

**COMMONWEALTH OF PUERTO RICO  
PUERTO RICO ENERGY COMMISSION**

IN RE: REVIEW OF RATES OF  
THE PUERTO RICO ELECTRIC  
POWER AUTHORITY

NO. CEPR-AP-2015-0001

SUBJECT: PREPA'S  
RESPONSES TO THE  
COMMISSION'S 2<sup>nd</sup> ROI

**PREPA'S RESPONSES TO THE COMMISSION'S  
SECOND REQUIREMENT OF INFORMATION**

TO: THE PUERTO RICO ENERGY COMMISSION  
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COMES NOW the Puerto Rico Electric Power Authority ("PREPA"), and submits its responses to the Puerto Rico Energy Commission's (the "Commission") "2<sup>nd</sup> Requirement of Information", dated June 23, 2016 (the "2<sup>nd</sup> ROI").<sup>1</sup> For ease of reference, the questions in the 2<sup>nd</sup> ROI are quoted, in bold, before each response.

**A. Questions for Witness Quintana**

1. **SGH-01-01: Ref. Quintana Direct, II. 426-432 - At the cited portion of his testimony, Dr. Quintana states that a PREPA's 2015 financial statements are not yet available due to a "change in the scope and breadth of the FY 2015 audit," and a disagreement with PREPA's auditor regarding the costs and fees related to that change in scope.**

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<sup>1</sup> PREPA makes a general, standing objection to any request for information or documents to the extent, if any, that it calls for any document or information that is not subject to disclosure or discovery because it is privileged, attorney work product, or subject to any other exemption from disclosure or discovery.

The 2<sup>nd</sup> ROI is labeled as the 2<sup>nd</sup> ROI in its header, but its second paragraph refers to it as the first ROI. PREPA believes that the 2<sup>nd</sup> ROI is in fact the 2<sup>nd</sup> ROI, in light of the Commission's June 22, 2016, Requerimiento de Informacion. The Commission also issued a June 15, 2016, request for clarification, although it was not labeled as an ROI.

**Dr. Quintana cites PREPA Ex. 1.02 [an affidavit from the PREPA Chief Financial Officer (CFO)], for support. However, in PREPA Ex. 1.02 the CFO states that the change in scope was related to PREPA's FY 2014 financials, not FY 2015. Please respond to the following questions:**

- a. Was the change of scope related to the Company's 2014 or 2015 financials?**

The following response was provided by Ernesto Ramos, the Chief Financial Officer ("CFO") of PREPA.

The change of scope was related to PREPA's FY 2014 financials. The change of scope delayed the ultimate release of the FY 2014 audited financials, which in turn delayed the start of the FY 2015 audit process.

- b. If the change of scope was related to PREPA's 2014 financials, please explain in as much detail as possible what caused the change in scope, explain how it was accounted for and provide comparative 2014 financial statements before and after the change in scope.**

The following response was provided by Ernesto Ramos, the CFO of PREPA.

The change of scope occurred as a result of the auditors placing a 'high-risk' designation on PREPA due to its financial condition, entrance into a forbearance agreement with creditors, and its exposure to the overall economic condition of Puerto Rico. The high-risk designation led the auditor's to transfer responsibility for the audit from its local Puerto Rico office to its US-based national office and to conduct significant additional diligence in the following areas; accounts receivable, reserve for uncollectible accounts, inventory, obsolescence of inventory, and contributed capital.

PREPA's FY 2014 audited financial statements are attached to PREPA's rate Petition, in its Attachment C, as Schedule I-2. In the Management Discussion and Analysis section (page 20, paragraph 1) there is discussion about an increase of \$191.5 million to the reserve for uncollectible accounts. This is the only material adjustment that was made to the financial statements as a result of the change of scope.

Because the change of scope occurred before the audit was completed, there are not two sets of 2014 financial statements to compare. As a result, we have not submitted documents in response to the 'before and after' request.

