seek confirmation of an amended or modified Plan that is consistent with this Definitive RSA and takes into account the Title III Court's ruling denying confirmation of the prior Plan(s) and confirmation of such amended or modified Plan has also been denied for any reason other than solely as a result of a Permitted Puerto Rico Objection; or

(7) Any Supporting Holder (other than Assured and the Ad Hoc Group) participates in contesting or defending any Lien Challenge brought by the Government Parties in compliance with the terms of this Definitive RSA (including, without limitation, asserting any defense or counterclaim in connection therewith); provided, further, that an election to declare a Stipulated Treatment Termination based on this subsection (7) must be made prior to entry of the 9019 Order.

(ii) In the event of a Stipulated Treatment Termination as to all Supporting Holders or an Individual Termination as to an individual Supporting Holder, (1) the Supporting Holder's Bond Claims shall automatically be reduced by the amount of any Settlement Payments (or Increased Settlement Payments or Adequate Protection Payments) made or Administrative Claim accrued and paid to such Supporting Holder on account of its Bond Claims, (2) all prior Settlement Payments, Increased Settlement Payments, Adequate Protection Payments, and payments made on Administrative Claims, as applicable, received by any Supporting Holder subject to such termination shall be retained by the recipient, (3) all Parties reserve all rights as to whether Settlement Payments (or Increased Settlement Payments or Adequate Protection Payments) or payments made on Administrative Claims shall be credited against Claims for principal, pre-petition

interest, or (if applicable) post-petition interest; and (4) accrued and unpaid Administrative Claims shall be disallowed other than the Surviving Administrative Claim.

(iii) Upon the occurrence and declaration by any Government Party of a Stipulated Treatment Termination in accordance with the terms of this Definitive RSA, this Definitive RSA shall become void and of no further force or effect as to all Parties and each Party shall, except as otherwise expressly provided in this Definitive RSA or the 9019 Order, (1) be immediately released from its respective liabilities, obligations, commitments, undertakings, and agreements under or related to this Definitive RSA or the 9019 Order, (2) have no further rights, benefits, or privileges hereunder, and (3) have all the rights and remedies that it would have had, and be entitled to take all actions, whether with respect to the Restructuring, the 9019 Settlement or otherwise, that it would have been entitled to take had it not entered into this Definitive RSA and had the 9019 Order never been issued, and no such rights or remedies shall be deemed waived pursuant to a claim of laches or estoppel; provided that the provisions of this Section 9(c) and the other provisions set forth in Section 17 shall survive; provided, further, that a Stipulated Treatment Termination shall not void any prior tolling pursuant to the Tolling Agreement or the 9019 Order.

(d) Additional Termination Events.

(i) This Definitive RSA may be terminated by mutual agreement of the Required Parties upon the receipt of notice delivered in accordance with Section 27.

(ii) This Definitive RSA may be terminated by the Required Holders if the Settlement Payments have not commenced by August 30, 2019 upon the receipt of notice delivered in accordance with Section 27, subject to a thirty (30) day cure period.

(iii) This Definitive RSA may be terminated by any of the Required Parties, if (x) the Settlement Motion is denied or (y) the 9019 Order has not been entered by August 30, 2019, in each case upon the receipt of notice by a Party delivered in accordance with Section 27.

(iv) This Definitive RSA may be terminated by any of the Government Parties if the Tolling Agreement has not been entered into by the date five (5) business days after the entry of the 9019 Order and subsequently approved by the Title III Court prior to the expiration of the applicable statutes of limitations.

(v) This Definitive RSA may be terminated by any of the Government Parties as to any individual Supporting Holder if such Supporting Holder commits a Bondholder Breach (an “**Individual Termination**”) upon the receipt by such Supporting Holder of notice delivered in accordance with Section 27.

(vi) Either PREPA or AAFAF may terminate all of its obligations under this Definitive RSA solely as to itself in the event that AAFAF objects to a Plan pursuant to a Permitted Puerto Rico Objection and the Title III court sustains such objection; provided that neither PREPA nor AAFAF shall have the right to terminate under this subsection (vi) until (i) the Parties have worked in good faith and used their commercially reasonable efforts to agree on amendments or modifications to the Plan in order to achieve confirmation of such Plan for a period of forty-five (45) days, (ii) FOMB has used its commercially reasonable efforts to seek confirmation of such amended or modified plan of adjustment (which is consistent with this Definitive RSA) taking into account the Title III Court's ruling denying confirmation of the prior Plan, and (iii) AAFAF objects to such amended or modified Plan in a Permitted Puerto Rico Objection and the Title III Court sustains such objection. Nothing in this subsection (vi) shall alter or limit any other termination rights of any of the Government Parties set forth herein including in Section 9(c)(i)(6).

(vii) Any termination pursuant to Sections 9(d)(i) - (iv) shall each be treated as a Stipulated Treatment Termination.

(viii) Any termination pursuant to Section 9(d)(vi) shall be treated as a termination of this Definitive RSA solely as to PREPA or AAFAF, as applicable. Upon the occurrence and declaration by PREPA or AAFAF of a termination pursuant to Section 9(d)(vi), then, except as otherwise expressly provided in the 9019 Order in the form approved by PREPA and AAFAF in connection with this RSA, the right and obligations in the Definitive RSA shall become void and of no further force or effect as to PREPA and/or AAFAF, and the remaining Parties hereto shall have no obligations to PREPA and/or AAFAF; provided that the provisions set forth in Section 17 shall survive as to PREPA and/or AAFAF. Notwithstanding the foregoing, all of the rights and obligations under this Definitive RSA of all other Parties as to each other shall survive such termination as if no such termination occurred, including (i) the FOMB's obligations to provide the Stipulated Treatment, Allowed Claim, Adequate Protection Payments, and Administrative Claims; provided, that the FOMB shall not be obligated to impose a Settlement Charge or Increased Settlement Charge or provide Settlement Payments or Increased Settlement Payments, (ii) the Supporting Holders' obligations to vote in favor of a Plan that provides them with the Stipulated Treatment, and (iii) the Tolling Agreement and the litigation stay provisions of this Definitive RSA.

(e) Automatic Stay. Each Government Party acknowledges and agrees that the giving of notice of termination by any Party pursuant to and in accordance with this Definitive RSA (or any action to enforce this Definitive RSA) shall not be a violation of the automatic stay; provided that nothing herein shall prejudice any Party's rights to argue that the giving of notice of termination was not in accordance with the terms of this Definitive RSA.

(f) Limitation on Termination. No Party may terminate this Agreement if the event giving rise to the termination is the result of such Party failing to perform or comply in any material respect with the terms and conditions of this Agreement.

**Section 10 Definitive Documents; Good Faith Cooperation; Further Assurances.**

(a) Each Party hereby covenants and agrees to cooperate with each other in good faith in connection with, and shall exercise commercially reasonable efforts with respect to, the pursuit, approval, implementation, and consummation of the Restructuring, as well as the negotiation, drafting, execution, and delivery of the Definitive Documents and Additional Definitive Documents (to the extent relating to treatment of Bonds subject to the RSA). Upon written confirmation of an agreement (which confirmation may be by email and must specifically state that it constitutes an agreement pursuant to this Section 10) among the Super Majority Holders, Assured and each Government Party on, and finalization of, the Definitive Documents, this Definitive RSA shall automatically be deemed amended to replace the corresponding portions of the Recovery Plan Term Sheet with the Definitive Documents as Exhibit C hereto and all references in this Agreement to such portions of the Recovery Plan Term Sheet shall be deemed to be references to the Definitive Documents or Additional Definitive Documents, as applicable.

(b) Subject to the terms hereof, each of the Parties shall take such action as may be reasonably necessary or reasonably requested by the other Parties to carry out the purposes and intent of this Definitive RSA, and shall refrain from taking any action that would frustrate the purposes and intent of this Definitive RSA.

**Section 11 Representations and Warranties.**

(a) Mutual Representations and Warranties. Each Party, severally (and not jointly), represents and warrants to the other Parties that the following statements are true and correct as of the date hereof (or as of the date a Supporting Holder becomes a party hereto):

(i) such party has the legal right, power and authority to enter into this Agreement;

(ii) this Agreement is a legal, valid, and binding obligation of such Party, enforceable against it in accordance with its terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium, or similar laws affecting creditors' rights generally and subject, as to enforceability, to equitable principles of general application);

(iii) except in the case of an individual, it is duly organized and validly existing and in good standing under the laws of the jurisdiction of its organization with full power and authority to execute and deliver, and to perform and observe, the terms and provisions of this Agreement;

(iv) the execution, delivery, performance, and observance of this Agreement by such Party (A) has been duly authorized by all necessary action on the part of such Party, does not and will not conflict with, or result in a violation of, any law applicable to it, and does not require it to obtain any permit, consent,

approval, order, or authorization of, or provide notice to or make a filing with, any court, governmental or regulatory agency or authority, or other person or entity that has not been obtained, provided, or made, as applicable, (B) except to the extent modified, stayed or otherwise excused by PROMESA, (1) with respect to FOMB, AAFAF, and PREPA, does not contravene, or constitute a default under any provision of applicable law or regulation or of any agreement, judgment, injunction, order, decree, or other instrument binding on FOMB, AAFAF, or PREPA, as applicable, and (2) with respect to each Party, does not and will not violate, conflict with, or result in the breach of any provision of its organizational or governance documents, and (C) does not and will not result in any breach of, constitute a default (or event which with the giving of notice or lapse of time, or both, would become a default) under, require any consent under, or give to others any rights of, termination, amendment, acceleration, suspension, revocation, or cancellation of any note, bond, mortgage, indenture, contract, agreement, lease, sublease, license, permit, franchise, or other instrument or arrangement to which it is a party, which would materially adversely affect its ability to carry out its obligations under and otherwise observe this Agreement or cause the occurrence of a Stipulated Treatment Termination; provided, however, that clause (C) hereof shall not apply to any note, bond, mortgage, indenture, contract, agreement, lease, sublease, license, permit, franchise, or other instrument or arrangement to which PREPA is a party.

(b) Additional Representations of Supporting Holders. Each Supporting Holder individually represents, warrants, and covenants to each other Party that the following statements are true, correct, and complete as of the date of this Agreement (or, in the case of a Party executing a Joinder Agreement other than in connection with a pending Transfer, as of the date of such Joinder Agreement, and in the case of a Party executing a Joinder Agreement in connection with a pending Transfer of Uninsured Bonds to such joining Party, upon consummation of such pending Transfer of Uninsured Bonds to such joining Party) (each of which is a continuing representation, warranty, and covenant): that it owns or has investment management responsibility for accounts that own Uninsured Bonds in the principal amounts set forth on its respective signature page hereto or its Joinder Agreement (as applicable), which it would be entitled to vote on in a plan (or qualifying modification) solicitation, and that it has not sold, assigned, transferred, participated, or otherwise pledged such Bonds, or any voting, consent, or direction rights related to such Bonds, to any other person or entity that would prevent or adversely affect in any way such Supporting Holders' performance of its obligations contained in this Agreement at the time such obligations are required to be performed, in each case except as permitted by Section 6(c).

(c) Additional Representation of the Ad Hoc Group Members. Each Ad Hoc Group Member that is party to this Agreement on the RSA Execution Date individually represents and warrants to the other Parties that as of the RSA Execution Date it does not beneficially own or control any Uninsured Bonds in a Qualified Marketmaker capacity.

**Section 12 Disclosure; Publicity.** Each Government Party shall endeavor to submit drafts to the Ad Hoc Group and Assured of any press releases, public documents, and any and all filings with the SEC, the Municipal Securities Rulemaking Board, or any state or Puerto Rico governmental agency regarding this Definitive RSA or the Restructuring at least two (2) business

days, to the extent practicable, before making any such disclosure. Except as required by applicable law or otherwise permitted under the terms of any other agreement between a Party and the applicable Supporting Holder, no Party or its advisors shall disclose to any person or entity (including, for the avoidance of doubt, any other Supporting Holder), other than advisors to the Government Parties and the Ad Hoc Group, the principal amount or percentage of Bonds held by the applicable Supporting Holder, in each case, without such Supporting Holder's prior written consent. Notwithstanding the provisions in this Section 12, any Party may disclose, to the extent consented to in writing by a Supporting Holder, such Supporting Holder's individual holdings, and, for the avoidance of doubt, a Supporting Holder shall be permitted to disclose its own individual holdings. Any public filing of this Definitive RSA, with the Title III Court or otherwise, which includes executed signature pages to this Definitive RSA shall include such signature pages only in redacted form with respect to the holdings of each Supporting Holder; provided that the holdings disclosed in such signature pages may be filed in unredacted form with the Title III Court under seal.

**Section 13 Amendments and Modifications.** The terms and conditions of this Agreement, including any exhibits, annexes, or schedules to this Agreement, may not be waived, modified, amended, or supplemented without the written consent of (i) FOMB, (ii) PREPA, (iii) AAFAF, (iv) the Super Majority Holders and (v) Assured; provided that the foregoing is subject to the withdrawal rights pursuant to Section 9(a).

**Section 14 Effectiveness.** Except as specifically provided herein, this Definitive RSA shall become effective and binding on the RSA Execution Date; provided that, until entry of the 9019 Order, (i) the 9019 Settlement shall not be effective; (ii) the Government Parties shall have no obligation to impose the Settlement Charge or Increased Settlement Charge; make Settlement Payments, Increased Settlement Payments, or Adequate Protection Payments; or propose a Plan providing for issuance of Securitization Bonds or Stipulated Treatment; and (iii) the Supporting Holders shall not be entitled to Administrative Claims, the Stipulated Treatment, or Waiver and Support Fees and shall not be obligated to vote in favor of any Plan, qualifying modification, exchange, or restructuring. Notwithstanding the foregoing, in the event the Settlement Motion is denied or the 9019 Order is not entered prior to a termination pursuant to Section 9(d)(iii), this Definitive RSA shall be deemed to have been void *ab initio* and shall be of no further force and effect; provided that the obligations of the Government Parties under Section 22 shall survive with respect to any fees or expenses incurred prior to the date of such denial or termination and required to be reimbursed under the terms of Section 22.

**Section 15 Governing Law; Jurisdiction; Waiver of Jury Trial.**

(a) THIS AGREEMENT IS TO BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK APPLICABLE TO CONTRACTS MADE AND TO BE PERFORMED IN SUCH STATE, WITHOUT GIVING EFFECT TO THE CONFLICT OF LAWS PRINCIPLES THEREOF, EXCEPT THAT, WITH RESPECT TO THE EXISTENCE, POWERS, LEGAL CAPACITY, AND AUTHORITY OF (I) EACH OF AAFAF AND PREPA, THIS AGREEMENT SHALL BE GOVERNED BY THE LAWS OF THE COMMONWEALTH OF PUERTO RICO, EXCLUDING THE CONFLICT OF LAWS PRINCIPLES THEREOF, AND (II) AS TO FOMB, THIS AGREEMENT SHALL BE GOVERNED BY PROMESA. Each Party hereto agrees that it shall bring any action or



proceeding with respect to any claim arising out of or related to this Agreement in the Title III Court (or a court of proper appellate jurisdiction) (the “**Chosen Court**”), and solely in connection with claims arising under this Agreement: (a) irrevocably submits to the exclusive jurisdiction of the Chosen Court; (b) waives any objection to laying venue in any such action or proceeding in the Chosen Court; and (c) waives any objection that the Chosen Court is an inconvenient forum or does not have jurisdiction over any Party hereto or constitutional authority to finally adjudicate the matter. The Government Parties submit to the jurisdiction of the Chosen Court and irrevocably waive any immunity from suit in the Chosen Court that they may have for any action or proceeding arising out of or relating to this Definitive RSA or the 9019 Order.

(b) Each Party hereby waives, to the fullest extent permitted by applicable law, any right it may have to a trial by jury in any legal proceeding directly or indirectly arising out of or relating to this Definitive RSA or the transactions contemplated herein (whether based on contract, tort or any other theory).

(c) The rights and obligations of the Parties under this Agreement and the 9019 Order shall be binding and enforceable against the Parties, and, to the extent necessary, the Government Parties consent for purposes of section 305 of PROMESA to such enforcement by the Chosen Court.

**Section 16 Specific Performance/Remedies.** The Parties understand and agree that monetary damages would be an insufficient remedy for any breach of this Definitive RSA by any Party, and each non-breaching Party shall be entitled to specific performance and injunctive or other equitable relief as a remedy of any such breach, without the necessity of proving the inadequacy of monetary damages as a remedy. Specific performance and injunctive or other equitable relief to the extent appropriate and allowed by applicable law and the right to terminate this Definitive RSA in accordance with the terms of this Definitive RSA shall be the sole and exclusive remedies for any breach of this Definitive RSA by any Party. Without limiting the ability of a Party to sue for payment of money owed under this Agreement or the 9019 Order, no person or entity shall be entitled to monetary damages for any breach of this Agreement or the 9019 Order. Each Party hereby waives any requirement for security or the posting of any bond in connection with such remedies.

**Section 17 Survival.** Subject to entry of the 9019 Order, notwithstanding the termination of this Definitive RSA pursuant to Section 9(d)(vi) (as to PREPA or AAFAF), pursuant to an Individual Termination (as to an individual Supporting Holder), or a Stipulated Treatment Termination (as to all Parties), Sections 9(c) and 15-19(a), 20-22 and 24-31 shall survive such termination and shall continue in full force and effect in accordance with the terms hereof.

**Section 18 Headings.** The headings of the sections, paragraphs, and subsections of this Definitive RSA are inserted for convenience only and shall not affect the interpretation hereof or, for any purpose, be deemed a part of this Definitive RSA.

**Section 19 Successors and Assigns; Severability.**

(a) This Definitive RSA is intended to bind and inure to the benefit of the Parties and their respective successors, permitted assigns, heirs, executors, administrators, and

representatives; provided that nothing contained in this Section 19 shall be deemed to permit Transfers of the Bonds or any related Claims other than in accordance with the express terms of this Definitive RSA. If any provision of this Definitive RSA, or the application of any such provision to any person or entity or circumstance, shall be held invalid or unenforceable, in whole or in part, such invalidity or unenforceability shall attach only to such provision or part thereof and the remaining part of such provision hereof and the remainder of this Definitive RSA shall continue in full force and effect.

(b) Upon any such determination of invalidity, the Parties shall negotiate in good faith to modify this Definitive RSA so as to effect the original intent of the Parties as closely as possible in a reasonably acceptable manner so that the transactions contemplated hereby are consummated as originally contemplated to the greatest extent possible.

**Section 20** Several, Not Joint, Obligations. The agreements, representations, warranties, and obligations of the Parties under this Definitive RSA are, in all respects, several and not joint.

**Section 21** Relationship Among Parties. Unless expressly stated herein, this Definitive RSA shall be solely for the benefit of the Parties, and no other person or entity shall be a third-party beneficiary hereof. No Party shall have any responsibility for any trading by any other entity by virtue of this Definitive RSA. Except as expressly set forth in this Definitive RSA, nothing in this Definitive RSA shall be construed to affect any actual or potential claims arising from any obligation of the Government of Puerto Rico or any of its instrumentalities other than PREPA. Except as expressly set forth in this Definitive RSA, nothing in this Definitive RSA shall constitute or be construed as a waiver or release of any claims or causes of action against FOMB, AAFAF, PREPA, or the Government of Puerto Rico or any of its affiliates or instrumentalities prior to the Effective Date.

No Bondholder shall have any liability to any other Bondholder arising from or related to: (i) any extensions of the deadlines set forth herein pursuant to the terms of this Definitive RSA; (ii) the termination of this Definitive RSA pursuant to its terms, whether or not such termination is as to all Supporting Holders; (iii) any waivers, modifications, amendments, or supplements of or to this Definitive RSA; or (iv) the exercise of, or failure to exercise, any other consent, termination, or other rights pursuant to this Definitive RSA or the 9019 Order. This paragraph shall be included in the 9019 Order.

**Section 22** Fees & Expenses.

(a) (i) The reasonable fees and reasonable expenses of the Ad Hoc Group incurred in connection with the Preliminary RSA, this Definitive RSA, and any documents and transactions relating to or implementing the foregoing on or after July 23, 2018 through the Effective Date (or, if earlier, a Stipulated Treatment Termination), limited to one (1) primary law firm, one (1) municipal bond counsel law firm, one (1) Puerto Rico law firm, one (1) financial advisor, and one (1) utility consultant, shall be reimbursed by PREPA on a monthly basis within sixty (60) days following submission of an invoice and redacted time detail summary to counsel to FOMB, PREPA, and AAFAF and (ii) the reasonable fees and reasonable expenses of the Ad Hoc Group members up to \$25 million for the period prior to July 23, 2018, shall be reimbursed on the Effective Date as agreed in connection with the Preliminary RSA.

(b) The reasonable fees and reasonable expenses of Assured incurred in connection with the Preliminary RSA, this Definitive RSA and any documents and transaction relating to or implementing the foregoing on or after August 1, 2018 through the earliest to occur of (i) the Effective Date, (ii) a Stipulated Treatment Termination, or (iii) an Individual Termination as to Assured, limited to one (1) primary law firm, one (1) Puerto Rico law firm, one (1) financial advisor, one (1) municipal bond counsel law firm, and one (1) utility consultant, shall be reimbursed by PREPA on a monthly basis within sixty (60) days following submission of an invoice and redacted time detail summary to counsel to FOMB, PREPA, and AAFAF.

(c) Reimbursement of reasonable fees and expenses pursuant to Sections 22(a)(i) and 22(b) shall be subject to delivery of all required certifications under Puerto Rico law and accompanied by detailed time records with appropriate redactions.

(d) Payments made pursuant to this Agreement (including reimbursement of fees and expenses pursuant to this Section 22, other than in the case of reimbursement of fees and expenses for services rendered in Puerto Rico) shall not be subject to withholding tax under the Puerto Rico Internal Revenue Code of 2011, as amended.

(e) In the event of a termination by PREPA or AAFAF pursuant to Section 9(d)(vi), the obligation of PREPA or AAFAF to pay any fees that accrue after the effective date of such termination shall terminate, but any fees and expenses incurred after such date and until the earlier of the Effective Date or a Stipulated Treatment Termination or any fees and expenses pursuant to Section 22(a)(ii), in each case to the extent they would otherwise have been due and payable hereunder, shall constitute an Administrative Claim entitled to be paid in cash on the Effective Date of a Plan and, notwithstanding anything herein to the contrary, such Administrative Claim shall survive a Stipulated Treatment Termination.

**Section 23 Most Favored Nations.** Other than with respect to the receipt by Assured of the Assured Treatment in accordance with the terms hereof, to the extent any holder(s) of Financial Indebtedness receives a treatment under a Plan, qualifying modification, exchange, or restructuring, however funded, more economically favorable than the treatment proposed to be received by the Ad Hoc Group Members or Assured, then (i) such treatment shall only be allowed and considered consistent with this Agreement if it does not adversely affect the Ad Hoc Group's or Assured's recoveries, and (ii) additional consideration shall be provided to the Ad Hoc Group or Assured, as applicable, such that the treatment of the Ad Hoc Group or Assured is at least as favorable as the treatment being provided to such holder(s) of Financial Indebtedness.