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- c. **If the change of scope was related to PREPA's 2015 financials, please explain in as much detail as possible what caused the change in scope, explain how it was accounted for and provide comparative 2015 financial statements before and after the change in scope, as soon as available.**

The following response was provided by Ernesto Ramos, the CFO of PREPA.

The change of scope was related to the audit of PREPA's FY 2014 financials. Please see the response to the previous question.

- d. **The November 2014 FTI Capital Advisors Report indicates that PREPA has differences in its accounts receivable balances for financial reporting purposes and for operational reports used by its customer service personnel. Is this still the case and, if so, why?**

The following response was provided by Ernesto Ramos, the CFO of PREPA.

It does remain the case that the reports used by customer service personnel have differences from the financial reports generated by the finance directorate. PREPA's Customer Care and Billing ("CC&B") system serves as the system of record for all management and financial reporting related to accounts receivable. It is capable of producing pre-configured management reports and also provides transaction data to PREPA's general ledger. The differences cited above are driven by the way that the two systems process adjusting transactions (cancel and re-bill, late payment charges, etc.). The general ledger creates accounts receivable balances in a specific time period by considering all of the transactions (sales and adjusting) that occurred during that time period. CC&B makes adjustments to the accounts receivable balances of previous periods based on adjustments made in the current period.

It is important to note that these approaches each have value. Neither is incorrect. Also, these differences can be reconciled and that PREPA considers the differences in the way the two systems process transactions as it extracts and analyzes data and develops management and financial reports.

2. **CEPR-SGH-01-02: Ref. Quintana Direct, I. 599 - Dr. Quintana indicates that a Formula Rate is "called for" by the RSA. Please cite the portion of the RSA to which he refers, and explain if "called for" means "mandated" or "allowed."**

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The following response was provided by Lisa Donahue, the Chief Restructuring Officer ("CRO") of PREPA.

The response to this question has been combined with the response to the overlapping sixth question relating to the testimony of Ms. Donahue.

**B. Questions for Witness Donahue**

1. **CEPR-SGH-01-03: Ref. Donahue Direct, II. 6-7 - Ms. Donahue testifies that she is the Chief Restructuring Officer of PREPA. Please describe the purpose of the \$625 Million of "Lender Bonds" described at pages 9 and 10, sub-paragraph "f." of the PREPARC Verified Petition for Restructuring Order.**

The following response was provided by Lisa Donahue, the CRO of PREPA.

PREPA's fuel line lenders were provided two options to restructure the past due Fuel Lines.

- a) Fuel Line Lenders were given the option to opt for a six year term out, as modeled in PREPA's rate case submitted to the Energy Commission.
- b) Alternatively, Lenders were given the option to exchange existing obligations owed under the Credit Agreements to Securitization bonds on similar terms as other participating holders, including a 15% reduction in principal. The \$625 million "Lender Bonds" was created as one of the Authorized Categories to enable this exchange, if needed

PREPA currently is not aware of any of its Fuel Line Lenders anticipating to participate in the exchange, although they do continue to maintain that option.

2. **CEPR-SGH-01-04: Ref. Donahue Direct, II. 71-73 - Ms. Donahue indicates that, at July 1, 2016, PREPA has a \$1.3 Billion principal and interest payment due related to Revenue Bonds and Revolving Credit Lines. Is it correct that PREPA has reached an agreement with its Credit Lenders as part of its Securitization; and, if so, are those monies still due and payable on July 1, 2016? If not, please explain why Ms. Donahue elected to include the Revolving Credit obligations in her description of PREPA's July 2016 obligations.**

The following response was provided by Lisa Donahue, the CRO of PREPA.

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The description of PREPA's July 2016 obligations, at the time the testimony was prepared, referred to a Status Quo where PREPA would not have the RSA in place and would be obligated to make all scheduled legacy debt service payments as well as settle the past due Revolving Credit Lines. The RSA has now been extended through December 15, 2016, and PREPA continues down the path of the contemplated consensual restructuring, PREPA's Revolving Credit Lines will not become payable in full on June 30th and instead will remain stayed as per the RSA and ultimately upon completion of our transaction, term out over a six-year period as modeled in the rate case petition before the Energy Commission.