Notwithstanding the foregoing, the Ad Hoc Group and Assured shall not object pursuant to this Section 23 if holders of Financial Indebtedness (other than Uninsured Bonds) receive the same treatment with the same terms as the Ad Hoc Group is receiving, so long as such treatment does not adversely affect the Ad Hoc Group's or Assured's recoveries. Adjustments to coupons and par on the bonds received by such holder(s) of Financial Indebtedness are authorized, so long as total cash flow payable each year remains the same (with proportional adjustments for the varying claim sizes of varying legacy debt claims), and so long as such treatment shall not adversely affect the Ad Hoc Group's or Assured's recoveries.

**Section 24** **Preservation of Rights.** Except as expressly provided in this Agreement or the 9019 Order, the Parties expressly reserve all rights, contractual or otherwise, under Title III or any other provision of PROMESA or any other law or regulation. Upon an Individual Termination (as to an individual Supporting Holder), a Stipulated Treatment Termination (as to each Party), or a termination pursuant to 9(d)(vi) (as to AAFAF or PREPA), subject to Section 9(c), (i) no such Party shall be precluded, by virtue of having been a Party to this Agreement or otherwise having engaged in negotiations regarding the Restructuring, 9019 Settlement or other matters related to this Agreement, from exercising any and all rights, whether contractual or otherwise, in connection with any proceeding under Title III or under any other provision of PROMESA or any other law or regulation, (ii) no provision of this Agreement, the 9019 Order or other document related to this Agreement, the Restructuring or the 9019 Settlement or statement made during the negotiations thereof, shall be used against any such Party in any proceeding under Title III or any other provision of PROMESA or otherwise, provided that a Section 9(d)(vi) termination as to AAFAF and PREPA shall have no effect on any remaining Parties' rights with respect to any other remaining party hereunder and in the 9019 Order and ability to enforce such rights, and (iii) each such Party shall be restored to its original position. Notwithstanding the generality of the foregoing in this Section 24, except as otherwise provided in this Agreement, no Party shall be precluded from asserting any right, and each Party shall preserve each of its rights and shall not be impeded by this Agreement from bringing before any applicable court any available averment, defenses or priority allegation, or from challenging or contesting any such rights, whether under such law or otherwise, on any grounds.

**Section 25** **Prior Negotiations; Entire Agreement.** This Definitive RSA, including the exhibits, annexes and schedules hereto, constitutes the entire agreement of the Parties and supersedes all other prior negotiations, with respect to the subject matter hereof and thereof, except that the Parties acknowledge that all confidentiality agreements executed between one or more Parties before the execution of this Definitive RSA shall continue in full force and effect. Without limitation of the foregoing, the Preliminary RSA is superseded by this Definitive RSA and terminated in its entirety and shall be of no further force and effect.

**Section 26** **Counterparts.** This Definitive RSA may be executed in several counterparts, each of which shall be deemed to be an original, and all of which together shall be deemed to be one and the same agreement. Execution copies of this Definitive RSA delivered by PDF shall be deemed to be an original for the purposes of this paragraph.

**Section 27** **Notices.** All notices hereunder shall be deemed given if they are made in writing and delivered by electronic mail, courier, or registered or certified mail (postage prepaid, return receipt requested) (and if by any method other than electronic mail, then with a copy by electronic mail) to the following addresses (or at such other addresses as shall be specified by like notice):

- (i) if to PREPA or AAFAF, to:

O'Melveny & Myers LLP  
7 Times Square  
New York, NY 10036  
Attention: Nancy Mitchell, Maria DiConza, and Matthew Hinker  
Email: nmitchell@omm.com; mdiconza@omm.com;

mhinker@omm.com

- (ii) if to FOMB, to:

Proskauer Rose LLP  
Eleven Times Square  
New York, NY 10036  
Attention: Martin J. Bienenstock, Paul V. Possinger, and Ehud Barak  
Email: mbienenstock@proskauer.com;  
ppossinger@proskauer.com; ebarak@proskauer.com

- (iii) if to the Ad Hoc Group, to:

Kramer Levin Naftalis & Frankel LLP  
1177 Avenue of the Americas  
New York, New York 10036  
Attention: Amy Caton, Alice J. Byowitz, and Steven Segal  
Email: acaton@kramerlevin.com; abyowitz@kramerlevin.com;  
ssegal@kramerlevin.com.

- (iv) if to Assured, to:

Assured Guaranty Corp. and Assured Guaranty Municipal Corp.  
1633 Broadway  
New York, NY 10019  
Attention: Kevin J. Lyons and Terence Workman  
Email: klyons@agltd.com; tworkman@agltd.com

-and-

Cadwalader, Wickersham & Taft LLP  
200 Liberty Street  
New York, NY 10281  
Attention: Mark C. Ellenberg, Ivan Loncar, and Thomas J. Curtin  
Email: mark.ellenberg@cwt.com; ivan.loncar@cwt.com;  
thomas.curtin@cwt.com

or such other address as may have been furnished by a Party to each of the other Parties by notice given in accordance with the requirements set forth above. Any notice given by mail or courier shall be effective when received. Any notice given by electronic mail shall be effective upon oral, machine, or electronic mail (as applicable) confirmation of transmission. For purposes of this Agreement, notices and other communications may be delivered by a Party or by its authorized representatives. Any notice provided to an individual Supporting Holder hereunder must also be provided to the Required Parties.

(b) If this Agreement is terminated as to any Government Party, Assured or the Ad Hoc Group, FOMB shall publish notice of such withdrawal or termination on its website and

PREPA shall file a notice with EMMA not later than one (1) business day after receipt of such notice.

(c) Unless otherwise mutually agreed to by the Required Parties, this Agreement, and each amendment hereto, shall be posted by FOMB on its website and PREPA shall file a notice with EMMA not later than one (1) business day after the execution and delivery hereof and thereof, subject to the confidentiality restrictions contained herein, including Section 12.

**Section 28 Settlement Discussions.** This Definitive RSA is part of a proposed settlement of matters that could otherwise be the subject of litigation among the Parties. This Definitive RSA and all negotiations relating thereto shall be deemed to be settlement discussions covered by Rule 408 of the Federal Rules of Evidence, any applicable state rules of evidence, and any other applicable law, foreign or domestic. Further, other than in a proceeding to enforce or implement this Definitive RSA's terms (or the terms of the 9019 Order), no Party shall offer into evidence this Definitive RSA, or any negotiations relating thereto. If this Definitive RSA is terminated, for any reason, no Party shall use any of the terms in this Definitive RSA against the other Party other than for enforcing its remedies under this Definitive RSA and to extent provided.

**Section 29 No Solicitation; Adequate Information.** This Definitive RSA is not and shall not be deemed to be a solicitation for consents to a Plan, qualifying modification, exchange, or restructuring. The votes of the holders of Claims against PREPA will not be solicited until such holders who are entitled to vote on Plan have received the required solicitation in accordance with PROMESA. In addition, this Definitive RSA does not constitute an offer to issue or sell securities to any person or entity, or the solicitation of an offer to acquire or buy securities, in any jurisdiction where such offer or solicitation would be unlawful.

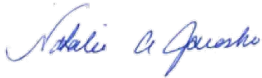
**Section 30 No Waiver.** The failure or neglect by a Party to enforce any rights under this Agreement will not be deemed a waiver of that Party's rights. No waiver of satisfaction of or nonperformance of an obligation under this Agreement will be effective unless in writing and signed by the Party granting the waiver.

**Section 31 Representation by Counsel.** The Parties agree that they have each been represented by legal counsel during the negotiation and execution of this Definitive RSA and, therefore, waive the application of any law, regulation, holding, or rule of construction providing that ambiguities in an agreement or other document shall be construed against the party drafting such agreement or document.

*[Signature pages follow.]*

IN WITNESS WHEREOF, the Parties have executed this Agreement on the day and year first above written.

Financial Oversight and Management Board for  
Puerto Rico

By:   
\_\_\_\_\_  
Name: Natalie A. Jaresko  
Title: Executive Director

Puerto Rico Electric Power Authority

By: \_\_\_\_\_

A handwritten signature in blue ink, appearing to be 'J. F. Ortiz', written over a horizontal line.

Name: José F. Ortiz

Title: Executive Director of the Puerto Rico  
Electric Power Authority



Puerto Rico Fiscal Agency and Financial Advisory  
Authority

By:





---

Name: Christian Sobrino Vega  
Title: CEO & President

[Signature Page to RSA]

Assured Guaranty Corp. and Assured Guaranty  
Municipal Corp.

By:   
Name: Holly Horn  
Title: Senior Managing Director

Principal amount of Uninsured Bonds beneficially owned by Assured, which it would be entitled to vote on in a plan solicitation: <sup>1</sup>

Principal amount of Assured Insured Bonds: 

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<sup>1</sup> This figure includes principal amounts paid by Assured under its Bond Insurance Agreements on account of matured Assured Insured Bonds. Pursuant to the Bond Insurance Agreements, Assured has become subrogated to the holders of such matured Assured Insured Bonds.

AG MM, L.P.  
AG CAPITAL RECOVERY PARTNERS VIII, L.P.  
AG CORPORATE CREDIT OPPORTUNITIES FUND,  
L.P.  
NUTMEG PARTNERS, L.P.  
AG CENTRE STREET PARTNERSHIP, L.P.  
AG SUPER FUND MASTER, L.P.

By: Angelo, Gordon & Co., L.P., as manager or advisor

By: \_\_\_\_\_

Name:

Title:

**David Kamin**  
**Authorized Signatory**

Principal amount of Uninsured Bonds beneficially owned by Supporting Holder, or beneficially owned by accounts for which Supporting Holder has investment management responsibility, which it would be entitled to vote on in a plan solicitation: [REDACTED]

BLUEMOUNTAIN GUADALUPE PEAK FUND L.P.  
BLUEMOUNTAIN FOINAVEN MASTER FUND L.P.  
BLUEMOUNTAIN CREDIT OPPORTUNITIES  
MASTER FUND I L.P.  
BLUEMOUNTAIN KICKING HORSE FUND L.P.  
BLUEMOUNTAIN FURSAN FUND L.P.  
BLUEMOUNTAIN TIMBERLINE LTD.  
BLUE MOUNTAIN CREDIT ALTERNATIVES  
MASTER FUND L.P.  
BLUEMOUNTAIN MONTENVERS MASTER FUND  
SCA SICAV-SIF  
BLUEMOUNTAIN LOGAN OPPORTUNITIES  
MASTER FUND L.P.  
BLUEMOUNTAIN SUMMIT TRADING L.P.

By: BLUEMOUNTAIN CAPITAL MANAGEMENT,  
LLC, ITS INVESTMENT MANAGER

By: 

Name: David M. O'Mara

Title: Deputy General Counsel

Principal amount of Uninsured Bonds beneficially owned by Supporting Holder, or beneficially owned by accounts for which Supporting Holder has investment management responsibility, which it would be entitled to vote on in a plan solicitation: [REDACTED]

Each of Centerbridge Credit Partners Master, L.P.,  
Centerbridge Special Credit Partners II, L.P. and  
Centerbridge Special Credit Partners III, L.P., in their  
individual capacities

By: Centerbridge Partners LP

By:   
Name: Gavin Baiera  
Title: Senior Managing Director

Principal amount of Uninsured Bonds beneficially owned by Supporting Holder, or beneficially  
owned by accounts for which Supporting Holder has investment management responsibility,  
which it would be entitled to vote on in a plan solicitation: [REDACTED]

FRANKLIN ADVISERS, INC. on behalf of the  
following funds:

CALIFORNIA INTERMEDIATE TERM TAX  
FREE INCOME FUND

CALIFORNIA HIGH YIELD MUNICIPAL BOND  
FUND

TENNESSEE MUNICIPAL BOND FUND

CALIFORNIA TAX FREE INCOME FUND

NEW YORK TAX FREE INCOME FUND

FEDERAL TAX FREE INCOME FUND

COLORADO TAX FREE INCOME FUND

GEORGIA TAX FREE INCOME FUND

PENNSYLVANIA TAX FREE INCOME FUND

HIGH YIELD TAX FREE INCOME FUND

MISSOURI TAX FREE INCOME FUND

OREGON TAX FREE INCOME FUND

VIRGINIA TAX FREE INCOME FUND

FLORIDA TAX FREE INCOME FUND

LOUISIANA TAX FREE INCOME FUND

MARYLAND TAX FREE INCOME FUND

NORTH CAROLINA TAX FREE INCOME  
FUND

NEW JERSEY TAX FREE INCOME FUND

FRANKLIN STRATEGIC INCOME FUND –  
CANADA

FTIF- FRANKLIN STRATEGIC INCOME FUND

FSS-FRANKLIN STRATEGIC INCOME FUND

FTVIP – FRANKLIN STRATEGIC INCOME VIP  
FUND

FIST-FRANKLIN TOTAL RETURN FUND

By: Sheila Amoroso  
Name: Sheila Amoroso  
Title: NP

Principal amount of Uninsured Bonds beneficially owned by Supporting Holder, or beneficially owned by accounts for which Supporting Holder has investment management responsibility, which it would be entitled to vote on in a plan solicitation: [REDACTED]

GOLDENTREE ASSET MANAGEMENT LP, on  
behalf of all funds and accounts holding Uninsured  
Bonds (now and hereafter) for which it serves as  
investment advisor

By: John DeMartino

Name: John DeMartino


Title: Authorized Signatory


Principal amount of Uninsured Bonds beneficially owned by Supporting Holder, or beneficially  
owned by accounts for which Supporting Holder has investment management responsibility,  
which it would be entitled to vote on in a plan solicitation: [REDACTED]



KNIGHTHEAD (NY) FUND, L.P.


By: Knighthead Capital Management, LLC, its  
Investment Advisor

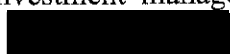
By:   
Name: Laura Torrado  
Title: Authorized Signatory

Principal amount of Uninsured Bonds beneficially owned by Supporting Holder, or beneficially owned by accounts for which Supporting Holder has investment management responsibility, which it would be entitled to vote on in a plan solicitation: 

KNIGHTHEAD ANNUITY & LIFE ASSURANCE  
COMPANY

By: Knighthead Capital Management, LLC, its  
Investment Advisor


By:   
\_\_\_\_\_  
Name: Laura Torrado  
Title: Authorized Signatory

Principal amount of Uninsured Bonds beneficially owned by Supporting Holder, or beneficially owned by accounts for which Supporting Holder has investment management responsibility, which it would be entitled to vote on in a plan solicitation: 

KNIGHTHEAD MASTER FUND, L.P.


By: Knighthead Capital Management, LLC, its  
Investment Manager

By:   
Name: Laura Torrado  
Title: Authorized Signatory

Principal amount of Uninsured Bonds beneficially owned by Supporting Holder, or beneficially owned by accounts for which Supporting Holder has investment management responsibility, which it would be entitled to vote on in a plan solicitation: 

By Marathon Asset Management, LP solely in its  
capacity as Investment Advisor to the  
Fund(s)/Accounts(s) named in Schedule A of this  
Agreement

By:   
Name: Louis Hanover  
Title: Co-Managing Partner

Principal amount of Uninsured Bonds beneficially owned by Supporting Holder, or beneficially  
owned by accounts for which Supporting Holder has investment management responsibility,  
which it would be entitled to vote on in a plan solicitation: 

**Schedule A:**

AUSTRALIANSUPER, BY AUSTRALIANSUPER PTY LTD, AS TRUSTEE  
BSF MULTI-MANAGER ALTERNATIVE STRATEGIES FUND  
MARATHON BLUE GRASS CREDIT FUND LP  
MARATHON CENTRE STREET PARTNERSHIP LP  
MARATHON CREDIT DISLOCATION FUND, LP  
MARATHON CURRITUCK FUND, LP – SERIES C  
MARATHON CURRITUCK FUND, LP – SERIES D  
MARATHON LES GRANDES JORASSES MASTER FUND SCA SICAV-SIF  
MARATHON SPECIAL OPPORTUNITY MASTER FUND, LTD.  
MARATHON STRATEGIC OPPORTUNITIES PROGRAM, LP  
TRS CREDIT FUND LP

OPPENHEIMER FUNDS, INC., as investment advisor  
for the following accounts:

OPPENHEIMER ROCHESTER AMT –FREE  
MUNICIPAL FUND

OPPENHEIMER ROCHESTER AMT –FREE NEW  
YORK MUNICIPAL FUND

OPPENHEIMER ROCHESTER CALIFORNIA  
MUNICIPAL FUND

OPPENHEIMER ROCHESTER LIMITED TERM  
CALIFORNIA MUNICIPAL FUND

OPPENHEIMER ROCHESTER SHORT DURATION  
HIGH YIELD MUNICIPAL FUND (A SERIES OF  
OPPENHEIMER MUNICIPAL FUND)

OPPENHEIMER ROCHESTER LIMITED TERM  
NEW YORK MUNICIPAL FUND (A SERIES OF  
ROCHESTER PORTFOLIO SERIES)

OPPENHEIMER ROCHESTER NEW JERSEY  
MUNICIPAL FUND (A SERIES OF OPPENHEIMER  
MULTI-STATE MUNICIPAL TRUST)

OPPENHEIMER ROCHESTER PENNSYLVANIA  
MUNICIPAL FUND (A SERIES OF OPPENHEIMER  
MULTI-STATE MUNICIPAL TRUST)

OPPENHEIMER ROCHESTER HIGH YIELD  
MUNICIPAL FUND (A SERIES OF OPPENHEIMER  
MULTI-STATE MUNICIPAL TRUST)

OPPENHEIMER ROCHESTER FUND MUNICIPALS

and

OFI GLOBAL INSTITUTIONAL, INC. as investment  
manager for the following accounts:

MASSMUTUAL INTERNATIONAL HOLDINGS  
MSC, INC.

MASSMUTUAL UNIFIED TRADITIONAL

By:   
Name: Richard Stein  
Title: Senior Vice President

Principal amount of Uninsured Bonds beneficially owned by Supporting Holder, or beneficially owned by accounts for which Supporting Holder has investment management responsibility, which it would be entitled to vote on in a plan solicitation: [REDACTED]

Silver Point Capital Fund, L.P.  
Silver Point Capital Offshore Master Fund, L.P.

By: Silver Point Capital, L.P., Its Investment Manager


By: 

Name:

Michael A. Gatto

Title:

Authorized Signatory

Principal amount of Uninsured Bonds beneficially owned by Supporting Holder, or beneficially owned by accounts for which Supporting Holder has investment management responsibility, which it would be entitled to vote on in a plan solicitation: 



**Exhibit A**  
**Form of Joinder**



## FORM OF JOINDER AGREEMENT

This Joinder Agreement to the Restructuring Support Agreement (as amended, supplemented, or otherwise modified from time to time, the “**Definitive RSA**”), dated as of May 3, 2019 by and among: (i) Puerto Rico Electric Power Authority (“**PREPA**”), (ii) the Puerto Rico Fiscal Agency and Financial Advisory Authority (“**AAFAF**”), in its capacity as fiscal agent and financial advisor for PREPA, (iii) the Financial Oversight and Management Board for Puerto Rico (“**FOMB**”), (iv) the members of the Ad Hoc Group of PREPA Bondholders identified on Annex A thereto and party thereto (the “**Ad Hoc Group**”), (v) Assured Guaranty Corp. and Assured Guaranty Municipal Corp. (collectively, “**Assured**”) and (vi) the other Supporting Holders from time to time party thereto, is executed and delivered by [ \_\_\_\_\_ ] (the “**Joining Supporting Creditor**”) as of \_\_\_\_\_, 2019. Each capitalized term used herein but not defined herein shall have the meaning set forth in this Definitive RSA.

1. Agreement to be Bound. The Joining Supporting Creditor hereby agrees to be bound by all of the terms of this Definitive RSA, including the 9019 Settlement. The Joining Supporting Creditor shall hereafter be deemed to be a “**Supporting Holder**” and a Party for all purposes under this Definitive RSA, including, for the avoidance of doubt, with respect to any Bonds held by the Joining Supporting Creditor as of the date of this Joinder Agreement (other than any Bonds held in a Qualified Marketmaker capacity). Upon signing, the Joining Supporting Creditor will be deemed to have joined the direction to the Trustee to join the Settlement Motion, as set forth in Section 2(a) to the Definitive RSA, and to have joined the Tolling Agreement, as set forth in Section 3(c) to the Definitive RSA, and shall be entitled to exculpation on the terms set forth in Section 2(a) to the Definitive RSA.

2. Representations and Warranties. With respect to the aggregate principal amount of Uninsured Bonds held by the Joining Supporting Creditor, including upon consummation of any pending Transfer of Uninsured Bonds to the Joining Supporting Creditor, the Joining Supporting Creditor hereby makes, as of the date hereof, the representations and warranties of the Supporting Holders set forth in Sections 11(a)-(b) of the Definitive RSA to each of the other Parties to this Definitive RSA.

3. Governing Law. Section 15 of the Definitive RSA is incorporated by reference as if set forth fully herein, except that any references to “**Agreement**” or “**Definitive RSA**” shall be replaced with references to Joinder Agreement.

4. Notice of Joinder. The Joining Supporting Creditor agrees to provide a copy of this Joinder Agreement to counsel to the Ad Hoc Group, FOMB, PREPA, and AAFAF in accordance with Section 27 of this Definitive RSA.

5. Transfer Restrictions. The Joining Supporting Creditor acknowledges that the RSA Marketmaker List is available at a URL to be posted on EMMA and acknowledges that during the RSA Marketmaker Period, so long as at least one RSA Marketmaker appears on the RSA Marketmakers List, it will be subject to the transfer restrictions set forth in Section 6(c) of the Definitive RSA and may only Transfer Uninsured Bonds to either (x) another Supporting Holder

or other Bond Qualified Transferee in accordance with Section 6(c)(i) of the Definitive RSA or (y) an RSA Marketmaker (and not any other Qualified Marketmaker), acting in its capacity as a Qualified Marketmaker in accordance with Section 6(c)(ii)(2) of the Definitive RSA.

\* \* \* \* \*

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Joining Supporting Creditor has caused this Joinder Agreement to be executed as of the date set forth above.

[NAME OF INSTITUTION]

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address:

Attention:

Email:

Principal amount of Uninsured Bonds beneficially owned by Joining Supporting Creditor, or beneficially owned by accounts for which Joining Supporting Creditor has investment management responsibility, which it would be entitled to vote on in a plan (or a qualifying modification under Title VI of PROMESA) solicitation: \$ \_\_\_\_\_

Principal amount of Assured Insured Bonds beneficially owned by Joining Supporting Creditor, or beneficially owned by accounts for which Joining Supporting Creditor has investment management responsibility: \$ \_\_\_\_\_

Principal amount of Insured Bonds insured by National beneficially owned by Joining Supporting Creditor, or beneficially owned by accounts for which Joining Supporting Creditor has investment management responsibility: \$ \_\_\_\_\_

Principal amount of Insured Bonds insured by Syncora beneficially owned by Joining Supporting Creditor, or beneficially owned by accounts for which Joining Supporting Creditor has investment management responsibility: \$ \_\_\_\_\_

**Exhibit B**  
**RSA Marketmaker Joinder**

## LIMITED MARKETMAKER JOINDER TO RESTRUCTURING SUPPORT AGREEMENT

This Limited Marketmaker Joinder Agreement (“**RSA Marketmaker Joinder**”) to the Definitive Restructuring Support Agreement (as amended, supplemented, or otherwise modified from time to time, the “**RSA**”), dated as of May 3, 2019 by and among: (i) Puerto Rico Electric Power Authority (“**PREPA**”), (ii) the Puerto Rico Fiscal Agency and Financial Advisory Authority (“**AAFAF**”), (iii) the Financial Oversight and Management Board for Puerto Rico (“**FOMB**”), (iv) the members of the Ad Hoc Group of PREPA Bondholders identified on Annex A thereto and party thereto (the “**Ad Hoc Group**”), (v) Assured Guaranty Corp. and Assured Guaranty Municipal Corp. (collectively, “**Assured**”) and (vi) the other Supporting Holders from time to time party thereto, is executed and delivered by [\_\_\_\_\_] (the “**RSA Marketmaker**”) as of \_\_\_\_\_, \_\_, 2019. Each capitalized term used herein but not defined herein shall have the meaning set forth in the RSA.

1. Agreement to Transfer or Vote.

(a) The RSA Marketmaker agrees that, with respect to any Uninsured Bonds it may acquire in its capacity as a Qualified Marketmaker from a Supporting Holder (“**RSA Bonds**”), no later than ten (10) business days prior to the voting deadline on the Plan (the “**Transfer Deadline**”), qualifying modification, exchange, or other restructuring of the Uninsured Bonds pursuant to which the Securitization Bond Treatment or the Stipulated Treatment, as applicable, is being offered, it shall transfer such Bonds pursuant to Section 6(c) of the RSA only to a Supporting Holder or other person (“**Subsequent Transferee**”) who at or prior to consummation of the Transfer has executed a Joinder Agreement substantially in the form of Exhibit A to the RSA and has delivered such executed Joinder Agreement to counsel to the Ad Hoc Group, FOMB, PREPA, and AAFAF in accordance with Section 27 of the RSA. In the event that an RSA Marketmaker receives Uninsured Bonds, the RSA Marketmaker shall ask the Bondholder Transferring such Uninsured Bonds whether such Uninsured Bonds are RSA Bonds.

(b) If the RSA Marketmaker has not transferred RSA Bonds in accordance with Section 1(a) of this Joinder by the Transfer Deadline, the RSA Marketmaker shall be required to vote such Uninsured Bonds pursuant to a direction from the Required Uninsured Holders.

(c) Other than as set forth in Sections 1(a) and 1(b) of this Joinder, only a Subsequent Transferee (and not the RSA Marketmaker acting in its capacity as a Qualified Marketmaker) shall be bound by and required to timely perform all of the terms and provisions of the RSA, and only such Subsequent Transferee (and not the RSA Marketmaker acting in its capacity as a Qualified Marketmaker) shall be entitled to any rights under the RSA with respect to the negotiation, drafting, execution, and delivery of the Definitive Documents or otherwise exercise rights or remedies under the RSA.

(d) For the avoidance of doubt, any RSA Bond held at any time by the RSA Marketmaker in its capacity as a Qualified Marketmaker shall continue to be entitled to all rights to which such Uninsured Bond was entitled when it was held by the transferring Supporting Holder, including the Securitization Bond Treatment or Stipulated Treatment, as applicable,

accrual of Administrative Claims and receipt of Settlement Payments, Increased Settlement Payments, and Adequate Protection Payments, as applicable; provided that if PREPA as already paid any of these amounts to the transferor it will not be required to make such payments to the RSA Marketmaker or anyone else.

(e) The obligations assumed under this RSA Marketmaker Joinder shall apply solely to RSA Bonds. For the avoidance of doubt, this RSA Marketmaker Joinder shall not cause the RSA to apply to (i) Uninsured Bonds other than RSA Bonds, claims, securities, loans, other obligations or any other interest that may be held, acquired or sold by the RSA Marketmaker, (ii) any credit facilities to which the RSA Marketmaker or any of its affiliates may be party, (iii) any new credit facility, amendment to an existing credit facility, or debt or equity securities offering involving the RSA Marketmaker or its affiliates, (iv) any direct or indirect principal activities undertaken by the RSA Marketmaker or its affiliates engaged in the venture capital, private equity, or mezzanine businesses, or portfolio companies in which they have investments, (v) any ordinary course sales and trading activity taken by employees who are not a member of the RSA Marketmaker, (vi) any RSA Marketmaker or affiliate or related business engaged in providing private banking or investment management services, or (vii) any Uninsured Bonds or related claims that may be beneficially owned by non-affiliated clients of the RSA Marketmaker or any of its affiliates. Nothing herein addresses or otherwise modifies the status and obligations of the RSA Marketmaker or any affiliate of the RSA Marketmaker under or with respect to the RSA (or any other joinder agreement thereto), including whether or not the RSA currently applies or in the future will apply to the RSA Marketmaker or any affiliate thereof independently of this RSA Marketmaker Joinder.

2. Representations and Warranties. The RSA Marketmaker hereby makes the representations and warranties in Section 11(a) of the RSA, except that any references to “Agreement,” “Definitive RSA,” or “RSA” shall be replaced with references to this RSA Marketmaker Joinder, and further represents, warrants, and covenants that, if it is required to vote RSA Bonds in accordance with Section 1(b) hereof, it shall have all requisite or necessary authority to vote such RSA Bonds in a Plan, qualifying modification, exchange, or other restructuring of the Uninsured Bonds; provided, that the RSA Marketmaker does not assume any obligations or make any additional covenants under the RSA other than as set forth herein.

3. Governing Law. Section 15 of the RSA is incorporated by reference as if set forth fully herein, except that any references to “**Agreement**” or “**RSA**” shall be replaced with references to this RSA Marketmaker Joinder.

4. Notice of Joinder. The RSA Marketmaker agrees to provide a copy of this RSA Marketmaker Joinder to counsel to the Ad Hoc Group, FOMB, PREPA, and AAFAF in accordance with Section 27 of the RSA.

\* \* \* \* \*

IN WITNESS WHEREOF, the Marketmaker Joining Party has caused this Marketmaker Joinder to be executed as of the date set forth above.

[NAME OF INSTITUTION]

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Address:  
Attention:  
Email:

**Exhibit C**  
**Recovery Plan Term Sheet**



## RECOVERY PLAN TERM SHEET

Capitalized terms used herein without definition shall have the meanings given such terms in the Definitive RSA to which this Recovery Plan Term Sheet is attached.

### **I. Acceleration of Bonds.**

The Plan and Confirmation Order shall accelerate all of the Uninsured Bonds and Insured Bonds to the extent such Bonds are insured by a party to the RSA as of the Effective Date, with the same effect and treatment as if all of the Bonds were accelerated under the terms of the Trust Agreement.

### **II. Supporting Holder Exchange.**

The Supporting Holders shall commit to exchange (or commit to cause an exchange, as applicable) all of their Bonds, whenever acquired, for Securitization Bonds on the Effective Date, on the terms and in the manner set forth herein.

### **II. Securitization Bonds.**<sup>1</sup>

- a) The SPV shall issue Securitization Bonds, in the tranches provided below, secured by the Transition Charge.
- b) The Securitization Bonds shall be issued on the Effective Date.

### **III. Transition Charge.**

- a) The transition charge allocable to outstanding power revenue and revenue refunding bonds issued by PREPA under the Trust Agreement (the “**Transition Charge**”)<sup>2</sup> shall be set at the following levels:

- (i) 2.768 c/kWh for Years 1-3 [FY21-FY23]

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<sup>1</sup> In the event of conflict with these terms, the terms of the Securitization Term Sheet, attached to the Recovery Plan Term Sheet as Annex A, relating to the Securitization Bonds shall govern.

<sup>2</sup> The calculation of the Transition Charge (including the TC Cap) set forth in this Recovery Plan Term Sheet assumes (i) 100% of the Bonds are exchanged, (ii) interest accrues on Bonds until May 1, 2019 calculated at prior stated interest rates for each CUSIP, (iii) interest stops accruing on all power revenue bonds on May 1, 2019, (iv) the Administrative Claim for the Tranche A interest accrues for the benefit of all Bonds beginning May 1, 2019 as provided in the Definitive RSA, (v) any portion of the Administrative Claim not paid through the Settlement Charge is satisfied in Tranche A Bonds, (vi) the transaction closes on June 30, 2020, and (vii) the Settlement Charge is paid as provided herein. To the extent these assumptions are not correct or have to be modified, the Transition Charge (including the TC Cap) will need to be adjusted in connection with the issuance of the Securitization Bonds. The Transition Charge amounts (including the TC Cap) set forth above also do not include (i) the Assured Treatment or any premium paid to Assured, (ii) the costs of administration of the securitization vehicle (including costs such as trustee fees and servicer fees), or (iii) the Assured swap, and the Transition Charge will need to be adjusted in connection with the issuance of the Securitization Bonds to take those items into account.

- (ii) 2.957 c/kWh for Years 4-8 [FY24-FY28]
- (iii) 3.242 c/kWh in Year 9 [FY29]
- (iv) 3.323 c/kWh in Year 10 [FY30]
- (v) 3.406 c/kWh in Year 11 [FY31]
- (vi) 3.492 c/kWh in Year 12 [FY32]
- (vii) 3.579 c/kWh in Year 13 [FY33]
- (viii) 3.668 c/kWh in Year 14 [FY34]
- (ix) 3.760 c/kWh in Year 15 [FY35]
- (x) 3.854 c/kWh in Year 16 [FY36]
- (xi) 3.950 c/kWh in Year 17 [FY37]
- (xii) 4.049 c/kWh in Year 18 [FY38]
- (xiii) 4.150 c/kWh in Year 19 [FY39]
- (xiv) 4.254 c/kWh in Year 20 [FY40]
- (xv) 4.361 c/kWh in Year 21 [FY41]
- (xvi) 4.470 c/kWh in Year 22 [FY42]
- (xvii) 4.552 c/kWh in Year 23 [FY43]

(xviii) 4.552 c/kWh in Year 24 [FY44] and thereafter through Transition Charge Termination

b) The Transition Charge allocable to the Bonds shall begin on the earlier of the Title III plan Effective Date or the Delayed Implementation Date and shall be capped at 4.552 c/kWh (the “TC Cap”).

#### IV. Exchange Ratio.<sup>3</sup>

a) Tranche A Bonds: 67.5% of principal amount of outstanding Bonds subject to the

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<sup>3</sup> As used in “Exchange Ratio,” the principal amount of Supporting Holders’ Claims to be calculated to include (i) accrued and unpaid interest on the existing Bonds through an assumed exchange date of May 1, 2019 (which interest, in the case of a series of Assured Insured Bonds that bear interest at a floating interest rate, will be calculated based on the fixed rate under the related interest rate swap), and (ii) in the case of a series of Assured Insured Bonds that bear interest at a floating interest rate, the mark-to-market amount (the “Swap MTM Amount”) on the related interest rate swap as of the Effective Date (or such earlier date as negotiated by the Government Parties with the swap counterparties and Assured). As a result, Assured shall be entitled to receive additional Tranche A and B Bonds on

exchange plus, at the option of the Government Parties to the extent such Administrative Claim is not being paid in cash, 100% of any Administrative Claim being satisfied with Tranche A Bonds.

b) Tranche B Bonds: 10% of principal amount of outstanding Bonds subject to the exchange. The Tranche B Bonds shall not be required to be tax-exempt.<sup>4</sup>

c) With respect to Assured, the Exchange Ratio shall be subject to the Assured Treatment.

## V. Tranche A Bonds.

a) There will be a tranche of Securitization Bonds known as the Tranche A Bonds (the “**Tranche A Bonds**”), with the following maturities and coupons:

(i) **Maturity:** 40-year stated final maturity, subject to early mandatory redemption from sweep of Transition Charge Revenues (33 year expected maturity from FOMB’s May 2018 projections, which may change).

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account of the Swap MTM Amounts based on the same Exchange Ratio that is applicable to its claim with respect to Assured Insured Bonds. Such Swap MTM Amounts will be mutually agreed to between the Government Parties and Assured, provided that, if the parties cannot agree to such Swap MTM Amounts, then such amounts will be determined by obtaining actionable quotations from at least three swap dealers in accordance with Section 6(e) of the respective interest rate swap agreements (assuming that PREPA is the defaulting party for such purpose).

On the Effective Date, the Assured Insured Interest Rate Swaps will be extinguished and PREPA’s obligation thereunder will be satisfied by the treatment accorded to Assured on account of such interest rate swaps as described in this Term Sheet. Assured will have the option to (i) continue making net scheduled payments under the insurance policies insuring the Assured Insured Interest Rate Swaps or (ii) accelerate its obligations thereunder by paying the termination payment to the respective swap counterparties.

Notwithstanding the foregoing, in lieu of receiving additional Tranche A and B Bonds on account of the Swap MTM Amounts as described above, Assured may elect, if agreed by Assured and the swap counterparties, to insure a security to be issued by the issuer of the Securitization Bonds that (i) is delivered to the counterparties to the Assured Insured Interest Rate Swaps with PREPA in exchange for their agreement to the extinguishment of the Assured Insured Interest Rate Swaps, the cancellation of the respective swap insurance policies and the release of all of their claims thereunder, (ii) entitles the holder of such security to receive periodic payments that are equal to the fixed amounts that the respective interest rate swap counterparty would have been entitled to receive under the respective interest rate swap if floating rates were zero at all times during the term of such swap and the respective fixed rate were equal to the difference between the actual fixed rate under such swap and the on-market fixed rate (the “**Market Fixed Rate**”) for an interest rate swap otherwise having the same terms as such swap, and (iii) is secured by a Transition Charge segregated from the Transition Charges securing Assured Securitization Bonds and other Securitization Bonds, with any excess revenues from such Transition Charge securing future payments under such security or being used to prepay such future payments if such prepayment is allowed in the definitive documentation. If Assured makes such election, the Market Fixed Rate will be the fixed rate agreed to among the Government Parties, Assured and the respective swap counterparties, provided that, if the parties cannot agree to such fixed rate, then such Market Fixed Rate will be determined by obtaining actionable quotations from at least three swap dealers to enter into an offsetting interest rate swap pursuant to which such swap dealers would be paying such fixed rate. If Assured makes such election, Assured will be entitled to receive premium payments with respect to the insurance policy wrapping such security that for each year during which such security is outstanding are equal to 0.5% per annum of the aggregate payments payable under such security in such year.

<sup>4</sup> To the extent it has no economic effect on PREPA, the Tranche A and Tranche B Bonds shall be allocated in satisfaction of Bond principal and interest, whenever accrued, in the most tax-efficient manner.

(ii) **Coupon:** 5.25% to be paid in cash, on a tax-exempt basis.

(iii) Any interest not paid when due shall be added to the interest to be paid on the next payment date for such Tranche A Bonds. Interest shall accrue on overdue principal and interest at the coupon rate, compounding semi-annually.

(iv) The obligation to pay the Tranche A Bonds (including accrual and compounding, as applicable of interest) will extend beyond the stated final maturity if not paid in full on the stated final maturity until all principal of, and accrued and unpaid interest on, the Tranche A Bonds is paid in full.

## VI. Tranche B Bonds.

a) There will be a tranche of Securitization Bonds known as the Tranche B Bonds (the “**Tranche B Bonds**”), with the following maturities and coupons:

(i) **Maturity:** 47-year stated final maturity.

(ii) **Coupon:** 7.00% accretion rate for tax-exempt bonds; 8.75% for taxable bonds.<sup>5</sup>

(iii) Interest on Tranche B Bonds shall be paid in additional Tranche B Bonds in a principal amount equal to the unpaid balance of Tranche B Bond interest due (such payment of interest on Tranche B Bonds referred to as “**PIK Payments**”).

(iv) No cash flow on Tranche B bonds until Tranche A paid in full.

(v) Tranche B Bonds shall receive 100% of total excess cash flow from the Transition Charge (including any cash on deposit in the DSRF) after repayment of the Tranche A Bonds until maturity.

(vi) Any amounts on such Tranche B Bonds not paid with Transition Charge Revenues imposed prior to the stated final maturity of the Tranche B Bonds shall not be recoverable by Bondholders.

## VII. Assured Treatment.<sup>6</sup>

The Plan shall provide for the following treatments with respect to Assured on the account

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<sup>5</sup> The Government Parties shall work in good faith to try to obtain tax-exempt status for the Tranche B Bonds or as great a portion thereof as possible or, to the extent the Tranche B Bonds are not tax-exempt to work in good faith to minimize the tax impacts thereof; provided that the Government Parties shall not be required to change or modify the terms of any Transformation Transaction or incur any additional material costs to achieve such a result. A majority of the Ad Hoc Group, with the agreement of the Government Parties, may elect to alter the structure of the Tranche B Bonds received by holders of Uninsured Bonds to maximize tax exemption and minimize tax issues while otherwise maintaining equivalent economics.

<sup>6</sup> Transition Charge, DSRF, and surety repayments allocable to Assured Securitization Bonds and swap counterparty security must be segregated from Transition Charge and DSRF allocable to Uninsured Bonds and separately accounted for in a manner agreed to by the Required Parties, so that Assured Treatment and swap counterparty treatment do not affect recoveries on Uninsured Bonds and vice versa. For avoidance of doubt, the Uninsured Bond

of the Assured Insured Bonds, the Uninsured Bonds identified on Assured's signature page hereto that are beneficially owned by Assured, and the Assured Insured Interest Rate Swaps, which treatments shall be selected by Assured in its sole discretion on or prior to the hearing on the disclosure statement:

a) **Assured Election:** At Assured's election (the "**Assured Election**"), all or any portion of the Assured Insured Bonds selected by Assured shall be paid, in full, on the Effective Date, at an acceleration price (the "**Acceleration Price**") equal to the outstanding principal amount of such Bonds plus the accrued and unpaid interest thereon (or, in the case of any capital appreciation bonds, the compounded amount thereof) as of the Effective Date from (a) the proceeds of all or any portion of the Assured Securitization Bonds allocable to holders of Assured Insured Bonds that shall be (i) insured, at Assured's election, in accordance with a new insurance policy issued by Assured on terms acceptable to Assured, (ii) underwritten in an "offering" within the meaning of SEC Rule 15c2-12 and (iii) sold into the market such that they are issued and delivered to such underwriter(s) on the Effective Date, and (b) to the extent such proceeds of Assured Securitization Bonds are not sufficient to pay the Acceleration Price, amounts equal to such deficiency paid by Assured in accordance with the insurance policies (the "**Assured Insurance Policies**") guaranteeing the Assured Insured Bonds. In addition, at Assured's election, all or any of Assured Securitization Bonds allocable to Assured as a beneficial owner of Uninsured Bonds identified on Assured's signature page hereto, or that Assured is otherwise entitled to receive in accordance with the terms of this Definitive RSA, shall be insured, offered and underwritten in the same manner as Assured Securitization Bonds allocable to holders of Assured Insured Bonds would be required to be insured, offered and underwritten if Assured exercised the Assured Election in respect of such Assured Insured Bonds, and any proceeds of the sale of such Assured Securitization Bonds shall be transferred to Assured. The principal amounts, maturities and interest rates on the Assured Securitization Bonds in respect of which any of the foregoing elections is exercised, shall be determined by Assured in consultation with applicable underwriter(s), such that the interest rates on the Assured Securitization Bonds shall be the lowest interest rates necessary for such Assured Securitization Bonds to be issued with increased par amounts relative to other Securitization Bonds and otherwise result in the Assured Securitization Bonds being issued at the lowest aggregate yield; provided, however, that the annual debt service on the Assured Securitization Bonds due in any fiscal year shall not be greater than the annual debt service that would have been due in such fiscal year if such Assured Securitization Bonds had the same terms as the other Securitization Bonds. The costs associated with the issuance of the Assured Securitization Bonds (including the fees and compensation of the applicable underwriter(s)) shall be paid by PREPA and shall not be withheld from the proceeds of the Assured Securitization Bonds. The offering and underwriting of the Assured Securitization Bonds shall be provided for in the Plan or in connection with providing the Stipulated Treatment, provided, however, that if either (i) at or prior to the time of pricing of Assured Securitization Bonds, Assured determines, based on its good faith evaluation of the circumstances, that Assured Securitization Bonds cannot be sold into the market on terms acceptable to Assured or (ii) such Assured Securitization Bonds are not issued to the underwriter(s) for any reason, then in either case,

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Transition Charge or allocation must be set at levels sufficient to cover debt service in respect of Securitization Bonds allocable to the Uninsured Bonds, and Assured's Transition Charge or allocation must be set at levels sufficient to cover both debt service and premiums in respect of Assured Securitization Bonds and otherwise to provide for the Assured Treatment.