PREPA's \$1.3 billion principal and interest due on July 1st, 2016 ("Status Quo") assuming no extension of RSA past June 30th, consisted of the following components:

|                                    |                 |
|------------------------------------|-----------------|
| July 1st bond debt service:        | \$421 million   |
| Fuel Lines and GDB line of credit: | \$730 million   |
| 2016 Series A/B:                   | \$111 million   |
| Total                              | \$1,262 million |

3. **CEPR-SGH-01-05: Ref. Donahue Direct, II. 180-188 - Ms. Donahue indicates that by 2015, PREPA's revenues were approximately 8¢ to 12¢ per kWh lower than the Company's costs. Please provide the supporting analysis for those estimates, including all assumptions.**

The following response was provided by Lisa Donahue, the CRO of PREPA.

Ms. Donahue's testimony states in part:

By 2015, it was estimated that, all else being equal (absent concessions from creditors and operational improvements), the difference between PREPA's costs and what it was charging was between 7.8¢ and 10.99¢ per kilowatt hour ("kWh"). This range depends on whether you examine 2017-2019 averages and assume the fuel line creditors would accept a 3-year amortization schedule, or you examine just 2017 and assume that the entire fuel line would be due in that year. Not surprisingly, therefore, for many years PREPA borrowed to make up for the shortfall in cost recovery through rates.

So, the referenced range can be more precisely described as approximately 8¢ to 11¢ per kWh of revenue shortfall, rather than 8¢ to 12¢ per kWh.

The lower end of the range is actually 7.7¢ per kWh. It was calculated in 2015 and was based on the revenues projected to be necessary to pay all of PREPA's operating expenses and all un-restructured debt service, but over the FY 2017-2019 period. Again, this was as projected in 2015, with FY2017 starting in July 2016 and

concluding in July of 2017, and so on. This difference of 7.7¢ per kWh reflects the difference between FY 2017-2019 projected average rates of 21.4¢ per kWh, based on a continuation of 2015 rates essentially frozen at that level for the future, and expected full costs of 29.1¢ per kWh, as projected over that time period.

Specifically, that average FY2017-2019 calculation, in ¢ per kWh, was derived as follows:

2015 Rates:

|                               |      |
|-------------------------------|------|
| 2015 Base rates               | 6.3  |
| Fuel (with markup)            | 9.5  |
| Purchased Power (with markup) | 5.5  |
| Other                         | 0.2  |
| Total Rates                   | 21.4 |

Average FY2017-2019 Full costs:

|                                     |      |
|-------------------------------------|------|
| Fuel                                | 7.6  |
| Purchased Power                     | 5.3  |
| Operations and Maintenance Expenses | 8.5  |
| Investment Capital Expenditures     | 1.5  |
| Debt Service                        | 6.2  |
| Total Costs                         | 29.1 |

|            |     |
|------------|-----|
| Difference | 7.7 |
|------------|-----|

The average 2017-2019 debt service of 6.2¢ per kWh had assumed that Debt service reflected PREPA's status quo debt service obligations for FY2017-FY2019. It had been assumed that fuel lines were repaid in full on July 1, 2016, the beginning of FY 2017, that all debt service (excluding the fuel line repayments) must have a 1.25x debt service coverage ratio. As is stated in the testimony, however, the implicit assumption in this 3-year averaging is that the fuel line would have accepted 3-year amortization schedule.