Assured (A) may elect, in its sole discretion, to pay the applicable Acceleration Price (such payment election, the “**Assured Acceleration Price Payment Option**”) to the holders of any Assured Insured Bonds with respect to which Assured has exercised the Assured Election, and (B) shall receive, on the Effective Date, the Assured Securitization Bonds in respect of which the Assured Acceleration Price Payment Option is exercised and any other Assured Securitization Bonds allocable to Assured or the Assured is otherwise entitled to receive hereunder, which Assured Securitization Bonds may, at Assured’s election, be insured in accordance with a new insurance policy issued by Assured on terms acceptable to it. The Plan shall provide that payment of the applicable Acceleration Price with respect to any Assured Insured Bond in accordance with the Assured Election shall satisfy and discharge all of Assured’s obligations under the Assured Insurance Policies with respect to such Assured Insured Bond.

b) **Assured Bondholder Elections**: In the event that Assured declines to make the Assured Election with respect to any Assured Insured Bonds as described above (or makes the Assured Election but declines to exercise the Assured Acceleration Price Payment Option upon the occurrence of any event that gives Assured the right to exercise such option as described above), the plan or Stipulated Treatment provision may offer each beneficial holder of an Assured Insured Bond with respect to which Assured has not made the Assured Election any one or more of the following options (collectively, the “**Assured Bondholder Elections**”), in each case on terms acceptable to Assured: (1) Assured Bondholder Election 1, pursuant to which such holder shall receive from Assured the applicable Acceleration Price on the Effective Date in full satisfaction and discharge of Assured’s obligations with respect to such holder under the applicable Assured Insurance Policies, and Assured shall receive Assured Securitization Bonds allocable to such holder under the plan that may, at Assured’s election, be insured in accordance with a new insurance policy issued by Assured on terms acceptable to it; (2) Assured Bondholder Election 2, pursuant to which such holder shall opt into a custodial trust, escrow arrangement, or similar structure established by Assured that would provide such holder with an interest in the applicable Assured Insurance Policy and Assured Securitization Bonds allocable to such holder in accordance with terms acceptable to Assured; or (3) Assured Bondholder Election 3, pursuant to which such holder shall, on the Effective Date, and in full satisfaction of Assured’s obligations under the applicable Assured Insurance Policies, receive (i) the Assured Securitization Bonds allocable to such holder under the plan, which Assured Securitization Bonds may, at Assured’s election, be insured in accordance with a new insurance policy issued by Assured on terms acceptable to Assured, and (ii) a cash payment from Assured in an amount to be determined or defined by Assured prior to the hearing on the disclosure statement. The Assured Bondholder Elections offered to Assured Insured Bondholders shall include at least either Assured Bondholder Election 1 or Assured Bondholder Election 2. In the event that Assured Bondholder Election 1 is not one of the options offered, the structure, terms, and conditions of the custodial trust, escrow arrangement or similar structure established as part of Assured Bondholder Election 2 must be reasonably acceptable to Assured and the Government Parties and the interests granted therein must be DTC eligible, provided that such custodial trust, escrow arrangement or similar structure will be deemed to be reasonably acceptable to the Government Parties if it is consistent with either one of the structures set forth in Annex B hereto. The Definitive RSA will provide that in the event an Assured Bondholder fails to make an election such Assured Bondholder is deemed to have elected Election 2 (unless otherwise provided in the Plan).

c) **DSRF Surety**: Assured may, at its election, provide a DSRF surety to satisfy the

DSRF requirement with respect to Tranche A Bonds that are Assured Securitization Bonds, which DSRF surety will be in effect during the entire term of such Tranche A Bonds. Any reimbursement obligation with respect to such DSRF surety will be secured and payable from the portion of the Transition Charge allocable to Assured Securitization Bonds, subordinate only to interest on Tranche A Bonds secured by such DSRF Surety. In exchange for such DSRF surety, Assured will be entitled to receive (i) additional Tranche A Bonds having a principal amount equal to the present value of the projected cash flow that would fund the DSRF requirement with respect to Tranche A Bonds that are Assured Securitization Bonds in the absence of the DSRF surety from Transition Charge excess cash following interest paid on Tranche A Bonds, and (ii) an upfront one-time DSRF surety fee equal to 2% of the DSRF requirement with respect to Tranche A Bonds that are Assured Securitization Bonds. Such DSRF Surety shall only secure the Tranche A Bonds that are Assured Securitization Bonds.

d) **Insurance Premiums:** To the extent that Assured insures any Assured Securitization Bonds, Assured will be entitled to receive a premium that (a) in the case of any Tranche A Bonds that it insures, will be payable in each year during which such Tranche A Bonds are outstanding, will be equal to 0.50% per annum of the principal amount of such Tranche A Bonds that were outstanding as of the first day of such year and will be payable from and secured by the Transition Charge revenues on a *pari passu* basis with interest on Tranche A Bonds, and (b) in the case of any Tranche B Bonds that it insures, will be a one-time premium payable in form of Tranche A Bonds having a principal amount equal to 2% of the expected aggregate cash flow of such Tranche B Bonds.

#### **VIII. Call Protection.**

a) Tranche A Bonds: Callable starting on the first interest payment date after the tenth anniversary of the issuance date.

b) Tranche B Bonds: Starting on the first interest payment date after the tenth anniversary of the issuance date, callable at the product of (i) the accreted value of the Tranche B Bonds at the date of redemption, multiplied by (ii) the Tranche B Call Premium. "Tranche B Call Premium" shall be (i) 110% for the twelve-month period starting on the first call date, (ii) 109.5% for the next twelve-month period and (iii) shall continue to decline by 0.5% each twelve-month period thereafter until it reaches 100%.

#### **IX. Debt Service Reserve Fund ("DSRF").**

a) The DSRF requirement shall be set at 5% of principal amount of the Tranche A Bonds.

b) DSRF will be funded through first dollars from Transition Charge excess cash following interest paid on Tranche A Bonds.

#### **X. Payment Default.**

a) No default on Tranche A Bonds for failure to pay scheduled debt service prior to maturity, so long as full amount collected under the Transition Charge (minus administrative fees) is used to pay debt service. Interest shall continue to accrue (and compound, as applicable) at the

original Coupon rate.

b) No default on Tranche B Bonds for failure to pay debt service, so long as full amount collected under the Transition Charge (minus administrative fees) is used to pay debt service. Interest shall continue to accrue (and pay-in-kind, as applicable) and accrete at the original Coupon rate.

c) The Transition Charge shall extend, and interest shall continue to accrue (and compound or pay-in-kind, as applicable) at the original Coupon rate, until the “**Transition Charge Termination**,” which shall be the later of (1) the date necessary to pay the Tranche A Bonds in full, even if past their stated maturity, and (2) the earlier of (i) the stated maturity of the Tranche B Bonds, and (ii) the date on which the Tranche B Bonds are paid in full.

**XI. Remedies.**

a) Remedies will be mutually agreed upon in the Definitive Documentation or Additional Definitive Documentation and will include, at a minimum, the right to replace the Transition Charge servicer and the right to enforce the Securitization Bonds’ trust agreement’ the servicing agreement, and non-impairment covenants. Requirements for replacement servicer to be mutually agreed upon as part of Definitive Documentation.

**XII. Securitization Protections (including structure of SPV).**

a) As set forth in Schedule I-B to the Securitization Term Sheet.

**XIII. Administrative Fees.**

a) Terms, structure, and cap on administrative fees to be mutually agreed upon.

**XIV. Demand Protections.**

a) As set forth in Schedule I-A to the Securitization Term Sheet.



**ANNEX A TO RECOVERY PLAN TERM SHEET:**

**Securitization Term Sheet  
Summary of Major Terms**

This term sheet (the “**Securitization Term Sheet**”) is intended to set forth certain agreements of the Parties with respect to the Securitization Bonds to be issued in accordance with the Definitive RSA and the exhibits, schedules and annexes thereto to which this Securitization Term Sheet is attached (collectively, the “**Agreement**” or “**RSA**”) and to set forth certain provisions in addition to those set forth in the Recovery Plan Term Sheet. This Term Sheet does not address all material terms that would be required to consummate the transactions set forth in the RSA, the Recovery Plan Term Sheet and this Securitization Term Sheet and is subject to Definitive Documentation.

Capitalized terms used in this Securitization Term Sheet that are not explicitly defined herein shall have the meanings ascribed to them in the RSA. The provisions of this Securitization Term Sheet shall be subject to and governed by the RSA, including the Rule of Interpretation set forth therein.

This Term Sheet does not constitute (nor shall it be construed as) an offer with respect to any securities.

<b>Legislation</b>	Act 4-2016 shall be amended or other legislation shall be enacted to govern the Securitization Bonds and implement the transactions contemplated by the RSA, the Recovery Plan Term Sheet and this Securitization Term Sheet (the “ <b>Amended Act</b> ”). Enactment of the Amended Act, as set forth in “Conditions Precedent” below, is a condition precedent to the Effective Date unless otherwise consented to by the Required Parties.	
<b>Issuance of Securitization Bonds</b>	Securitization Bonds shall be issued on the Effective Date of the Plan pursuant to and secured by a trust agreement (the “ <b>Securitization Trust Agreement</b> ”).	
<b>Interest Accrual; Interest Payment Dates</b>	<p>Interest on the Securitization Bonds will accrue (as applicable) at a fixed rate and be computed on a 30/360 basis and be due as follows:</p> <p>For Tranche A Bonds:</p> <ul style="list-style-type: none"> <li>• Interest will accrue (and, to the extent not paid, compound) and be payable semi-annually, on each January 1 and July 1 (each, an “<b>Interest Payment Date</b>”) at the coupon rate and on the terms set forth in the Recovery Plan Term Sheet.</li> <li>• First scheduled Interest Payment Date is [January 1, 2021]<sup>1</sup>.</li> </ul>	<p>For Tranche B Bonds:</p> <ul style="list-style-type: none"> <li>• Interest will accrue, accrete, and be compounded semi-annually (on each Interest Payment Date) at the coupon rate set forth in the Recovery Plan Term Sheet.<sup>2</sup></li> </ul>

<sup>1</sup> Initial Interest Payment Date shall be set based on issuance date of Securitization Bonds.

<sup>2</sup> The Required Parties shall work collaboratively to maximize the tax benefits related to the Tranche B Bonds, including altering the structure and terms thereof in a manner that preserves equivalent economics and does not have an adverse effect on the Government Parties or Supporting Holders.

<p><b>Tranche A Expected Scheduled Retirement Date; Bond Structure</b></p>	<p>The Tranche A Bonds are expected to mature in 33 years (according to FOMB’s May 2018 projections, which are subject to change, including with respect to demand projections) and shall have a stated final maturity of 40 years, subject to earlier mandatory redemption from Transition Charge Revenues<sup>3</sup> remaining after all other required payments in accordance with “Priority of Payment” below have been satisfied; <u>provided</u>, that maturity of Tranche A Bonds (including accrual and compounding of interest as set forth in the RSA/Plan Term Sheet) will extend beyond their stated final maturity and such Tranche A Bonds will remain outstanding if not paid in full on the stated final maturity until all principal of, and accrued and unpaid interest on, the Tranche A Bonds is paid in full. For the Uninsured Securitization Bonds, any cash on deposit in the DSRF shall be used to pay such Bonds at maturity (or prior to maturity if the amount on deposit in the DSRF equals or exceeds the remaining debt service on such Bonds) and any excess therein shall thereafter be used to pay the Tranche B Bonds.</p>
<p><b>Tranche B Expected Scheduled Retirement Date; Bond Structure</b></p>	<p>The Tranche B Bonds shall be structured as capital appreciation bonds<sup>4</sup> with a stated final maturity of 47 years, subject to mandatory redemption after payment in full of all amounts outstanding on the Tranche A Bonds from (1) for the Uninsured Securitization Bonds, any cash remaining on deposit in the DSRF after no Tranche A Bonds are outstanding under the Securitization Trust Agreement and (ii) for all Securitization Bonds, all cash flow from Transition Charge Revenues remaining after all other required payments in accordance with “Priority of Payment” below have been satisfied; <u>provided</u>, that any amounts on the Tranche B Bonds not paid with Transition Charge Revenues imposed prior to the stated final maturity of the Tranche B Bonds shall not be recoverable by Bondholders.</p>
<p><b>Denominations</b></p>	<p>Integral multiples of \$1.00 or such higher amount required by DTC.</p>
<p><b>Restructuring Resolution; Financing Costs</b></p>	<p>Simultaneously with the consummation of the Plan, the Issuer shall adopt a restructuring resolution (the “<b>Restructuring Resolution</b>”) in form and substance acceptable to the Required Parties, which resolution shall be adopted by the Issuer simultaneously with the consummation of the Plan, create and constitute part of the Restructuring Property<sup>5</sup> and approve the issuance of Securitization Bonds, the incurrence of other Secured Obligations (as defined in the Securitization Protections Term Sheet) and</p>

<sup>3</sup> “**Transition Charge Revenues**” means any money or other property received or to be received on account of the Transition Charges, and all proceeds of the investment thereof.

<sup>4</sup> Any references in the RSA/Plan Term Sheet to PIK Payments or payment in kind of interest on the Tranche B Bonds shall be understood to refer to accrual, accretion, and semi-annual compounding of interest of capital appreciation bonds.

<sup>5</sup> “**Restructuring Property**” (i) means a Restructuring Resolution and the property rights and interests created thereby, including the title and right to, and the interest in: (a) the right to receive Transition Charges; (b) the Transition Charges, as adjusted from time to time if required under the Definitive Documents, including any rights under a Servicing Agreement assigned pursuant to the Securitization Trust Agreement; (c) all revenues, collections, claims, payments, money, or proceeds on account of the Transition Charges or constituting Transition Charges, regardless of whether such revenues, collections, claims, payments, money, or proceeds are billed, received, collected or maintained by PREPA or by the Issuer together with or commingled with other revenues, collections, claims, payments, money, or proceeds; (d) all rights relating to the Transition Charges pursuant to the terms of the Restructuring Resolution related thereto (including as provided in the Demand Protection Term Sheet); and (e) all reserves established in connection with the Securitization Bonds or the Restructuring Property. For the avoidance of doubt, Restructuring Property shall not include any other charges, other property of the Issuer, property of PREPA or federal funds received by PREPA, the Government or any Government Entity.

	<p>the imposition and collection of the Transition Charges and Financing Costs in accordance with the terms hereof. The Restructuring Resolution shall address such other matters as may be necessary or desirable for the servicing of the Restructuring Property, with such terms and conditions agreed upon by the Required Parties. The Restructuring Resolution shall be irrevocable.</p> <p>“<b>Financing Costs</b>” shall be defined in, and shall be subject to, any restrictions set forth in the Restructuring Resolution or Securitization Trust Agreement but shall at a minimum include items 1, 2, 3, and 7 in “Priority of Payment” below and compensation for the Issuer’s board, and director and officer insurance for the Issuer, and the Transition Charge shall adjust to cover such Financing Costs in the manner set forth in the Definitive Documents; provided, that general Issuer expenses shall be allocated among Securitization Bonds and any other debt issued by the Issuer.</p>
<b>Administrator</b>	<p>To the extent that the Issuer acts through, or contracts with, an administrator (the “<b>Administrator</b>”), such Administrator shall enter into an Administration Agreement governing its employment. The Required Parties must agree on the identity of the Administrator (including whether the Administrator will be a third-party Servicer), but shall not be any Government Entity or employee thereof.</p>
<b>Securitization Trustee</b>	<p>The Securitization Trustee for the initial issuance of Securitization Bonds shall be a mainland financial institution (to the extent available) agreed upon by the Required Parties and shall hold all accounts associated with the Securitization Bonds at a mainland branch.</p>
<b>Servicer</b>	<p>The servicer<sup>6</sup> of the Transition Charge (the “<b>Servicer</b>”) shall be a concessionaire, operator or other service provider for the System<sup>7</sup> (or other party agreed upon by the Required Parties).</p> <p>The Issuer and the Servicer shall become a party to a servicing agreement (the “<b>Servicing Agreement</b>”), and which shall include, among others, the terms and conditions set forth herein and other terms and conditions consistent with prudent mainland utility securitizations, taking into account appropriate adjustments to reflect the structure of this transaction and feasibility in light of PREPA’s system, and shall at a minimum include the following:</p> <ul style="list-style-type: none"> <li>• A covenant that the Servicer obtain meter reads, calculate or estimate electricity usage, and bill the Transition Charges to the customers as a separate line item on electric bills;</li> <li>• A covenant that, if the Servicer receives any billed amounts from customers in respect of electricity charges, Transition Charges, and/or other charges, the Servicer shall promptly transfer such receipts to a third-party collection agent agreed upon by the Required Parties and the</li> </ul>

<sup>6</sup> Certain minimum standards that would have to be met by a Servicer will be included in the Definitive Documentation. PREPA may also act as Servicer during any transition period to any concessionaire, operator, or other service provider; provided, that the Definitive Documentation shall provide separate servicer terms and servicing standards specific acceptable to the Required Parties to PREPA or another Government Entity. References herein to PREPA acting as Servicer includes PREPA or any other Government Entity acting as Servicer, even on a temporary basis.

<sup>7</sup> System shall have the definition given to it in Demand Protection Term Sheet.

	<p>Servicer that meets the requirements set forth below (the “<b>Depository</b>”), and covenants addressing how charges from customers that do not pay in person shall be remitted to the Depository; in order to maximize collections the Required Parties may agree on provisions providing for collection and aggregation in other accounts prior to remittance to the Depository, including in accounts established and held by financial institutions in Puerto Rico;</p> <ul style="list-style-type: none"> <li>• A covenant that the Servicer use commercially reasonable efforts to collect all Transition Charges; provided, that if the Servicer is PREPA, the Servicing Agreement shall include specific requirements acceptable to the Required Parties for collection of the Transition Charges;</li> <li>• Daily allocation of Transition Charges and electricity and other charges by the Depository; provided, that the Required Parties will agree on provisions concerning such allocation, which may include provisions that amounts will be allocated based on actual amounts on deposit in the particular account after all transactions have been confirmed and reconciled;</li> <li>• A covenant that the Servicer provide to the Issuer, the Securitization Trustee on behalf of the Secured Parties (as defined in the Securitization Protections Term Sheet) (or, if different, any owner of all or any portion of the Restructuring Property), any rating agency rating the Securitization Bonds, and, if applicable, the Servicing Monitor commercially reasonable reporting as set forth in the Definitive Documents;<sup>8</sup> <u>provided</u>, that the Definitive Documents shall address the ability of the Securitization Trustee to share information with the Secured Parties; and</li> <li>• Covenants acceptable to the Servicer regarding termination of service to customers, termination of access to the System, and making use of intercept provisions, including a prohibition on discriminating between treatment of the Transition Charge and other electric charges.</li> </ul>
<p><b>Servicing Agreement</b></p>	<p>The Servicing Agreement shall further (and subject, in each case, to the terms and conditions of the Servicing Agreement):</p> <ul style="list-style-type: none"> <li>• set forth the Servicer’s compensation, which compensation shall be reasonable, market-based compensation;</li> <li>• include deposit, allocation, and periodic reconciliation requirements;</li> <li>• authorize the Securitization Trustee to replace the Servicer<sup>9</sup> or appoint a co-servicer or other additional or special servicer under the conditions set forth in the Servicing Agreement; and</li> </ul>

<sup>8</sup> To the extent the Servicer is PREPA, the Servicer must provide such financial information in respect of the Servicer, or material information regarding the Restructuring Property, as may be necessary for the Issuer, Securitization Trustee (or such other owner of the Restructuring Property), any rating agency rating the Securitization Bonds, and the Servicing Monitor (if applicable) to monitor the Servicer’s performance under the Servicing Agreement, perform their respective duties, and determine compliance by the Servicer with the Servicing Agreement.

<sup>9</sup> References to replacement of the Servicer throughout this Term Sheet, the RSA and the related documents shall mean replacement of the Servicer in such capacity only and not in any other capacity.

	<ul style="list-style-type: none"> <li>• contain other provisions, including for resignation or removal, and replacement, of the Servicer as set forth in the Servicing Agreement, including for failure to take collection actions required by the Servicing Agreement.</li> </ul> <p>The Servicing Agreement may also include provisions regarding the appointment of a backup servicer, co-Servicers or subservicers, which shall include the terms regarding the backup servicer, co-Servicers, and subservicers set forth in the Demand Protection Term Sheet.</p> <p>The Servicing Agreement shall also provide for the option on the part of the Servicer to make advances to the Issuer with respect to Transition Charge receivables.</p>
<p><b>Depository</b></p>	<p>Amounts held by the Depository shall be allocated between Transition Charges, electricity charges, and other permitted charges and transferred daily to the Securitization Trustee (in respect of Transition Charge collections), to the Servicer for payment to PREPA or any successor(s)<sup>10</sup> (in respect of electric and other charges), or to the owner of any other permitted charges (in respect of such other permitted charges) in accordance with a methodology agreed upon by the Required Parties. Such allocation and transfer shall be periodically reviewed by the Servicing Monitor (if applicable) and corrected by the Servicer based on the direction of the Servicing Monitor. The Securitization Trustee shall receive and hold all such amounts in a segregated deposit account. All Transition Charge Revenues shall be and remain property of the Issuer, and, except as otherwise provided in connection with Permitted Indebtedness, all collections that are not Transition Charge Revenues shall be and remain property of PREPA or its successor.</p> <p>The Servicer will be expressly prohibited in the Servicing Agreement from acting as Depository in respect of the Transition Charges. If the Servicer receives any Transition Charges, such receipt will be in its capacity as agent of the Issuer only, and the Servicer will hold such Transition Charges in trust for the exclusive benefit of the Issuer, Securitization Trustee, and the Secured Parties. The Servicer shall take such action necessary to direct third parties to turn over Transition Charges and electric and other charges to the Depository. Transition Charges shall not lose their character as Restructuring Property by virtue of possession by the Servicer, the Depository or any other party, and such Transition Charges shall be transferred as soon as possible to the Depository.</p> <p>The Depository shall be a mainland financial institution (to the extent available), agreed upon by the Required Parties, that is not related to the Government of Puerto Rico (the “<b>Government</b>”) or any of its agencies, departments, public corporations, trusts, funds, systems, instrumentalities, political subdivisions, taxing authorities, or regulatory bodies (each, a “<b>Government Entity</b>”) and that holds its accounts on the mainland.<sup>11</sup></p>

<sup>10</sup> References to “successor” in this provision shall refer to any person who bills or collects electricity rates in Puerto Rico.

<sup>11</sup> The Definitive Documents shall incorporate mechanics acceptable to the Required Parties that address, to the extent applicable, electronic transaction fees and other amounts that are collected or aggregated in Puerto Rico.

	<p>The Securitization Trust Agreement shall authorize the Securitization Trustee to replace the Depository, subject to terms and conditions agreed upon by the Required Parties.</p> <p>The Definitive Documents shall provide the investment standards for funds held by the Depository and the Securitization Trustee; provided, that neither the Depository nor the Securitization Trustee shall hold any accounts at or invest in AAFAF or any other Government Entity.</p> <p>In the event that a Depository cannot be identified to perform the responsibilities set forth above, the Servicing Agreement shall provide another methodology for allocating collections acceptable to the Required Parties and the Servicer.</p>
<p><b>Servicing Monitor</b></p>	<p>Solely if PREPA is acting as Servicer, a third-party servicing monitor (not affiliated with the Government or any Government Entity) (in such capacity, “<b>Servicing Monitor</b>”) agreed upon by the Required Parties will be appointed and retained to confirm the Servicer’s calculation and implementation of Transition Charges (including the implementation mechanisms described on the Demand Protection Term Sheet) and to review any allocation and transfer instructions provided by the Service to the Depository.<sup>12</sup> The Servicing Monitor shall also have the right to review the Servicer’s billing and collection practices. The Servicing Monitor shall act as an agent of the Securitization Trustee on behalf of the Secured Parties.</p> <p>The Securitization Trust Agreement shall include the qualifications for the Servicing Monitor and shall allow the Securitization Trustee to remove and replace the Servicing Monitor.</p> <p>In case of a dispute between the Servicing Monitor and the Servicer, an independent expert shall be appointed.</p> <p>The Servicing Monitor shall be in place no later than the Effective Date.</p>
<p><b>Restructuring Property; Security; Lien</b></p>	<p>The Restructuring Property will be as described in the Amended Act and in the Restructuring Resolution.</p> <p>In addition to the statutory lien on the Restructuring Property granted pursuant to and set forth in the Amended Act, the Issuer shall also grant the Secured Parties a supplemental security interest in the Restructuring Property and in all funds and accounts held by the Securitization Trustee thereunder, to secure the Secured Obligations.</p> <p>The lien of the Secured Parties shall have priority over any other lien (other than the statutory lien) on the Restructuring Property, and the Securitization Trust Agreement shall not permit any other lien on the Restructuring Property senior to the lien of the Secured Parties (other than the statutory lien).</p>

<sup>12</sup> If the Servicer is a mainland third party that meets certain standards, then all information that would have gone to the Servicing Monitor must go to the Securitization Trustee (with permission to share with holders of Securitization Bond subject to terms of the Securitization Trust Agreement), but no Servicing Monitor is necessary. In the event of a dispute between the Trustee or any holder and the Servicer, an independent expert shall be appointed.

	<p>The Securitization Trustee shall have the right to foreclose on all Restructuring Property and sell such Restructuring Property for the sole benefit of the Secured Parties.</p>
<p><b>Priority of Payment</b></p>	<p>On each payment date in respect of principal and interest, all amounts of the Transition Charge Revenues allocable to the Securitization Bonds will be available to pay the following amounts in the following priority (except as may otherwise be agreed upon by the Required Parties and subject to agreement on the allocation of the Transition Charge Revenues between the Uninsured Securitization Bonds and the Assured Securitization Bonds):</p> <ol style="list-style-type: none"> <li>1. Fees, costs, and expenses owed to the Securitization Trustee</li> <li>2. Depository and, if applicable, Servicing Monitor fees</li> <li>3. Servicer fees and related agent and/or administrator fees</li> <li>4. Interest on Tranche A Bonds<sup>13</sup></li> <li>5. Initial funding of the Debt Service Reserve Fund (expected to occur over a nine-year period)</li> <li>6. So long as the Tranche A Bonds are outstanding, replenishment of Debt Service Reserve Fund to required reserve level</li> <li>7. Indemnity amounts owed to the Securitization Trustee</li> <li>8. All remaining Transition Charge Revenues shall be applied to the mandatory redemption of Tranche A Bonds at a redemption price of par plus accrued interest to the applicable redemption date and, upon payment in full of the Tranche A Bonds, for the mandatory redemption of the Tranche B Bonds at a redemption price of par plus accrued interest to the applicable redemption date;</li> </ol> <p>provided, that for the Transition Charge Revenues allocable to the Assured Securitization Bonds, (i) interest on Tranche A Bonds that are Assured Securitization Bonds and premium payments payable to Assured with respect to any insurance policy insuring such Tranche A Bonds shall be payable on a <i>pari passu</i> basis; and (ii) the funding and replenishment of the DSRF will be replaced by the payment of any reimbursement obligation with respect to any DSRF surety.</p>
<p><b>Partial Payments Allocated Pro Rata</b></p>	<p>Any partial payments by customers shall be allocated pro rata between the Issuer (in respect of the Transition Charges), PREPA or any successor(s)<sup>14</sup> (in respect of the electric and other charges), and the owner of any other charges (in respect of such other charges) such pro rata allocation to be based upon the relative amounts of the Transition Charges, the PREPA charges, and the other charges as a part of the total bill; provided, that any applicable Puerto Rico taxes and Government-imposed fees (including any taxes or fees imposed by a Government Entity) shall be covered by an increase in the Transition Charge so that debt service is not effected; and provided further, that if the Issuer agrees to increase the charge to cover federally imposed taxes or fees in an issuance of additional bonds permitted under the</p>

<sup>13</sup> To the extent the Servicer is PREPA, interest on Tranche A Bonds shall be paid before servicer fees.

<sup>14</sup> References to “successor” in this provision shall refer to any person who bills or collects electricity rates in Puerto Rico.

	Securitization Trust Agreement, the Transition Charge shall also be entitled to such increase.
<b>Events of Default</b>	<p>The Securitization Trust Agreement shall include the following events of default and such other events of default as are agreed upon by the Required Parties:</p> <ul style="list-style-type: none"> <li>• Any violation of the Plan or the Confirmation Order, including violation of covenants by the Government or any Government Entity, subject to such notice and cure periods, if any, set forth in the Securitization Trust Agreement;</li> <li>• Covenant defaults by the Issuer subject to such notice and cure periods, if any, as are agreed upon by the Required Parties;</li> <li>• An event of default under the Servicing Agreement, Servicing Monitor Agreement, Administration Agreement, or Depository Agreement as are agreed to by the Required Parties; provided, that the remedy for any cross-default under the Servicing Agreement shall be solely the replacement of the Servicer unless otherwise agreed by the Required Parties;</li> <li>• Bankruptcy defaults agreed upon by the Required Parties;</li> <li>• Any act or failure to act by the Government or any Government Entity (including the Issuer) that violates or is not in accordance with the Amended Act, the Restructuring Resolution, the Securitization Trust Agreement, or other Securitization Documents;</li> <li>• The Government or any Government Entity (including the Issuer) breaches its covenants subject to such materiality standards, if any, set forth in the Securitization Trust Agreement; and</li> <li>• Failure to pay principal on the final maturity date of the Tranche A Bonds.</li> </ul>
<b>Governance</b>	The Issuer's governance shall be as set forth in the Amended Act and the Securitization Trust Agreement.
<b>Remedies</b>	<p>Remedies will be set forth in the Definitive Documents and will include, at a minimum, the right to replace the Servicer and the right to enforce the Securitization Trust Agreement, the Servicing Agreement, and the Government's covenants. Requirements for replacement Servicer to be part of Definitive Documents.</p> <p>The Issuer, the Securitization Trustee, the Secured Parties, and any owner of all or a portion of the Restructuring Property shall have the rights set forth in the Amended Act and the Restructuring Resolution, along with other rights and remedies set forth in the Definitive Documents.</p> <p>Neither the Transition Charge levels (including the TC Cap), duration, nor applicable coupon rates on the Securitization Bonds shall change as a result of an event of default.</p>
<b>Additional Provisions</b>	Actions that comply with law or regulation but that violate provisions of the Securitization Documents shall constitute a default; provided, that a third-



	<p>party Servicer shall not incur liability for violations of the Securitization Documents due to its compliance with law or regulation.</p> <p>The Transition Charge shall be billed and implemented in the manner and using the requirements set forth in the Amended Act and the Definitive Documents.</p> <p>The definitive documents related to a Transformation Transaction shall include customary covenants agreed to by the counterparty to the Transformation Transaction related to the maintenance of the tax-exemption on any Securitization Bonds.</p>
<p><b>Additional Permitted Indebtedness</b></p>	<p>The Definitive Documents shall provide that, at any time, Puerto Rico or PREPA and its subsidiaries and their respective legal successors (collectively, the “<b>PREPA Parties</b>”)<sup>15</sup> or any Concessionaire (as defined below), to the extent such Concessionaire is issuing debt payable from charges, taxes, or other fees on Puerto Rico electricity, shall be permitted (i) to incur additional Indebtedness (as defined in the Securitization Trust Agreement)<sup>16</sup> to fund costs related to the System, (ii) to impose charges, taxes, or other fees on electricity, or (iii) to grant liens in support of any such Indebtedness as provided below; provided that any such incurrence or imposition shall be done solely through a PREPA Party or the Issuer and shall be under and subject to the following conditions and requirements.</p> <p>A. Any additional Indebtedness issued must be solely for the following purposes:</p> <ol style="list-style-type: none"> <li>1. Indebtedness incurred in anticipation of receipt by any of the PREPA Parties, the Commonwealth or another governmental entity of funds from any agency of the U.S. Federal government, provided (x) such funds have been committed by such agency, (y) the Indebtedness being incurred is solely related to the System for purposes for which such funds have been committed and not for any other use, and (z) the designated recipient of the funds has agreed, to the extent permitted by applicable law, to turn over (and if permissible, pledge) such funds to the repayment of the additional Indebtedness incurred hereunder;</li> <li>2. Indebtedness incurred to meet any local match or cost sharing requirements relating to receipt of funding related to the System to be received from any agency of the U.S. government;</li> </ol>

<sup>15</sup> For the avoidance of doubt, PREPA Parties shall not include entities set up for the purpose of issuing debt.

<sup>16</sup> Neither the Issuer nor any PREPA Party may incur Indebtedness except as set forth above; provided, however, that with respect to PREPA Parties only, “Indebtedness” shall not include indebtedness or obligations or expenditures that are (i) incurred in the ordinary course of business, (ii) related to the operation of the System, and (iii) payable from collections that (x) are revenues of PREPA and (y) are not Transition Charge Revenues or revenues specifically allocated to Permitted Indebtedness.

	<ol style="list-style-type: none"><li>3. Indebtedness incurred to cover any capital requirements for the System;</li><li>4. Indebtedness incurred to fund a cash operating reserve, related to the System on or after exit from Title III in an amount not to exceed the greater of (a) an amount equal to ninety days of projected operating expenses or (b) the amount required by the Concessionaire; provided, that if the amount required under clause (b) exceeds the amount in clause (a), then the amount of such excess shall be repaid within five years of the date of borrowing;</li><li>5. Indebtedness incurred to finance emergency response to a major disaster or emergency directly related to the System in response to an emergency declaration requested by the Governor of the Commonwealth and declared by the President of the United States pursuant to the Stafford Act or similar or successor Federal law; or</li><li>6. Indebtedness incurred to refinance, in whole or in part, any indebtedness permitted by A.1 through A.5 above subject to the same restrictions as the Indebtedness being refinanced.</li></ol> <p>B. The issuance of any additional Indebtedness must meet the following standards:</p> <ol style="list-style-type: none"><li>1. Unless such funds are otherwise permitted pursuant to A.4(a) or A. 5 above, a private operator, manager or concessionaire (the “<b>Concessionaire</b>”) is operating the System, and the amounts of additional Indebtedness are (a) deemed appropriate by the Concessionaire to fund capital expenditures related to the System or necessary for the other purposes set forth in A.1 through A.6 above and (b) included in the budget or long-term plan approved by the Concessionaire (and, to the extent required, PREB) for the System;</li><li>2. The issuance of additional Indebtedness has received all necessary approvals, including, to the extent required by applicable law, approvals by PREB, FOMB, and the Board of PREPA or the Issuer (as applicable); provided, that with regard to the Issuer, the Issuer’s governance documents shall require that its board approve all additional issuances by the Issuer and the Confirmation Order shall provide that this provision cannot be changed;</li><li>3. The additional Indebtedness must have a dedicated transition charge, statutory charge, or other tax or revenue stream or be funded from revenues generated from the electricity rate including, to the extent required, an</li></ol>
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	<p>increase in such rate (such charge, stream, or increase, the “<b>Funding Charge</b>”); the imposition of the Funding Charge has received all necessary approvals (including, to the extent required by applicable law, by PREB and FOMB); and the Funding Charge is projected to fully cover all costs associated with the additional Indebtedness, including debt service, and, with respect to any additional Indebtedness incurred for any of the purposes set forth in A.3. above, be projected as of the date of issuance not to decrease the projected collections on the Transition Charge;</p> <ol style="list-style-type: none"><li>4. Any Funding Charge must be reflected in customer bills, and any allocation of partial payments in customer bills between the Funding Charge and the Transition Charge must be pro rata between the Transition Charge and the Funding Charge (each as then in effect) or require payment in full of the Transition Charge before the Funding Charge is paid;</li><li>5. The Transition Charge and the Funding Charge shall be kept separate; provided, that any commingling of the Transition Charge with the Funding Charge shall not limit, defeat, impair or interfere with the Securitization Bonds’ lien on the Transition Charge; provided further, that all revenues from the Transition Charge and each Funding Charge that is property of the Issuer (the “<b>Issuer Funding Charge</b>”) will be commingled when received by the Issuer, and will be allocated by the Issuer among the Securitization Bonds and the additional Indebtedness supported by each Issuer Funding Charge pro-rata based on (x) the Transition Charge then in effect and (y) each respective Issuer Funding Charge then in effect (without giving effect to any adjustments to such Issuer Funding Charge that would cause it to exceed the charge that was originally scheduled to be then in effect to the extent such adjustments are the result of collections of the Issuer Funding Charge being less than amounts billed);</li><li>6. The issuance of additional Indebtedness shall not adversely affect the tax treatment of the Securitization Bonds; and</li><li>7. Any lien granted in support of the additional Indebtedness shall be limited to the Funding Charge and other assets directly related thereto or to assets of PREPA that are not Restructuring Property.</li></ol> <p>Provided, for the avoidance of doubt, the financing of the amortization of the PREPA pension plan’s Unfunded Accrued Actuarial Liability and the establishment of a charge or other source of repayment therefore shall not</p>
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	<p>constitute Indebtedness but shall be subject to the requirements set forth in the clauses B.2 (except in the case of approvals required by clause B.2 or B.3 to the extent any approval is not required under the terms of the plan of adjustment) through B.7 above.</p> <p>Provided, further, that if there is no Concessionaire, then the restrictions on additional Indebtedness shall be as agreed upon by the Required Parties in the Securitization Trust Agreement and shall include at a minimum Indebtedness (a) incurred to fund a cash operating reserve on or after exit from Title III in an amount not to exceed the \$550 million and (b) that would be permitted under clauses A.1, A.2, and A.5, but, in the case of clauses (a) and (b), subject to the requirements set forth in the clauses B.2 (except in the case of approvals required under clause B.2 or B.3 to the extent any approval is not required under the terms of the plan of adjustment) through B.7 above.</p> <p>Notwithstanding the foregoing, to the extent that the Securitization Bonds are rated investment grade (without regard to any insurance or other third-party credit enhancement) by any nationally recognized rating agency (such bonds, the “<b>Rated Bonds</b>”), then the foregoing restrictions on additional Indebtedness shall not apply to any issuance of Indebtedness so long as each rating agency rating the Rated Bonds confirms that the issuance of such additional Indebtedness will not adversely affect the rating of such Rated Bonds (without regard to any insurance or other third-party credit enhancement).</p>
<p><b>Governing Law; Venue</b></p>	<p>Except as described in the last sentence of this paragraph, all documents relating to the Securitization Bonds or the issuance of the Securitization Bonds, and all of the Issuer’s agreements, shall be governed by the law of the State of New York, applied as if all such documents and agreements were executed in New York and were performed entirely within New York. Except as described in the last sentence of this paragraph, all rights of the Secured Parties shall be governed by the law of New York. Authorization and powers of PREPA and the Issuer are to be governed by Puerto Rico law.</p> <p>Each Party hereto, the parties to any of the Definitive Documents, and the Government (the “<b>Agreement Parties</b>”) shall submit to the continuing jurisdiction of the Title III Court and waive any objection to venue. In the event such court does not have or accept jurisdiction, the Agreement Parties shall agree to bring any disputes arising out of any aspect of the Plan, the Confirmation Order, the Transition Charge, the Securitization Bonds, or the Securitization Documents in any federal district court sitting in Puerto Rico and any appellate court therefrom, or in the event such federal district court does not have or accept jurisdiction, a {Commonwealth} court and any appellate court therefrom, and each Agreement Party shall be deemed to consent to the jurisdiction thereof.</p>
<p><b>Confirmation Order</b></p>	<p>The Confirmation Order shall include, among other things, the following:</p> <ul style="list-style-type: none"> <li>• The Issuer shall be bankruptcy remote/ineligible, as set forth in the Securitization Protections Term Sheet;</li> <li>• The Secured Obligations are legal, valid, binding, and enforceable obligations of the Issuer under Puerto Rico and federal law, and that the</li> </ul>

	<p>Transition Charge is property of the Issuer, free and clear of all liens, claims, encumbrances, and other interests of creditors of the Issuer, PREPA, the Government, or any Government Entity;</p> <ul style="list-style-type: none"> <li>• The Secured Obligations are validly secured by a statutory lien and a consensual lien, and the Securitization Documents and other Definitive Documents are legal, valid, binding, and specifically enforceable obligations of the Issuer, which validation will be set forth in the Plan and the Confirmation Order, including, without limitation, covenants not to impair such property conferred under the Plan and the Confirmation Order;</li> <li>• The Transition Charge is a valid provision made to pay or secure payment of the Secured Obligations, is not a tax under Puerto Rico law, is appropriate, reasonable, non-discriminatory, and legally binding on and specifically enforceable (including by the Servicing Monitor) against any Person in accordance with the Plan;</li> <li>• Any current or future owner of Restructuring Property, the Securitization Trustee, and the other Secured Parties shall be entitled to the property rights conferred under the Amended Act, the Plan, and the Confirmation Order, including the right to enforce such rights subject to the Securitization Documents;</li> <li>• Pursuant to Bankruptcy Code § 945(a), the Title III Court shall retain exclusive jurisdiction for at least the life of the Secured Obligations over all disputes arising out of any aspect of the Plan, the Confirmation Order, the Transition Charge, the Secured Obligations, or the Securitization Documents, including claims for specific performance, and each of the Government, the Government Entities, the Government Parties, and the Issuer shall consent, to the extent necessary, to exercise of jurisdiction over property and revenues of PREPA and the Issuer, notwithstanding section 305 of PROMESA;</li> <li>• The Confirmation Order shall provide that (i) subject to the passage of legislation authorizing the transaction, issuance of Securitization Bonds, the incurrence of the other Secured Obligations, the commencement of the Transition Charge, and any other aspect of the Agreement, including this Term Sheet, shall not be subject to review or approval by any party, including PREPA’s regulator, and (ii) that the demand protections the (“<b>Demand Protections</b>”) set forth on Scheduled I-A (the “<b>Demand Protections Term Sheet</b>”) shall be binding on the Agreement Parties, the Government, and each Government Entity.</li> <li>• Other provisions, including market or customary terms, as agreed to by the Required Parties.</li> </ul> <p>The decretal paragraphs of the Confirmation Order shall include the material terms, conditions, and covenants of the Government, PREPA, and the Issuer, as well as the other material terms and conditions of the Definitive Documents and Amended Act.</p>
<p><b>Conditions Precedent to Securitization</b></p>	<p>Customary conditions precedent to be agreed upon by the Required Parties and shall include, among other things:</p>

	<ul style="list-style-type: none"> <li>• Enactment into law of the Amended Act in a manner that meets the requirements of the RSA;</li> <li>• Certification by FOMB of a PREPA fiscal plan and an Issuer fiscal plan pursuant to Section 201(a) of PROMESA consistent with the transactions contemplated in the Plan.</li> <li>• An order of the Title III Court approving the form of the Restructuring Resolution, making the determinations set forth in “Confirmation Order” above, and including such other terms agreed upon by the Required Parties.</li> <li>• Receipt by the Securitization Trustee, for the benefit of the Secured Parties, of resolutions as agreed upon by the Required Parties and legal opinions that meet the requirements of the RSA from nationally recognized counsel, bond counsel, and special tax counsel (if different) to the Issuer and PREPA, and the Secretary of Justice of Puerto Rico, as applicable, that (among other things) interest payments made on the Tranche A Bonds (and, to the extent applicable, the Tranche B Bonds) will be excluded from gross income for federal income tax purposes and exempt from all state, territorial and Puerto Rico and other territorial income taxes, and the Securitization Bonds and other Secured Obligations are validly secured by a statutory lien on the Restructuring Property as set forth in the Amended Act; and</li> <li>• All Securitization Documents, Definitive Documents, and Additional Definitive Documents shall have been entered into, issued, or adopted in a manner that meets the requirements of the RSA; and</li> <li>• All necessary consents and approvals.</li> </ul>
<p><b>No Recourse</b></p>	<p>The Secured Obligations will have recourse solely to the Restructuring Property and not to any other assets, property, or rights of the Issuer, PREPA, the Government, or any other Governmental Entity; <u>provided</u>, that nothing shall limit the ability of Secured Parties (subject to the Securitization Trust Agreement, the Securitization Trustee, and the other agents appointed under the Securitization Documents from seeking specific enforcement of the Agreement Parties’ obligations or injunctive relief against any Agreement Party, and nothing shall impair or waive the constitutional rights of the Secured Parties or the Securitization Trustee.</p>
<p><b>Other Charges</b></p>	<p>Subject to any restrictions in the Securitization Trust Agreement, the Government Parties may establish other transition charges, statutory charge, or other tax or revenue stream, to provide for the payment of legacy obligations.</p>
<p><b>Servicer or Concessionaire Issues with Definitive Documents</b></p>	<p>Once the Servicer and/or Concessionaire is identified, to the extent that such Servicer or Concessionaire has concerns over provisions in this Securitization Term Sheet or any of the draft Definitive Documents, the Parties shall work in good faith to try to resolve such concerns in the final form of the such Documents.</p>

**Schedule I-A**

**Demand Protection Term Sheet**

*Each capitalized term not defined herein has the meaning given in the Restructuring Support Agreement and the exhibits, schedules and annexes thereto to which this Term Sheet is attached (collectively, the “RSA”). The omission of a term or condition contained elsewhere in this Term Sheet, including in the Restructuring Term Sheet, shall not affect the applicability of such term or condition.*

*This Term Sheet does not constitute (nor shall it be construed as) an offer with respect to any securities. This Term Sheet does not address all material terms that would be required in definitive documents and in order to consummate the transactions set forth in this Term Sheet and is subject to definitive documentation in form and substance mutually agreed upon by the Required Parties as well as to enactment of any legislation and issuance of any regulatory approvals contemplated by the RSA and this Term Sheet.*

<p><b>Overall Objectives of the Parties</b></p>	<p>The Government Parties, the Ad Hoc Group and Assured have entered into the RSA with the understanding that the Transition Charge is intended to be implemented so as to promote efficient investment in, and efficient use of, Puerto Rico’s electric infrastructure while providing for the recovery of legacy costs associated with the financing of the development of that infrastructure. The Transition Charge will be collected from all current and future Customers which have benefitted, are benefitting, or will benefit from the use of the System and which have benefitted from PREPA’s generation assets, as set forth in this Term Sheet.<sup>17</sup></p>
<p><b>Key Definitions</b></p>	<p>“<b>System</b>” means the T&amp;D assets in PREPA’s possession on July 23, 2018, as well as any replacements, extensions, or improvements of such assets made since that date and any T&amp;D assets acquired or constructed by PREPA and connected to the System after July 23, 2018.</p> <p>“<b>Customer</b>” means a service location or premise that (a) is connected to the System, (b) uses or leases any part of the System, (c) is connected to a microgrid, municipal utility or electric cooperative that is connected to or uses the System, or (d) benefits from any agreement that requires the System to provide the Customer electricity under any condition, including without limitation, an obligation to provide power on a standby, maintenance, emergency, or similar basis.<sup>18</sup></p>

<sup>17</sup> Any reference herein to “**PREPA**” refers to PREPA and any successors to PREPA (in full or in part) in its historic role as provider of transmission and distribution (“**T&D**”) services, including any entity succeeding to PREPA’s T&D assets or functions as T&D service provider through lease, sale, concession agreement, management agreement or other form of privatization, but for the avoidance of doubt shall not include entities that succeed solely to PREPA’s generation assets or functions.