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More specifically the 6.2¢ per kWh of debt service, summarized above, is derived as follows:

|  |     |
|--|-----|
| Principal on Existing Bonds                    | 1.5 |
| Interest net of subsidies/capitalized interest | 2.3 |
| Fuel Line Debt Service                         | 1.4 |
| GDB LOC  | 0.1 |
| Total Debt Service                             | 5.3 |
| Debt Service Coverage (1.25X)                  | 0.9 |
| Total Debt Service in Rates                    | 6.2 |



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The 10.99¢ per kWh rate gap shortfall, or 11 ¢ per kWh which is the upper end of the range, was intended to illustrate the potential one-year rate gap impact if certain relending agreements did not materialize. In this case, we estimated the impact of the fuel lines not agreeing to an implied 3-year amortization, instead requiring full payment in FY 2017, but with PREPA also taking some mitigating actions. The estimate focused on 2017 and then made two important assumptions. It included an assumption that the entire fuel line debt would be due in a single year at the beginning of 2017 but also that PREPA would have deferred the AOGP project and capital expenditures by one year, so the bulk of these expenditures would shift to 2018.

Specifically, that 2017 calculation, in ¢ per kWh, was derived as follows:

2015 Rates:

|                               |      |
|-------------------------------|------|
| 2015 Base rates               | 6.3  |
| Fuel (with markup)            | 9.5  |
| Purchased Power (with markup) | 5.5  |
| Other                         | 0.2  |
| Total Rates                   | 21.4 |

2017 Full costs:

|                                     |      |  |
|-------------------------------------|------|--|
| Fuel                                | 8.7  |  |
| Purchased Power                     | 5.2  |  |
| Operations and Maintenance Expenses | 8.6  |  |
| Investment Capital Expenditures     | 2.7  | (including planned 2017 AOGP expenditures) |
| Debt Service                        | 4.7  |  |
| Total Costs                         | 29.8 |  |

Initial Difference 8.4

Adjustments:

|                                      |       |
|--------------------------------------|-------|
| Entire Fuel Line and GDB LOC in 2017 | 4.3   |
| AOGP deferred expenditures           |       |
| Less 2017 projected                  | (2.3) |
| Plus 2016 projected                  | .6    |

Net Difference 11.0

All rate calculations were based on the sales forecast and fuel and purchased power forecasts during the time period referenced in the testimony, in 2015.

4. **CEPR-SGH-01-06: Ref. Donahue Direct, I. 242 - Ms. Donahue indicates that PREPA needs to replenish its self-insurance fund. Is the replenishment of that fund planned for in the proposed Restructuring? If not, please explain why not.**

The following response was provided by Lisa Donahue, the CRO of PREPA.

Yes, as part of the Restructuring PREPA intends to issue \$50 million of Securitization bonds at close to replenish the self-insurance fund. The proceeds and associated debt service of these funds are included in Attachment 3.03 to the PREPARC rate petition.

5. **CEPR-SGH-01-07: Ref. Donahue Direct, II. 287-291 - At the cited portion of Ms. Donahue's testimony she discusses "noneconomic contingencies" that must be met under the Restructuring Support Agreement. Two of those items listed are 1) consent by holders of \$2 billion of the \$2.7 billion in bonds that are not currently parties to the RSA, and 2) the appointment of a new independent board of directors for PREPA. Please respond to the following questions:**

- a. **What are the non-participating bondholders consenting to; the Restructuring?**

The following response was provided by Lisa Donahue, the CRO of PREPA.

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The RSA requires a portion of the holders of the uninsured Power Revenue Bonds that are not parties to the RSA to participate in the Securitization transaction. Bondholders can participate by either (i) accepting a cash tender for their existing bonds or (ii) agreeing to exchange their Power Revenue Bonds into Securitization Bonds on the same terms as the Ad Hoc Group. The RSA sets the required participation threshold by requiring that following the transaction, no more than \$700 million of uninsured Power Revenue Bonds may remain outstanding. Therefore, approximately \$2 billion of non-RSA bonds must consent to participate in the transaction.

- b. **What constitutes "consent" of the bondholders referenced, and how will that "consent" be determined and conveyed to PREPA?**

The following response was provided by Lisa Donahue, the CRO of PREPA.

Participation in the securitization transaction as described above will constitute consent. Such consent would be conveyed to PREPA through the receipt and



cancellation of a sufficient amount of non-RSA Power Revenue Bonds upon consummation of the exchange or tender.

- c. Does the ratio of \$2 billion to \$2.7 billion (approximately 75%) have significance in the consent? Is it a required proportion?**

The following response was provided by Lisa Donahue, the CRO of PREPA.