<sup>18</sup> For the avoidance of doubt, consistent with utility industry standards, the term “Customer” refers to a service location or premises, and not to an actual person. Furthermore, a Customer shall not include any permanently disconnected service location or premise that does not benefit from any agreement that requires the System to provide the Customer with electricity under any condition, including without limitation, an obligation to provide power on a standby, maintenance, emergency, or similar basis. For the purposes of this definition, “permanently disconnected”

	<p>“<b>Consumption</b>” means, for any given time period, the amount of electricity consumed by a Customer, regardless of the source of such electricity, including thermal, solar, wind, geothermal or other renewable or recyclable sources, whether owned by PREPA or any successor, lessor or concessionaire, an independent power producer, municipality, cooperative or a Customer.</p> <p>“<b>Gross Consumption</b>” means, for any given time period, the amount of electricity consumed by a Customer, regardless of the source of such electricity, including thermal, solar, wind, geothermal or other renewable or recyclable sources, whether owned by PREPA or any successor, lessor or concessionaire, an independent power producer, municipality, cooperative or a Customer. The Gross Consumption of a new Customer (<i>i.e.</i>, a Customer that has not established a history of electricity consumption over a period of at least twenty-four (24) months) prior to the date it connects to the System) shall be deemed for the period before such new Customer has established twenty-four (24) months of electricity consumption history to be the average kWh consumed over a period of twenty-four (twenty-four) months by an electricity consumer in Puerto Rico having a connected electric load comparable to the electric load which such new Customer shall have reported to PREPA, the Servicer or subservicer, as the case may be, at the time it applies for connection to the System, as such average may be adjusted to take into account the size of the new Customer premises, the nature of the loads to be connected, the location of the new Customer’s premises relative to the System and other factors bearing on electricity consumption, including size and specifications of the behind the meter system.</p> <p>“<b>Net Consumption</b>” means, for any given time period, a Customer’s Gross Consumption less amounts of electricity which such Customer produces through properly permitted behind the meter generating facilities.</p> <p>“<b>Transition Charge</b>” has the meaning given to it in the Recovery Plan Term Sheet.</p> <p>“<b>Transition Charge Rate</b>” means the per-kilowatt hour rate of the Transition Charge from years 1 through 24 and thereafter, as set forth on the Recovery Plan Term Sheet, as modified to take into account the Excepted Customer Classes and Subsidy Charge.</p>
<b>Non-Bypassability</b>	Transition Charges are non-bypassable charges, the payment of which shall be obligatory. Transition Charges shall be assessed on all Customers, regardless of

means any service location or premises, including one connected to a microgrid, municipal utility or electric cooperative, not capable of receiving any electricity from, delivering electricity to, or being synchronized with, the System, including, but not limited to, for standby, maintenance, emergency, or similar purposes, or providing electricity to the System. With respect to a microgrid, “permanently disconnected” means a microgrid, municipal utility or electric cooperative permanently operating solely in island-mode and without any agreement that requires the System to provide the microgrid, municipal utility or electric cooperative electricity under any condition, including without limitation, an obligation to provide power on a standby, maintenance, emergency, or similar basis. Notwithstanding the foregoing, a microgrid, municipal utility or electric cooperative permanently operating solely in island-mode shall not be considered “permanently disconnected” if it uses or leases any part of the System.



	<p>the date as of which they become Customers, through a fixed charge or volumetric charge, as applicable, unless, subject to the conditions set forth herein, including the assessment of the Subsidy Charge, a Customer in an Excepted Customer Class is excepted from paying all or a part of the Transition Charges. Customers shall not be permitted to evade the imposition of Transition Charges or reduce their responsibility for Transition Charges by disconnecting and subsequently reconnecting to the System or by withholding from the Servicer any information required in order to assess Transition Charges or determine the Customer’s status as a BTMG Customer or Grandfathered BTMG Customer.</p>
<p><b>Implementation Date</b></p>	<p>The cutoff date for eligibility for treatment as a Grandfathered BTMG Customer (see below) shall be September 30, 2020 (the “<b>Implementation Date</b>”).</p>
<p><b>Grandfathered BTMG Customers</b></p>	<p>Customers with behind the meter generation (“<b>BTMG Customers</b>”) that was approved, in place, and operational prior to the Implementation Date (each, a “<b>Grandfathered BTMG Customer</b>”) will be subject to a monthly Transition Charge in the form of a fixed charge calculated for each month by multiplying the Transition Charge Rate applicable to such month by a monthly average of the Grandfathered BTMG Customer’s Net Consumption over the prior twenty-four (24) month period, after taking into account a three (3) month lag time (such period, the “<b>Twenty-Four Month Period</b>”).<sup>19</sup> The fixed charge shall be revised as set forth in (1) and (3) of “Fixed Charge Updates.”</p> <p>Any Grandfathered BTMG Customer whose behind the meter generation capacity increases by more than 20% above the capacity in place on the Implementation Date shall cease in the next billing period and in all subsequent billing periods to be considered a Grandfathered BTMG Customer to the extent of the behind the meter generation capacity increase.</p> <p>Notwithstanding anything to the contrary provided in this Term Sheet, all Grandfathered BTMG Customers shall cease to be Grandfathered BTMG Customers on the twentieth (20<sup>th</sup>) anniversary of the Effective Date and each such Customer shall thereafter be a Non-Grandfathered BTMG Customer.</p>
<p><b>Non-Grandfathered BTMG Customers</b></p>	<p>All BTMG Customers other than Grandfathered BTMG Customers, including former BTMG Customers that cease to be Grandfathered BTMG Customers (each, a “<b>Non-Grandfathered BTMG Customer</b>”), shall be obligated to pay the Servicer for the cost of installing at, a minimum, a revenue grade meter to measure the amount of electricity that is generated behind the meter (each such meter, a “<b>BTMG Meter</b>”). The BTMG Meter shall be in place and functioning by the time the Customer’s behind the meter generation system first comes online. The BTMG Meter shall be installed immediately after the behind the meter generation</p>

<sup>19</sup> “**Approved behind the meter generation**” refers to generation installations that are installed consistent with PREB-approved rules (if applicable), are properly licensed by the Commonwealth, and have been fully inspected and determined to be compliant by a licensed electrical inspector. Approved behind the meter generation does not include a generator whose sole function is to provide back-up power when power from the System (including power supplied via any microgrid, municipal utility or electric cooperative) is interrupted.

	<p>system and before such generated electricity reaches any load. The Servicer shall, from time to time, inspect and test a sampling of BTMG Meters consistent with industry practice.</p> <p>Each Non-Grandfathered BTMG Customer with a BTMG Meter shall be subject to a monthly Transition Charge in the form of a charge that shall be the <i>greater of</i> (x) a fixed charge calculated for each month by multiplying (i) the Transition Charge Rate applicable to such month by (ii) the monthly average of that Non-Grandfathered BTMG Customer’s Gross Consumption during the then-applicable Twenty-Four Month Period, <i>and</i> (y) the product of the Transition Charge Rate applicable to such month and the Non-Grandfathered BTMG Customer’s Net Consumption for such month. The fixed charge set forth in (x) shall be revised as set forth in (2) and (3) of “Fixed Charge Updates.” The initial Twenty-Four Month Period for a Non-Grandfathered BTMG Customer shall be the Twenty-Four Month Period concluding on the date on which that Customer became a Non-Grandfathered BTMG Customer.</p> <p>Until such time as a Non-Grandfathered BTMG Customer has an operating BTMG Meter, then, for purposes of clause (x)(ii) of the immediately preceding paragraph, the monthly average of that Non-Grandfathered BTMG Customer’s Gross Consumption during the then-applicable Twenty-Four Month Period shall be deemed to be the gross electricity inflows received from the System in the month for which the fixed charge is being calculated.</p>
<p><b>Customers without BTMG Generation</b></p>	<p>All Customers other than BTMG Customers (including, for the avoidance of doubt, any Customers that become Customers on or after the Implementation Date) will be subject to a monthly Transition Charge calculated by multiplying each Customer’s Consumption by the then-applicable per kilowatt hour Transition Charge Rate.</p>
<p><b>Adjustment of Consumption Calculations</b></p>	<p>Calculations of Gross Consumption or other calculations of historical consumption over a specified period required by this Term Sheet shall be adjusted to take into account the number of months required by this Term Sheet while eliminating from such calculation any period (as well as any quantity of electricity delivered from the System in such period) during which a Customer’s consumption of electric energy delivered from the System shall have been reduced or eliminated by reason of an event of force majeure affecting the System or a malfunctioning meter.</p>
<p><b>Allocation of Transition Charges Among Customer Classes</b></p>	<p>Exemptions, subsidies and credits may be offered to certain classes of Customers, and exemptions, subsidies and credits may be created for the benefit of low- and middle-income residential Customers. The value of any such exemptions, subsidies and credits and of the Additional Subsidies described below shall be spread among other Customers on the terms set forth below (the Customers to whom such exemptions, subsidies, charges and credits apply, the “<b>Excepted Customer Classes</b>”); <i>provided</i> that (i) the aggregate value of all such exemptions, subsidies or credits (collectively, the “<b>Subsidy Value</b>”) shall be calculated and charged to all other Customers, through a fixed or volumetric charge, as</p>

	<p>applicable, by the Servicer through a transition charge subsidy line item on Customer invoices (such line item, the “<b>Subsidy Charge</b>”), and then remitted to the Trustee for the Securitization Bonds in the same manner as all other Transition Charges and such subsidy payments, and the Amended Act shall provide that such Subsidy Charge and all rights thereto shall form a portion of the Restructuring Property to the same extent as all other Transition Charge revenue and rights thereto; (ii) any such exemption, subsidy or credit shall not impair the Servicer’s ability to collect the aggregate amount of revenue to be generated in any period through imposition of the Transition Charge; and (iii) such exemptions, subsidies or credits shall only be permitted to the extent the recovery of the Subsidy Value (including the Uncollected Amounts Charge) from Customers other than Customers in the Excepted Customer Classes never increases the responsibility of any Customer class for Transition Charges by more than 25%.</p> <p>The Servicer shall verify and audit the Transition Charge Revenue to confirm that any Subsidy Charges or credits are net revenue neutral, and the Subsidy Value and Subsidy Charge shall be recalculated annually.</p>
<p><b>Additional Subsidies</b></p>	<p>The Subsidy Charge for any month shall include the monthly average of the sum of:</p> <p>(1) an amount to cover Subsidized Entities’ Non-Collections and an amount to cover General Public Non-Collections (together, the “<b>Uncollected Amounts Charge</b>”); and</p> <p>(2) an amount to cover Government Non-Collections.</p> <p>“<b>Subsidized Entities’ Non-Collections</b>” shall mean, in any given year, the amount of Billed (as defined in the Definitive Documentation) but unpaid kilowatt hours for the preceding year attributable to deliveries under CILT arrangements, for public lighting, for low-income (public) housing, or for other subsidies, exemptions or credits then in effect; provided, that in the first year starting on the Effective Date, the Subsidized Entities’ Non-Collections shall be a projection of the amount of expected unpaid kilowatt hours delivered to such entities. The amount to cover Subsidized Entities’ Non-Collections shall mean the Subsidized Entities’ Non-Collections multiplied by the then-applicable Transition Charge Rate.</p> <p>“<b>General Public Non-Collections</b>” shall mean, in any given year, the amount of Billed but unpaid kilowatt hours delivered to Customers that are not included in the Subsidized Entities’ Non-Collection and that are not the Government or a Government Entity (such Customers, “<b>General Public Customers</b>”); provided, that in the first year starting on the Effective Date, the General Public Non-Collections shall be a projection of the amount of expected unpaid kilowatt hours delivered to General Public Customers. The amount to cover General Public Non-Collections shall mean the then-applicable Transition Charge Rate multiplied by:</p> <p>(i) in the event that (x) there is a private third-party acting as the System operator or (y) PREPA or any Government Entity is operating or</p>

	<p>managing the System and is following the Collection Regulations, any amounts over 1.5% of the total kilowatt hours consumed by General Public Customers that were Billed but not collected during the previous year; or</p> <p>(ii) in the event that PREPA or any Government Entity is operating or managing the System and is not following the Collection Regulations, all total kilowatt hours consumed by General Public Customers that were Billed but not collected during the previous year.</p> <p>The Uncollected Amounts Charge shall be recalculated each year and shall be updated on each Update Date to give effect to the then applicable Transition Charge Rate as follows:</p> <p>If the actual uncollected amounts (or, if applicable, in the case of General Public Non-Collections, actual uncollected amounts above the 1.5% threshold) (such amounts, the “<b>Actual Uncollected Amounts</b>”) for any given year (after giving effect to any adjustments from previous years) are less than the amount that was charged to Customers through the Uncollected Amounts Charge, the Uncollected Amounts Charge shall be reduced in the next year to rebate such excess to Customers in the form of a lower Uncollected Amounts Charge. If the Actual Uncollected Amounts for any given year (after giving effect to any adjustments from previous years) are greater than the amount that was charged to Customers through the Uncollected Amounts Charge, the Uncollected Amounts Charge for the next year shall be increased to make up for such shortfall.</p> <p>“<b>Government Non-Collections</b>” shall mean, in any given year, the total amount of payables owed with respect to kilowatt hours consumed by the Government and all Government Entities that were more than sixty (60) days past-due as of the end of the previous year. The amount to cover Government Non-Collections shall mean the Government Non-Collections multiplied by the Transition Charge Rate applicable for such year. The Government Non-Collections shall be recalculated each year and shall be updated on each Update Date.</p> <p>PREB shall, to the extent necessary, adopt and/or modify regulations acceptable to the Parties that shall require PREPA or any concessionaire or other manager or operator of the System, or electric service provider to exercise collection remedies for non-payment (including for disconnection after 60 days of non-payment) by General Public Customers (as defined below) and the Government and Government Entities that are in accordance with national standards (the “<b>Collection Regulations</b>”). The Amended Act shall, to the extent necessary, authorize the adoption of the Collection Regulations.</p>
<p><b>Fixed Charge Updates</b></p>	<p>The fixed charge applicable to Grandfathered BTMG Customers and Non-Grandfathered BTMG Customers shall be recalculated by the Servicer on the</p>

	<p>Effective Date and every anniversary thereof (any such date, the “<b>Update Date</b>”) as follows:</p> <ol style="list-style-type: none"> <li>(1) For Grandfathered BTMG Customers, at the conclusion of each Twenty-Four Month Period measured from the Effective Date, by calculating that Grandfathered BTMG Customer’s average monthly Net Consumption for the most recent Twenty-Four Month Period preceding such Update Date;</li> <li>(2) For Non-Grandfathered BTMG Customers, at the conclusion of each Twenty-Four Month Period measured from the Effective Date, by calculating that Non-Grandfathered BTMG Customer’s average monthly Gross Consumption for the most recent Twenty-Four Month Period preceding such Update Date; and</li> <li>(3) For all BTMG Customers, every year on the Update Date, to reflect changes in the applicable Transition Charge Rate to ensure that the fixed charge is consistent with the Transition Charge Rate for such month.</li> </ol>
<p><b>Notification &amp; Metering Requirements</b></p>	<p>The provisions of this Term Sheet regarding BTMG Customers shall apply to any existing or new Customer which installs behind the meter generation, whether or not such Customer seeks and/or receives approval to become a net metering Customer.</p> <p>All BTMG Customers shall be required to install or pay the Servicer for installing the necessary BTMG Meter to allow the Servicer to measure and record quantities of electricity produced from such BTMG Customer’s behind the meter generating facilities, or electricity usage within any microgrid, municipal utility or electric cooperative (or similar system or entity) connected to the System or with an agreement permitting it to obtain standby capacity or emergency energy from the System, and the Servicer shall routinely read these meters for Transition Charge billing purposes.</p> <p>In addition to any required regulatory notice, a Customer shall be required to send a notice to the Servicer (whether PREPA or any replacement Servicer or sub-servicer) (the “<b>BTMG Notice</b>”) in the event that it installs behind the meter generation or ceases to be a Grandfathered BTMG Customer for any of the reasons set forth in this Term Sheet. The Servicer shall be required to promptly provide copies of all BTMG Notices to the Issuer, the Servicing Monitor, and the Trustee for the Securitization Bonds.</p> <p>A Customer which fails to file a BTMG Notice shall pay a “<b>Registration Charge</b>” equal to \$250 (subject to annual increase at not less than the Consumer Price Index) plus the amount of Transition Charges the Customer would have owed if it had properly notified the Servicer of the installation of its behind the meter generation for the period beginning when it was installed and ending on the date of discovery (such amount, the “<b>Missed Transition Charge Payment</b>”). The Issuer shall receive the Missed Transition Charge Payment, and the remaining portion of the Registration Charge shall be remitted to PREPA. The Amended</p>

	<p>Act shall provide that the Missed Transition Charge Payment is Restructuring Property.</p> <p>Upon identifying a Customer that may have failed to file a BTMG Notice, the Servicer shall determine whether the Customer was required to file a BTMG Notice, calculate the amount of any Registration Charge, and enforce and collect the Registration Charge, each in a manner consistent with the Servicer’s investigation and collection of obligations from Customers to the Servicer.</p>
<b>Role of the Servicer</b>	<p>The Servicer’s responsibilities shall include (i) calculating the Transition Charge component of the Subsidy Charge; (ii) conducting audits of Transition Charge Revenues to confirm that any Subsidy Charges or credits are net revenue neutral; (iii) reviewing the BTMG Notices; (iv) auditing the BTMG Notices; (v) conducting ongoing diligence to identify Customers that failed to file BTMG Notices as required; (vi) calculating and implementing Fixed Charge Updates; and (vii) implementing any Fixed Charge Amendment approved by the PREB.</p>
<b>Annual Calculation Audit</b>	<p>In the event that a private third party is acting as Servicer, the Issuer’s Auditor shall, in addition to the annual audit of the Issuer, conduct an audit, with respect to the Servicer or any subservicer, of (i) the calculations of the Transition Charge component of the Subsidy Charge, (ii) the Transition Charge Revenues to confirm that any Subsidy Charge or credit are net revenue neutral and that total Transition Charges billed are consistent with Consumption, Gross Consumption and Net Consumption, as applicable, and otherwise consistent with the calculations set forth herein, (iii) Customers’ eligibility as Grandfathered BTMG Customers, Non-Grandfathered BTMG Customers, and Excepted Customer Classes; (iv) the calculation and implementation of any Fixed Charge Update; and (v) the implementation of any Fixed Charge Amendment. <b>“Issuer’s Auditor”</b> means an independent accounting firm of recognized national standing acceptable to the Trustee for the Securitization Bonds.</p> <p>In the event that PREPA or any Government Entity is acting as Servicer, there will be a Servicing Monitor in place to perform the duties set forth above, as well as the duties set forth in the Securitization Term Sheet.</p>
<b>Role of PREB</b>	<p>After the Securitization Bonds are issued, PREB’s role with regard to the calculation, modification or imposition of any Transition Charge shall be limited to (i) verification of the mathematical accuracy of the Servicer’s calculation of (a) the Transition Charge, (b) Subsidy Value and Subsidy Charges impacting the Transition Charge; (c) Gross Consumption and Transition Charge revenue calculations to confirm that Subsidy Charges do not negatively or beneficially impact Transition Charge revenue, as determined by the Servicer;<sup>20</sup> and (ii) amending the fixed charge applicable to BTMG Customers if, in a proceeding of which all Bondholders shall be given notice, it determines that the fixed charge is contributing to and is likely to continue to contribute to BTMG Customer</p>

<sup>20</sup> Any correction of such a mathematical error shall be made in the first billing cycle in which such adjustment can be practically implemented. In no event shall PREB’s inquiries into any such mathematical error or the correction thereof result in a delay to the calculation, billing, and collection of the Transition Charge or the Subsidy Charge.

	<p>defection from the System that is likely to result in material changes in Transition Charge revenue (any such amendment, the “<b>Fixed Charge Amendment</b>”). The Fixed Charge Amendment may be applied to the fixed charge collected from the BTMG Customer classes most likely to defect from the System. Any Fixed Charge Amendment shall be (i) supported by third-party expert studies quantifying the impact of implementing the Fixed Charge Amendment as compared with the status quo; (ii) put into effect only (a) if the Securitization Bonds have an investment grade rating, (b) if every rating agency that has rated the Securitization Bonds has confirmed that the Fixed Charge Amendment shall not result in a downgrade of the rating on the Securitization Bonds or otherwise cause an adverse action by the rating agency, and (c) upon the affirmative vote of the holders of a majority of principal amount of the Securitization Bonds at that time outstanding, excluding any Securitization Bonds held by the Government, any Government Entity, and any Puerto Rico municipality; and (iii) may be implemented no more frequently than once every three (3) years.</p>
<p><b>Servicing Agreement</b></p>	<p>Each microgrid, municipal utility, cooperative or any person selling electricity directly or indirectly to a microgrid, municipal utility, cooperative, or Customer that is subject to the provisions of this Term Sheet shall be a “subservicer” and each shall enter into the Servicing Agreement with the Servicer upon such terms and provisions as may be agreed upon by the Required Parties.</p>
<p><b>Protections</b></p>	<p>The terms set forth in this Term Sheet shall be included in the Amended Act, and all charges, fees, and payments required hereunder (and the right to such charges, fees, and payments and the revenues therefrom) shall be treated as Transition Charges, Transition Charge Revenues and part of the Restructuring Property.</p>

**Schedule I-B**  
**Securitization Protections**

The following provisions (in addition to other protections agreed upon by the Required Parties<sup>21</sup>) will be included in the Amended Act, Confirmation Order, Issuer's by-laws, or transaction documents, as applicable, in a manner agreed upon by the Required Parties:

**I. Issuer**

**A. General Issuer Provisions**

1. Issuer will be a special purpose public corporation and instrumentality of the Government of Puerto Rico, constituting a corporate and political entity independent and separate from the Government of Puerto Rico, PREPA and any other Government Entity. It shall be operated independently, and its business and affairs shall be governed by or under the direction of its Board of Directors.

2. Issuer will observe normal corporate separateness from PREPA and any other entity (e.g., separate books and records, no transferring of assets, etc.).

**B. Issuer Governance**

1. Board members selected by the Governor from list of 10 candidates from executive search firm using objective selection criteria. Each member of the Board shall satisfy the independence and qualification standards to be agreed upon in Securitization Trust Agreement.

2. Board members have fiduciary duty to act in best interests of Issuer to such extent and scope as is consistent with Puerto Rico law and the Puerto Rico Constitution.

3. Board members shall receive such compensation as is authorized pursuant to the Securitization Documents.

4. Each Board member shall be appointed for a term of 3 years; provided that the Governor may remove any member who fails to uphold the responsibilities set forth in the Amended Act or for gross negligence, willful misconduct or fraud. Board members shall have staggered terms.

**C. Issuer Powers and Duties<sup>22</sup>**

1. Issuer shall be authorized, without further legislative or regulatory approval to:

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<sup>21</sup> Capitalized terms used herein that are not explicitly defined herein shall have the meanings ascribed to them in the RSA or Securitization Term Sheet, as applicable.

<sup>22</sup> Issuer shall only be authorized to take such actions to the extent such actions or any documents required thereby or referred to therein are consistent with the RSA including with regard to any approvals of the form or substance of such documents contained in the RSA, the Definitive Documents or the Additional Definitive Documents.



(a) Adopt a Restructuring Resolution that governs the Securitization Bonds that is irrevocable and not subject to amendment after the issuance of the Securitization Bonds.

(b) Execute and perform under (i) a Securitization Trust Agreement that governs and secures the Securitization Bonds and the repayment thereof from Transition Charge Revenues and (ii) the other Securitization Documents.

(c) Collect the Transition Charge Revenues subject to the terms and conditions of the Definitive Documents

(d) Issue the Securitization Bonds authorized under the RSA, issue swap counterparty security contemplated by the RSA, and incur obligations with respect to insurance premiums and DSRF sureties contemplated by the RSA (such Securitization Bonds, swap counterparty security and other obligations contemplated by the RSA collectively referred to as “**Secured Obligations**”).

(e) Issue or assume such additional debt or obligations as may be permitted under the Securitization Trust Agreement, which shall, at a minimum, include, as set forth in the Securitization Term Sheet, (i) at the discretion of the Government Parties, any unpaid or underfunded pension obligations and (ii) Additional Permitted Indebtedness (collectively, the “**Permitted Indebtedness**”).

(f) Take other actions necessary or appropriate to effectuate the Securitization Bond Treatment.

(g) Sue and be sued in Commonwealth or federal court.

(h) Grant consensual liens and security interests in the Restructuring Property to the Securitization Trustee for the benefit of the owners, beneficiaries or insurers (the Securitization Trustee and such beneficiaries, collectively, the “**Secured Parties**”) of the Secured Obligations as additional security for such Secured Obligations.

2. Issuer shall not be authorized to (i) engage in any business activity other than as provided herein, (ii) own any assets or property other than Restructuring Property and property created in connection with or related to any Permitted Indebtedness except as permitted under the Securitization Trust Agreement and consistent with the RSA, (iii) incur or guaranty any other debt other than the Permitted Indebtedness and otherwise as permitted by the Securitization Trust Agreement, or (iv) dissolve while any Secured Obligation is outstanding.

3. The Issuer shall also be forbidden from (a) merging or consolidating with any other person, (b) except as permitted in the Securitization Trust Agreement and consistent with the RSA, permitting any liens on its assets other than those securing the Secured Obligations and any Permitted Indebtedness, (c) liquidating, selling or otherwise transferring the Restructuring Property other than as permitted by Securitization Trust Agreement, or (d) taking any other action that is inconsistent with the Issuer’s purpose set forth in the Amended Act or ancillary thereto.

4. Under the Amended Act, the Issuer shall be expressly prohibited from filing a petition under Title III of PROMESA or any similar law for as long as the Secured Obligations are outstanding. The governance documents for the Issuer shall provide that neither the Issuer, nor the board of the Issuer or any officer of the Issuer shall request to effect, or desire to effect, a plan to adjust its debts

under Title III of PROMESA or any similar law for as long as the Secured Obligations are outstanding. The Confirmation Order shall provide that such provisions of the governance documents may not be amended, changed, or superseded for as long as any Secured Obligations are outstanding.

## **II. Transition Charge and Restructuring Property**

A. The legislation shall impose, without requiring the approval of the Puerto Rico Energy Bureau or other entity, a non-bypassable and unavoidable Transition Charge that shall be standard to utility securitizations, including any adjustments to the Transition Charge as may be agreed upon in the RSA, and demand protections as agreed upon in connection with the RSA.

B. Transition Charge shall not constitute a tax or available revenues under Puerto Rico law and shall not be revoked or terminated.

C. The Transition Charge will be collected by a designated servicer pursuant to a Servicing Agreement with the Issuer (the "Servicer"), which Servicer will collect the Transition Charge as agent of the Issuer, and not on its own behalf or on behalf of PREPA, the Government, or any other Government Entity or electric service provider, and the Transition Charge Revenues prior to their transfer to the Securitization Trustee shall be held in trust for the exclusive benefit of the Secured Parties. No person, other than the Securitization Trustee, who collects or holds the Transition Charge Revenues or other Restructuring Property shall have any legal or equitable right, title or interest thereto solely by virtue of such collection or holding.

1. The details of the billing and collection of the Transition Charge, the allocation of electric bill payments between Transition Charge Revenues and other payments (including in respect of partial payments of electric bills), and the transfer of Transition Charge Revenues to any third party depository and the Securitization Trustee shall be as set forth in the Securitization Documents.

2. In the event that a customer partially pays its electric bill, each of the Issuer, PREPA and the owners of other charges shall share pro rata in such partial payment regardless of any contrary instructions by the customer (subject to any fees and expenses that are paid prior to pro ration to the extent permitted by the Securitization Trust Agreement) and the Issuer's pro rata share shall form part of the Restructuring Property.

D. The Transition Charge shall not be subject to counterclaim or defense other than for miscalculation or misreporting of amount of energy delivered.

E. Restructuring Property shall be authorized in the legislation and created by the Restructuring Resolution, and shall continue to exist until all Secured Obligations are paid in full.

1. Restructuring Property shall constitute an existing, present, continuing and vested property right for all purposes whether or not the revenues and proceeds arising with respect thereto have accrued, whether or not all actions to impose and collect the Transition Charge have occurred, and even though its value depends on future provision of service.

F. The Issuer shall have sole ownership of the Restructuring Property, including all legal and equitable rights, title and interest thereto, subject, however, to all liens and pledges for Restructuring Property in favor of the Securitization Trustee for the benefit of the Secured Parties.

### **III. Statutory Lien**

A. The Secured Obligations shall automatically, upon their issuance or incurrence and until they are paid in full, be secured by a statutory first lien on the Restructuring Property, including any moneys, income, revenues, accounts, contract rights or general intangibles derived therefrom, in favor of the Securitization Trustee for the benefit of the Secured Parties.

B. Such statutory first priority lien shall occur automatically and shall automatically attach and be automatically perfected, valid and binding, in each case, from and after the issuance of the Securitization Bonds without any further act or agreement by any person. No instrument needs to be executed or delivered, recorded or otherwise filed in any official record or in any government registry or office in order to perfect or continue such statutory first lien or to establish or maintain the priority thereof.

C. No commingling of the Transition Charge with any property of (or possession by) PREPA, the Government, or any other Government Entity or any other person shall limit, defeat, impair or interfere with such statutory lien.

D. Such statutory lien, and any consensual lien or security interest granted pursuant to the Securitization Trust Agreement, shall be valid, binding, perfected (without the need for a UCC financing statement) and enforceable against all persons having claims of any kind in tort, contract or otherwise against the Issuer or its assets irrespective of whether such Persons have notice of such lien.

### **IV. Servicer**

A. The Servicer shall be authorized to interrupt or suspend service, use intercept provisions, take enforcement actions, or terminate System access for failure to pay the Transition Charge (and electric service providers shall be obligated to follow a Servicer direction to do the same) on the same terms and conditions as the Servicer is authorized to suspend service, use intercept provisions, take collection actions, or terminate System access for failure to pay for electric services.

B. Servicer shall be authorized to bill and collect the Transition Charge, to include Transition Charge on bills as a separate line item and to remit Transition Charge Revenues to the Securitization Trustee.

### **V. Certain Covenants**

A. The Government of Puerto Rico, with the intent of being contractually bound, will agree and covenant with the Issuer and each Secured Party, and will authorize the Issuer to include such covenant in the Securitization Trust Agreement for the benefit of the Secured Parties, that it will not, and no Government Entity shall be authorized to, until the Secured Obligations and all amounts and obligations under all transaction documents, have been completely paid in cash in full or otherwise discharged in accordance with their terms:

1. take any action that would (i) impair the Issuer's right to receive the Transition Charge, (ii) limit or alter the rights vested in the Issuer in accordance with the Plan to fulfill the terms of any agreements with Secured Parties, (iii) eliminate, decrease or modify the Transition Charge or Demand Protections, or (iv) impair the rights and remedies of the Secured Parties or their collateral security;

provided, that nothing shall limit or impair the rights of any Government Entity in its capacity as a customer purchasing or using electricity services;

2. amend the Amended Act to impair, limit, restrict, rescind, delay or modify any obligation of the Issuer to the Secured Parties;

3. limit or restrict the rights or powers of the Issuer or Servicer to impose, maintain, charge or collect the Transition Charge;

4. impose charges, taxes, or other fees on electricity other than those directly associated with operation of the System, or authorize debt secured by Restructuring Property or any other rights or interest in electric rates or charges other than the Secured Obligations and Transition Charge provided for in the RSA, except charges supporting Permitted Indebtedness and otherwise as permitted by the Securitization Trust Agreement; and

5. take action to cause interest on any tax-exempt bonds to become taxable.

## **VI. Remedies**

A. The Securitization Trustee may replace the Servicer after a default and, to the extent provided in the Securitization Trust Agreement, may foreclose on the Restructuring Property upon the occurrence of an event of default in accordance with the terms of the Securitization Trust Agreement.

B. The Issuer, the Securitization Trustee, or subject to any limitations contained in the Securitization Trust Agreement, the other Secured Parties, may request the court to order the sequestration and payment of Transition Charge Revenues, notwithstanding any bankruptcy.

C. The Secured Parties are authorized to enforce the provisions of the Amended Act, subject, in the case of the holders or insurers of the Securitization Bonds, to any limitations included in the Securitization Trust Agreement.

## **VII. Successors to PREPA**

A. To come once Concessionaire is identified.

## **VIII. Miscellaneous**

A. Title III court order on validity and enforceability of Secured Obligations, Transition Charge, and related documents is binding, and Title III court retains jurisdiction to hear all matters arising out of the Secured Obligations and Transition Charge for so long as any Securitization Bonds are outstanding under the Securitization Trust Agreement.

B. Issuer, Transition Charge and the Secured Obligations shall not be subject to any Puerto Rico taxes or fees of any kind (including those levied by any Government Entity). The Transition Charge shall automatically increase to cover any Puerto Rico taxes or fees imposed that are not permitted under the Amended Act.

C. The Puerto Rico UCC shall not apply to the statutory lien, consensual lien and property rights granted to the Issuer and/or Secured Parties under the Amended Act and Securitization Documents.

D. The Amended Act shall prevail in the event of a conflict with any other law of Puerto Rico.

E. The Securitization Trust Agreement, other Securitization Documents and the Secured Obligations shall be governed by and construed in accordance with the laws of the State of New York, except that the authorization and powers of the PREPA, AAFAF and the Issuer shall be governed by the laws of Puerto Rico.

F. Any disputes, legal action, suit, or proceeding arising from or related to the Securitization Trust Agreement or the Securitization Bonds (i) shall be brought in the Title III court and any appellate court therefrom or, in the event such court does not have or accept such jurisdiction, in any federal district court sitting in Puerto Rico and any appellate court therefrom or, in the event such federal district court does not have or accept jurisdiction, a New York court and any appellate court therefrom and (ii) the parties shall be deemed to consent to the jurisdiction thereof.

G. Inclusion of demand protections (and associated provisions on implementation and application), subject to agreement by parties and as applicable.

H. Inclusion of severability and language conflict provisions acceptable to the Required Parties.

I. The following laws or provisions shall not apply to the Issuer except as agreed to by the Required Parties:<sup>23</sup>

1. Chapters 4 and 6 of Act 26-2017, as amended, known as the “Fiscal Plan Compliance Act”;

2. Act 1-2012, as amended, known as the “Puerto Rico Government Ethics Act of 2011”;

3. Act 103 of May 25, 2006, as amended, known as the “Act for the Fiscal Reform of the Government of the Commonwealth of Puerto Rico of 2006”;

4. Act 8-2017, as amended, known as the “Act for the Transformation of the Government’s Human Resources”;

5. Act 237-2004, as amended, known as the “Act to Establish Uniform Parameters for Contracting Professional and Consulting Services by Agencies and Instrumentalities of the Government of Puerto Rico”;

6. Act 197-2002, as amended, known as the “Act to Regulate the Transition Process of the Government of Puerto Rico”;

7. Act 78-2011, as amended, known as the “Electoral Code of Puerto Rico for the XXI Century”;

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<sup>23</sup> Subject to further diligence.

8. Act 38-2017, known as the “Uniform Administrative Procedures Act of the Government of Puerto Rico”;

9. Plan 3-2011, as amended, known as “General Services Administration Reorganization Plan”;

10. Act 230 of July 23, 1974, as amended, known as the “Government Accounting Act”;

11. Act 3-2017, known as the “Law to Address the Economic, Fiscal and Budgetary Crisis and Ensure the Functioning of the Government of Puerto Rico”;

12. Act 14 of April 17, 1972, as amended;

13. Act 2-2017;

14. Act 5-2017;

15. Act 17-2019, known as the “Puerto Rico Energy Public Policy Act”; and

16. Section 6.25A of Act 57-2014.

**ANNEX B TO RECOVERY PLAN TERM SHEET:**

**STRUCTURE 1: CUSTODIAL TRUST**

**SECTION 1: DEFINITIONS**

Capitalized terms used and not otherwise defined herein shall have the meanings given to such terms in the Definitive RSA. In addition, the following capitalized terms shall have the following meanings:

**Acceleration Price:** With respect to an Assured Legacy Bond, an amount equal to the outstanding principal amount of such bond plus the accrued and unpaid interest thereon.

**Assured Acceleration Option:** Assured's right, in accordance with the terms of the Assured Insurance Policies, to accelerate its payment obligations with respect to all or any portion of the Assured Legacy Bonds at any time during the term thereof by paying the applicable Acceleration Price to the holders thereof.

**Assured Advancement Option:** Either (a) the Assured Acceleration Option or (b) the rights assigned by PREPA to Assured pursuant to Section 2(b) below to redeem the Assured Legacy Bonds and any related rights such that such rights may be exercised directly and exclusively by Assured as if it were PREPA for such purposes, with any amounts due and payable in connection with such redemption being equal to the lesser of the applicable redemption price and the applicable Acceleration Price.

**Assured Certificate Holder:** A beneficial holder of an Assured Certificate.

**Assured Certificate Holder Exchange Option:** Pursuant to the Assured Trust Agreement, the right of a holder of Assured Certificates with an aggregate unpaid principal amount that is equal to the Minimum Threshold or any integral multiple thereof to exchange such Assured Certificates for its pro rata share of related Assured Trust Assets (other than the related Assured Legacy Bonds CUSIP and related Assured Insurance Policy) in accordance with the terms and provisions of Section 2(c) hereof.

**Assured Certificate Holder Exchange Option No Exercise Period:** With respect to the exercise of any Assured Certificate Holder Exchange Option, any period specified in the definitive documentation for the Assured Certificates, as determined by Assured in its sole discretion to be necessary in order for the issuance of the Assured Certificates to be in compliance with certain securities law requirements, if any.

**Assured Certificates:** With respect to each Assured Trust that is formed for the benefit of the beneficial holders of an Assured Legacy Bonds CUSIP, the certificate(s) or receipt(s) to be issued by such Assured Trust to beneficial holders of such Assured Legacy Bonds CUSIP that are deposited into such Assured Trust.

**Assured Legacy Bonds Distribution:** The distribution, consisting of Securitization Bonds allocable to the holders of the Assured Legacy Bonds (and any other property as provided in the

Plan, which, if Assured elects to insure such Securitization Bonds, shall include the applicable insurance policy insuring such Securitization Bonds), but excluding (A) Securitization Bonds allocable to holders of Assured Insured Bonds other than Assured Legacy Bonds, (B) Securitization Bonds allocable to Assured as a beneficial owner of Uninsured Bonds, (C) Securitization Bonds that Assured is otherwise entitled to receive in accordance with the terms of the Definitive RSA, or (D) any other consideration that Assured is entitled to receive in accordance with the terms of the Definitive RSA (including, without limitation, consideration on account of fees or insurance premiums).

**Assured Insurer Event:** A default by Assured on its payment obligations under an applicable Assured Insurance Policy, which default is continuing.

**Assured Legacy Bonds:** Any Assured Insured Bonds (i) with respect to which Assured does not exercise the Assured Election and (ii) the beneficial holders of which have not elected Assured Bondholder Election 1 or Assured Bondholder Election 3.

**Assured Legacy Bonds CUSIP:** Any maturity of Assured Legacy Bonds that bears a unique CUSIP such that such maturity of Assured Legacy Bonds is separately identifiable from other maturities of Assured Legacy Bonds with unique CUSIPs.

**Assured Original Scheduled Payment Date:** Each date on which scheduled payments are due in respect of the Assured Legacy Bonds in accordance with the terms of the Assured Insurance Policies.

**Assured Trust:** With respect to each Assured Legacy Bonds CUSIP, a separate trust or custodial arrangement that will be formed, on or prior to the Effective Date, by PREPA, at the sole cost and expense of Assured, and for the benefit of the beneficial holders of such Assured Legacy Bonds CUSIP, in accordance with the terms and provisions of Section 2 hereof.

**Assured Trust Agreement:** The agreement to be entered into by Assured, the Assured Trustee, and PREPA, as of the Effective Date, and governing the treatment of each Assured Trust.

**Assured Trust Assets:** With respect to each Assured Trust that is formed for the benefit of the beneficial holders of an Assured Legacy Bonds CUSIP, (a) such Assured Legacy Bonds CUSIP (including the related Assured Insurance Policy), (b) the pro-rata share of each asset comprising the Assured Legacy Bonds Distribution that is allocable to beneficial holders of such Assured Legacy Bonds CUSIP based on the Acceleration Price of such Assured Legacy Bonds CUSIP as of the Effective Date and the Acceleration Price of all Assured Legacy Bonds as of the Effective Date, and (c) any proceeds of any of the foregoing.

**Assured Trustee:** The trustee or custodian of each Assured Trust established in accordance with the terms and provisions of Section 2 hereof, which in each case shall be an entity selected by Assured that is a nationally recognized U.S. domiciled financial institution and fiduciary regularly acting as trustee in the municipal finance market.

**Minimum Threshold:** With respect to any Assured Certificates, the lowest principal amount of such Assured Certificates that would result in the pro rata share of the holder of such principal amount of Assured Certificates in the Tax-Exempt Securitization Bonds and the Taxable



Securitization Bonds comprising the Assured Trust Assets being equal to the sum of the minimum authorizing denomination for each maturity of such Tax-Exempt Securitization Bonds and Taxable Securitization Bonds.

**Secondary Market Assured Legacy Bonds:** The Assured Legacy Bonds that are insured through insurance issued in the secondary market.

**Taxable Securitization Bonds:** Tranche B Bonds that are issued as taxable bonds.

**Tax-Exempt Securitization Bonds:** Collectively, (a) Tranche A Bonds, and (b) Tranche B Bonds that are issued as tax-exempt bonds.

## **SECTION 2: TERMS OF ASSURED TRUSTS**

(a) **General Terms:** In the event that (i) Assured declines to exercise the Assured Election with respect to all Assured Insured Bonds and (ii) any Assured Legacy Bonds exist as of the Effective Date (i.e., Assured Insured Bonds with respect to which Assured has not exercised the Assured Election and the beneficial holders of which have not elected Assured Bondholder Election 1 or Assured Bondholder Election 3), a separate Assured Trust shall be formed on behalf of, and for the benefit of, beneficial holders of each Assured Legacy Bonds CUSIP. The Assured Trustee of each Assured Trust shall be an entity selected by Assured that is a nationally recognized U.S. domiciled financial institution and fiduciary regularly acting as trustee in the municipal finance market. On behalf of beneficial holders of Assured Insured Bonds, PREPA shall assist, to the extent reasonably necessary, in the creation of the Assured Trusts. PREPA shall not have any other obligations with respect to the Assured Trusts or the Assured Certificates, including, without limitation, with respect to the qualification of the Assured Certificates as “eligible securities” with the Depository Trust Company.

On the Effective Date, by electing (or being deemed to have elected) Assured Bondholder Election 2, each beneficial holder of an Assured Legacy Bonds CUSIP shall be deemed to have exchanged and deposited into the Assured Trust that is formed for the benefit of beneficial holders of such Assured Legacy Bonds CUSIP (1) such Assured Legacy Bonds CUSIP and (2) the Assured Trust Assets allocable to such holder, in exchange for one or more Assured Certificates issued by such Assured Trust and evidencing a pro-rata beneficial ownership interest in the related Assured Trust Assets. In furtherance of such Assured Bondholder Election and solely on behalf of such holders, on the Effective Date, PREPA and the Issuer, as applicable, shall concurrently with the exchange described in the immediately preceding sentence, deposit the applicable Assured Trust Assets (other than the Assured Legacy Bonds) into each of the Assured Trusts. The Assured Trust Assets shall not be property of PREPA or the Issuer, but shall be held by the Assured Trustee, and the establishment of the Assured Trusts is, solely for the benefit of the Assured Certificate Holders and Assured (to the extent that Assured is subrogated to the rights of the holders of the Assured Certificate Holders) in accordance with the terms of the Assured Trust Agreement. The Assured Certificate Holders shall be the “tax owners” of the Assured Trust Assets for Federal income tax purposes.

By electing (or being deemed to have elected) Assured Bondholder Election 2, the beneficial holders of Assured Legacy Bonds shall be deemed to have directed each securities intermediary

for such Assured Legacy Bonds (including, without limitation, the Depository Trust Company) to take any action that is necessary to effect the transfer of securities entitlements with respect to such Assured Legacy Bonds and the related Assured Certificates in its book-entry systems and/or on its books and records, as applicable, in order to give effect to the provisions of the immediately preceding paragraph. Each such securities intermediary shall promptly comply with such deemed direction. Until the Depository Trust Company effects the transfer of securities entitlements with respect to Assured Legacy Bonds to a securities account designated by the Assured Trustee and established for the benefit of the respective Assured Trust, the Trustee (or custodian in the case of Secondary Market Assured Legacy Bonds) shall disburse any payments received under the respective Assured Insurance Policies directly to the Assured Trustee for the benefit of the respective Assured Trusts (rather than such payments being made through the Depository Trust Company), and Assured shall be authorized (but not required) to make any payments under such Assured Insurance Policies directly to the Assured Trustee for the benefit of the respective Assured Trusts (rather than such payments being made through the Trustee or custodian, as applicable, and the Depository Trust Company).

Except (a) as provided in any contract, instrument or other agreement or document entered into or delivered in connection with the Plan, (b) for purposes of evidencing a right to distribution under the Plan, or (c) as specifically provided otherwise in the Plan, on the Effective Date, the Assured Legacy Bonds and all instruments and documents related thereto shall be automatically cancelled, terminated and of no further force or effect against PREPA without any further act or action under any applicable agreement, law, regulation, order or rule, with PREPA and the Trustee having no continuing obligations or duties and responsibilities thereunder, and the obligations of the parties to PREPA, as applicable, under the Assured Legacy Bonds and all instruments and documents related thereto shall be discharged; **provided, however,** that, notwithstanding anything contained herein to the contrary, the Assured Legacy Bonds and such other instruments and documents shall continue in effect solely (i) to allow all distributions as set forth in the Plan and to perform other necessary administrative or other functions with respect thereto; (ii) to allow holders of Allowed Claims to receive distributions in accordance with the terms and provisions of the Plan; (iii) for any trustee, agent, contract administrator or similar entity under all instruments and documents related thereto, including the Trustee, to perform necessary functions, including making distributions, in accordance with the Plan and to have the benefit of all the rights and protections and other provisions of such instruments and documents, as applicable, and all other related agreements with respect to priority in payment and lien rights with respect to any distribution; (iv) to set forth the terms and conditions applicable to parties to such documents and instruments other than PREPA; or (v) as may be necessary to preserve any claims under the respective Insurance Policies by the applicable holders of Assured Legacy Bonds that validly elected (or are deemed to have validly elected) to receive Assured Certificates. Notwithstanding the foregoing, and except as otherwise expressly provided in the Plan, such bonds or bond documents as remain outstanding shall not form the basis for the assertion of any Claim against PREPA or the Issuer, as the case may be.

The Assured Certificates shall entitle an Assured Certificate Holder to its pro rata share of value in any distribution of cash from the respective Assured Trust, which distribution shall (a) in all cases, occur promptly upon receipt thereof by such Assured Trust and (b) automatically reduce the obligation outstanding under the respective Assured Insurance Policies as of the date of such distribution to Assured Certificate Holders in the amount of such distribution, as determined by

Assured in its sole discretion. On each Assured Original Scheduled Payment Date for any Assured Legacy Bonds, Assured shall be obligated to pay any remaining amount of the scheduled payment that is due for payment in accordance with the terms of the respective Assured Insurance Policy after giving effect to any reduction pursuant to the immediately preceding sentence. Upon repayment, redemption or other retirement of all Assured Certificates issued by an Assured Trust (including, without limitation, as a result of the exercise of the Assured Advancement Option as set forth in Section 2(b) hereof or the satisfaction of all of Assured's payment obligations under the respective Assured Insurance Policy), Assured shall be entitled to receive all remaining Assured Trust Assets of such Assured Trust. At any time on or after the date of receipt of such Assured Trust Assets, Assured shall have the right to sell all or any of the Tax-Exempt Securitization Bonds and/or Taxable Securitization Bonds comprising such Assured Trust Assets.

Each series of Assured Certificates shall bear unique CUSIPs and shall be freely tradable and transferable through the Depository Trust Company. So long as an Assured Insurer Event is not occurring under the applicable Assured Insurance Policy, Assured shall be deemed the sole holder of the Securitization Bonds deposited in the respective Assured Trusts with respect to voting, amendment, acceleration, events of default and election and direction of rights and remedies, including, without limitation, in connection with insolvency proceedings. In addition, Assured shall be fully subrogated to the rights of the respective Assured Certificate Holders in respect of the Securitization Bonds deposited in the respective Assured Trusts.

(b) **Assured Advancement Option:** Assured shall have the right to exercise the Assured Acceleration Option at any time. In addition, on the Effective Date, PREPA shall assign to Assured any rights to redeem the Assured Legacy Bonds and any related rights such that such rights may be exercised directly and exclusively by Assured. Upon the exercise of any Assured Advancement Option and the payment of the Acceleration Price with respect to any Assured Legacy Bonds CUSIP, the Assured Trustee shall be required to disburse such Acceleration Price to the related Assured Certificate Holders as set forth in Section 2(a) above, and Assured shall become fully subrogated to all of the rights of such Assured Certificate Holders. Upon the disbursement of such Acceleration Price to the related Assured Certificate Holders, the related Assured Certificates shall be retired, the related Assured Trust shall be terminated, and the Assured Trustee shall deliver the related Assured Trust Assets to or at the direction of Assured. At any time on or after the date of receipt of such Assured Trust Assets, Assured shall have the right to sell all or certain of the Tax-Exempt Securitization Bonds constituting part of the Assured Trust Assets for value as tax-exempt bonds and all or certain of the Taxable Securitization Bonds constituting part of the Assured Trust Assets for value as taxable bonds.

(c) **Assured Certificate Holder Exchange Option:** Pursuant to the Assured Trust Agreement, a holder of Assured Certificates with an aggregate unpaid principal amount that is equal to the Minimum Threshold or any integral multiple thereof shall have the right to exercise the Assured Certificate Holder Exchange Option by exchanging such Assured Certificates for such holder's pro rata share of related Assured Trust Assets (other than the related Assured Legacy Bonds CUSIP and related Assured Insurance Policy). Upon the exercise of such Assured Certificate Holder Exchange Option, (i) the exchanging holder's pro rata share of the Assured Legacy Bonds on deposit in the respective Assured Trust shall be deemed to be

no longer outstanding for purposes of the related Assured Insurance Policy and such exchanging holder shall relinquish its rights under such Assured Insurance Policy, and (ii) the Assured Trustee shall effect the cancellation of such Assured Certificates. The Assured Trust Agreement may provide, at Assured's option, that the Assured Certificate Holder Exchange Option may be exercised only (i) after the expiration of any Assured Certificate Holder Exchange Option No Exercise Period and (ii) upon a written notice of such exercise that must be provided prior to the effective date of such exercise such that the effective date occurs after the lapse of any Assured Certificate Holder Exchange Option Notice Period. For the avoidance of doubt, each beneficial holder of Assured Certificates that has not exercised its Assured Certificate Holder Exchange Option on any day on which such option may be exercised (including the first day on which such option may be exercised at the time the applicable Assured Trust is created) shall be deemed to have elected to deposit and hold (or continue to hold) its pro-rata share of the Securitization Bonds and any other assets comprising the related Assured Trust Assets in the related Assured Trust until such beneficial holder has validly exercised such option.

(d) **Secondary Market Assured Legacy Bonds:** On the Effective Date, each bond certificate that currently evidences both Secondary Market Assured Legacy Bonds and any other Bonds bearing the same CUSIP shall be exchanged for two separate bond certificates with different CUSIPs but otherwise identical terms – one evidencing the Secondary Market Assured Legacy Bonds and the other evidencing such other Bonds. After giving effect to such exchange, Secondary Market Assured Legacy Bonds shall have a unique CUSIP. Concurrently with such exchange, by electing (or being deemed to have elected) Assured Bondholder Election 2, each beneficial holder of custody receipts evidencing a beneficial ownership interest in the Secondary Market Assured Legacy Bonds with a unique CUSIP and the respective Assured Insurance Policy shall be deemed to have deposited such custody receipts into the respective Assured Trust in exchange for Assured Certificates evidencing a pro-rata beneficial ownership interest in the related Assured Trust Assets, which shall consist of such custody receipts and the assets described in clause (b) and (c) of the definition thereof and otherwise shall be subject to the terms set forth in Section 2 hereof.

## **STRUCTURE 2: ESCROW**

### **SECTION 1: DEFINITIONS**

Capitalized terms used and not otherwise defined herein shall have the meanings given to such terms in the Definitive RSA. In addition, the following capitalized terms shall have the following meanings:

**Acceleration Price:** With respect to an Assured Legacy Bond, an amount equal to the outstanding principal amount of such bond plus the accrued and unpaid interest thereon.

**Assured Acceleration Option:** Assured's right, in accordance with the terms of the Assured Insurance Policies, to accelerate its payment obligations with respect to all or any portion of the Assured Legacy Bonds at any time during the term thereof by paying the applicable Acceleration Price to the holders thereof.

**Assured Advancement Option:** Either (a) the Assured Acceleration Option or (b) the rights assigned by PREPA to Assured pursuant to Section 2 below to redeem the Assured Legacy Bonds and any related rights such that such rights may be exercised directly and exclusively by Assured as if it were PREPA for such purposes, with any amounts due and payable in connection with such redemption being equal to the lesser of the applicable redemption price and the applicable Acceleration Price.

**Assured Escrow Property:** Property consisting of (i) Securitization Bonds, (ii) if Assured elects to insure such Securitization Bonds, the applicable insurance policy insuring such Securitization Bonds, and (iii) solely at Assured's option, any other property, allocable with respect to the Assured Legacy Bonds under the Plan, but excluding (A) Securitization Bonds allocable to holders of Assured Insured Bonds other than Assured Legacy Bonds, (B) Securitization Bonds allocable to Assured as a beneficial owner of Uninsured Bonds, (C) Securitization Bonds that Assured is otherwise entitled to receive in accordance with the terms of the Definitive RSA, or (D) any other consideration that Assured is entitled to receive in accordance with the terms of the Definitive RSA (including, without limitation, consideration on account of fees or insurance premiums).

**Assured Insurer Event:** A default by Assured on its payment obligations under an applicable Assured Insurance Policy, which default is continuing.

**Assured Legacy Bonds:** Any Assured Insured Bonds (i) with respect to which Assured does not exercise the Assured Election and (ii) the beneficial holders of which have not elected Assured Bondholder Election 1 or Assured Bondholder Election 3.

**Assured Legacy Bonds CUSIP:** Any maturity of Assured Legacy Bonds that bears a unique CUSIP such that such maturity of Assured Legacy Bonds is separately identifiable from other maturities of Assured Legacy Bonds with unique CUSIPs.

**Assured Original Scheduled Payment Date:** Each date on which scheduled payments are due in respect of the Assured Legacy Bonds in accordance with the terms of the Assured Insurance Policies.

**Escrow Collateralization Ratio:** With respect to any date, a ratio obtained by dividing the value of the Assured Escrow Property as of such date with the Acceleration Price of the outstanding Assured Legacy Bonds as of such date.

**Legal Defeasance:** The legal defeasance of the Assured Legacy Bonds in accordance with Section 2 hereof such that the Assured Legacy Bonds are no longer outstanding other than for the purposes set forth in Section 2 related to the Assured Insurance Policies.

**Secondary Market Assured Legacy Bonds:** The Assured Legacy Bonds that are insured through insurance issued in the secondary market.

## **SECTION 2: TERMS OF ASSURED ESCROW AGREEMENT**

(a) **General Terms:** In the event that (i) Assured does not exercise the Assured Election with respect to all Assured Insured Bonds and (ii) as of the Effective Date, there are Assured Legacy Bonds (i.e., Assured Insured Bonds with respect to which Assured has not exercised the Assured Election and the beneficial holders of which have not elected Assured Bondholder Election 1 or Assured Bondholder Election 3), PREPA, Assured, and [], as escrow agent (the "Escrow Agent"), shall enter into an escrow agreement (the "Escrow Agreement") on the Effective Date. Pursuant to the Escrow Agreement, and except as otherwise provided in Section 2(b) below, (1) Assured shall agree to the Legal Defeasance of all of the Assured Legacy Bonds, and that Assured's sole recourse in respect of its subrogation rights is to the Assured Escrow Property, and (2) in consideration for the Legal Defeasance, PREPA shall concurrently deliver the Assured Escrow Property to or at the direction of Assured. Assured shall agree to the Legal Defeasance as the "sole owner" of the Assured Legacy Bonds for purposes of exercising rights and remedies under the Assured Legacy Bonds, and necessary amendments to the Trust Agreement shall be made in order to effectuate the Legal Defeasance.

At the direction of Assured, PREPA shall deliver the Assured Escrow Property to the Escrow Agent as security for Assured's obligations under the Assured Insurance Policies to the holders of the Assured Legacy Bonds. The Assured Escrow Property and any proceeds thereof shall not be property of PREPA or the Issuer, but shall be held by the Escrow Agent in an irrevocable trust solely for the benefit of Assured and the holders of the Assured Legacy Bonds in accordance with the terms of the Escrow Agreement. Assured shall be the "tax owner" of the Assured Escrow Property, and the Escrow Agreement shall constitute a "security device" with respect to Assured's obligations under the Assured Insurance Policies for Federal income tax purposes.

On each Assured Original Scheduled Payment Date, Assured shall be obligated to pay the full amount of the scheduled payment due in accordance with the terms of the Assured Insurance Policies. Pursuant to the Escrow Agreement, and except as otherwise provided in Section 2(b) below, on or after each Assured Original Scheduled Payment Date, the Escrow Agent shall apply any cash proceeds of the Assured Escrow Property that are available on such date to pay Assured an amount up to the amount of any scheduled payment that Assured made under the Assured

Insurance Policies and any accrued interest thereon. If Assured fails to make any scheduled payment under the Assured Insurance Policies on an Assured Original Scheduled Payment Date, then on the business day immediately following such Assured Original Scheduled Payment Date the Escrow Agent shall apply any cash proceeds of the Assured Escrow Property that are available on such date to pay such scheduled payment to the holders of the Assured Legacy Bonds. Upon the exercise of the Assured Advancement Option, the Assured Escrow Property and any cash proceeds thereof shall be liquidated and/or applied as described in the second succeeding paragraph below. On any date on which cash proceeds of Assured Escrow Property are available to the Escrow Agent and are not required to be applied in accordance with the foregoing, such cash proceeds shall be invested by the Escrow Agent in investments selected by Assured that mature on or prior to the next Assured Original Scheduled Payment Date.

PREPA, Assured and the Escrow Agent shall enter into a single Escrow Agreement with respect to all of the Assured Legacy Bonds, and all of the Assured Escrow Property shall be deposited into a single escrow account (the "Escrow Account") that is maintained by the Escrow Agent under the Escrow Agreement. On each date on which the Assured Escrow Property generates any cash proceeds, such cash proceeds shall be (i) used with respect to payments for any Assured Legacy Bonds as directed by Assured and/or (ii) invested by the Escrow Agent in investments selected by Assured, which may mature after certain Assured Original Scheduled Payment Dates such that those investments are not available for payments due on such Assured Original Scheduled Payment Dates. For the avoidance of doubt, Assured shall have the right to direct the application or investment of the cash proceeds of the Assured Escrow Property in accordance with the immediately preceding sentence even if such application or investment results in certain Assured Legacy Bonds (i) having an Escrow Collateralization Ratio that is lower than what such Escrow Collateralization Ratio would have been in the absence of such application or investment, or (ii) no longer being secured by any remaining Assured Escrow Property.

Assured shall have the right to exercise the Assured Acceleration Option at any time with respect to all or any of the Assured Legacy Bonds. In addition, PREPA shall assign to Assured any rights to redeem the Assured Legacy Bonds and any related rights such that such rights may be exercised directly and exclusively by Assured as if it were PREPA for such purpose, and any amounts due in connection with such redemption shall be equal to the lesser of the applicable redemption price and the Acceleration Price. Assured shall have the right (but no obligation) to exercise the Assured Advancement Option at any time with respect to all or any of the Assured Legacy Bonds. In connection with the exercise of the Assured Advancement Option with respect to any Assured Legacy Bonds, Assured shall (i) have the right to direct the Escrow Agent to (A) liquidate all or any portion of the Assured Escrow Property in accordance with Assured's instructions and (B) apply all or any portion of the cash proceeds of the Assured Escrow Property to pay the Acceleration Price of such Assured Legacy Bonds, and/or (ii) be required to pay to the holders of such Assured Legacy Bonds the difference between the Acceleration Price and the cash proceeds applied in accordance with (i)(B) hereof. For the avoidance of doubt, Assured shall have the right to direct such liquidation of all or any portion of Assured Escrow Property and/or the application of cash proceeds thereof in accordance with the immediately preceding sentence irrespective of whether such liquidation and/or application results in any Assured Legacy Bonds in respect of which such Assured Advancement Option is not exercised (i) having an Escrow Collateralization Ratio that is lower than what such Escrow Collateralization Ratio would have been in the absence of such liquidation and/or application or (ii) no longer being

secured by any remaining Assured Escrow Property. Except as otherwise provided in Section 2(b) below, upon the exercise of the Assured Advancement Option with respect to all of the Assured Legacy Bonds, the Escrow Agent shall deliver any remaining Assured Escrow Property and any remaining cash proceeds of the Assured Escrow Property to or at the direction of Assured. At any time on or after the date of receipt of such Assured Escrow Property, Assured shall have the right to sell all or certain of the Securitization Bonds constituting part of the Assured Escrow Property for value as taxable bonds.

(b) **Secondary Market Assured Legacy Bonds:** On the Effective Date, each bond certificate that currently evidences both Secondary Market Assured Legacy Bonds and any other Bonds bearing the same CUSIP shall be exchanged for two separate bond certificates with different CUSIPs but otherwise identical terms – one evidencing the Secondary Market Assured Legacy Bonds and the other evidencing such other Bonds.

The Escrow Agent shall transfer cash proceeds of the Assured Escrow Property to Assured as described in Section 2(a) above based on a certification to be provided by Assured to the Escrow Agent with respect to any payment made by Assured in respect of a Secondary Market Assured Legacy Bond.

If Assured exercises the Assured Advancement Option with respect to Secondary Market Assured Legacy Bonds, the related payment shall be made by Assured to the custodian for the custody receipts in accordance with the terms of the related Assured Insurance Policy, and such custodian shall disburse such payment to the holders of such custody receipts on a pro-rata basis in accordance with the terms of the custody receipts documentation. Upon such payment by Assured, the related custodian shall transfer such Secondary Market Assured Legacy Bonds to Assured in accordance with the terms of the related Assured Insurance Policy and custody receipts documentation. Upon the transfer of such Secondary Market Assured Legacy Bonds by Assured to the Escrow Agent, the Escrow Agent shall deliver (i) the Assured Escrow Property and any cash proceeds thereof to or at the direction of Assured and (ii) such Secondary Market Assured Legacy Bonds to PREPA for cancellation.



**Annex A To Definitive RSA**

**Ad Hoc Group Members**

AG MM, L.P.

AG CAPITAL RECOVERY PARTNERS VIII, L.P.

AG CORPORATE CREDIT OPPORTUNITIES FUND, L.P.

NUTMEG PARTNERS, L.P.

AG CENTRE STREET PARTNERSHIP, L.P.

AG SUPER FUND MASTER, L.P.

BLUEMOUNTAIN GUADALUPE PEAK FUND L.P.

BLUEMOUNTAIN FOINAVEN MASTER FUND L.P.

BLUEMOUNTAIN CREDIT OPPORTUNITIES MASTER FUND I L.P.

BLUEMOUNTAIN KICKING HORSE FUND L.P.

BLUEMOUNTAIN FURSAN FUND L.P.

BLUEMOUNTAIN TIMBERLINE LTD.

BLUEMOUNTAIN CREDIT ALTERNATIVES MASTER FUND L.P.

BLUEMOUNTAIN MONTENVERS MASTER FUND SCA SICAV-SIF

BLUEMOUNTAIN LOGAN OPPORTUNITIES MASTER FUND L.P.

BLUEMOUNTAIN SUMMIT TRADING L.P.

CENTERBRIDGE CREDIT PARTNERS MASTER, L.P.

CENTERBRIDGE SPECIAL CREDIT PARTNERS II, L.P.

CENTERBRIDGE SPECIAL CREDIT PARTNERS III, L.P.

CALIFORNIA INTERMEDIATE TERM TAX FREE INCOME FUND

CALIFORNIA HIGH YIELD MUNICIPAL BOND FUND

TENNESEE MUNICIPAL BOND FUND

CALIFORNIA TAX FREE INCOME FUND  
NEW YORK TAX FREE INCOME FUND  
FEDERAL TAX FREE INCOME FUND  
COLORADO TAX FREE INCOME FUND  
GEORGIA TAX FREE INCOME FUND  
PENNSYLVANIA TAX FREE INCOME FUND  
HIGH YIELD TAX FREE INCOME FUND  
MISSOURI TAX FREE INCOME FUND  
OREGON TAX FREE INCOME FUND  
VIRGINIA TAX FREE INCOME FUND  
FLORIDA TAX FREE INCOME FUND  
LOUISIANA TAX FREE INCOME FUND  
MARYLAND TAX FREE INCOME FUND  
NORTH CAROLINA TAX FREE INCOME FUND  
NEW JERSEY TAX FREE INCOME FUND  
FRANKLIN STRATEGIC INCOME FUND - CANADA  
FTIF-FRANKLIN STRATEGIC INCOME FUND  
FSS-FRANKLIN STRATEGIC INCOME FUND  
FTVIP-FRANKLIN STRATEGIC INCOME VIP FUND  
FIST -FRANKLIN TOTAL RETURN FUND  
GOLDENTREE ASSET MANAGEMENT LP  
KNIGHTHEAD (NY) FUND, L.P.  
KNIGHTHEAD ANNUITY & LIFE ASSURANCE COMPANY  
KNIGHTHEAD MASTER FUND, L.P.  
AUSTRALIANSUPER, BY AUSTRALIANSUPER PTY LTD, AS TRUSTEE

BSF MULTI-MANAGER ALTERNATIVES STRATEGIES FUND

MARATHON BLUE GRASS CREDIT FUND LP

MARATHON CENTRE STREET PARTNERSHIP, L.P.

MARATHON CREDIT DISLOCATION FUND, LP

MARATHON CURRITUCK FUND, LP – SERIES C

MARATHON CURRITUCK FUND, LP – SERIES D

MARATHON LES GRANDES JORASSES MASTER FUND SCA SICAV-SIF

MARATHON SPECIAL OPPORTUNITY MASTER FUND, LTD

MARATHON STRATEGIC OPPORTUNITIES PROGRAM, LP

TRS CREDIT FUND LP

OPPENHEIMER ROCHESTER AMT –FREE MUNICIPAL FUND

OPPENHEIMER ROCHESTER AMT –FREE NEW YORK MUNICIPAL FUND

OPPENHEIMER ROCHESTER CALIFORNIA MUNICIPAL FUND

OPPENHEIMER ROCHESTER LIMITED TERM CALIFORNIA MUNICIPAL FUND

OPPENHEIMER ROCHESTER SHORT DURATION HIGH YIELD MUNICIPAL FUND (A  
SERIES OF OPPENHEIMER MUNICIPAL FUND)

OPPENHEIMER ROCHESTER LIMITED TERM NEW YORK MUNICIPAL FUND (A  
SERIES OF ROCHESTER PORTFOLIO SERIES)

OPPENHEIMER ROCHESTER NEW JERSEY MUNICIPAL FUND (A SERIES OF  
OPPENHEIMER MULTI-STATE MUNICIPAL TRUST)

OPPENHEIMER ROCHESTER PENNSYLVANIA MUNICIPAL FUND (A SERIES OF  
OPPENHEIMER MULTI-STATE MUNICIPAL TRUST)

OPPENHEIMER ROCHESTER HIGH YIELD MUNICIPAL FUND (A SERIES OF  
OPPENHEIMER MULTI-STATE MUNICIPAL TRUST)

OPPENHEIMER ROCHESTER FUND MUNICIPALS

MASSMUTUAL INTERNATIONAL HOLDINGS MSC, INC.

MASSMUTUAL UNIFIED TRADITIONAL

SILVER POINT CAPITAL FUND, L.P.

SILVER POINT CAPITAL OFFSHORE MASTER FUND, L.P.

**Annex B to Definitive RSA**

**Ad Hoc Group Waiver and Support Fee Allocation**

<b>Client</b>	<b>Allocated Share</b>
Angelo Gordon	
BlueMountain	
Centerbridge	
Franklin	
GoldenTree	
Knighthead	
Marathon	
Oppenheimer	
Silver Point	
<b>Total</b>	