The ratio is not significant; the governing metric is that no more than \$700 million of uninsured Power Revenue Bonds remain outstanding following the transaction.

- d. Is it possible that some portion of those currently nonparticipating bondholders will elect to accept the new Securitized debt? If not, why not?**

The following response was provided by Lisa Donahue, the CRO of PREPA.

Yes. As noted previously, the RSA requires that all but \$700 million of the uninsured Power Revenue Bonds participate in the transaction. Participation could come through an exchange into the new Securitized debt on the same terms as the Ad Hoc Group.

- e. Please describe the progress, thus far, in selecting and installing the new PREPA board.**

The following response was provided by Lisa Donahue, the CRO of PREPA.

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As previously announced, following a comprehensive selection process, PREPA selected Russell Reynolds to lead the search for the six independent Directors which will be part of the new PREPA board. The initial screening process identified potential Puerto Rico and non-Puerto Rico resident candidates. Shortlisted candidates have been vetted by Russell Reynolds and are being interviewed by an interview committee consisting of current board members and representatives from PREPA's management team. The selection process is now in its final stages and Russell Reynolds anticipates providing the slate of the 10 candidates required by the PREPA Revitalization Act to the Governor by early July.

- f. When is the new board expected to have its initial meeting?**

The following response was provided by Lisa Donahue, the CRO of PREPA.

The new board will be seated and commence its duties immediately following the appointment process, which includes the Governor selecting the 6 members from the slate of 10 candidates. While exact timing of this is not finalized, Russell Reynolds is currently anticipating providing the slate to the Governor by early July. The date of the initial meeting will be determined once the board is seated and the Chairman calls for its first meeting.

6. **CEPR-SGH-01-08: Ref. Donahue Direct, I. 398-390 - Ms. Donahue's testimony indicates that PREPA's rate case should be based on a formula rate model according to Schedule VI of the RSA. Is it Ms. Donahue's understanding that the Commission, in setting PREPA's rates must follow a formula rate model; and, if it does not, would that jeopardize the RSA? Please explain and provide any available supporting documentation.**

The following response was provided by Lisa Donahue, the CRO of PREPA.

PREPA recommended a formula rate making ("FRM") approach to the Commission as recommended by our rate design expert and for reasons addressed in our rate design testimony. The RSA also contemplates such a mechanism. The specific provisions of the RSA addressing this issue are as follows.

First, the Rate Structure section of ANNEX D, which describes the Recovery Plan Term Sheet, requires PREPA to seek approval of a FRM. It states:

*PREPA will seek Energy Commission approval for a new rate structure (the "**Rate Structure**") incorporating the elements set forth in Schedule VI hereto, including without limitation approval by the Energy Commission of the Rate Structure on an expedited basis.*

The reference to Schedule VI is critical, as Schedule VI includes the following paragraph referring to Formula Ratemaking:

*1.3.2 Permanent Rate---Formula Ratemaking Mechanism*

*PREPA's rate consultant, Navigant, has recommended a Formula Ratemaking Mechanism ("FRM") for setting PREPA's rates. FRM uses a predetermined formula to determine the upcoming year's revenue requirements based on the test period expenses (usually a prior year adjusted for known and/or measurable changes). Revenue requirements are composed of all operating costs including fuel, purchased power, operations and maintenance expenses, revenue funded capital expenditures, CILT, subsidies, taxes paid, debt service and any other costs expected to be incurred (assuming a restructuring in accordance*

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*with the Recovery Plan). Debt service includes principal, interest, debt service reserves and/or debt service coverage ratio ("DSCR"), but excludes any debt service recovered through the Transition Charge. The resulting revenue requirement is compared against revenues calculated using existing rates for the test period to determine if rates are sufficient to cover full costs of providing services and if not make appropriate adjustments.*

Second, in the Mutual Obligations and Acknowledgments part of the RSA, and in Section 13 on Termination, it sets forth the following condition for termination related to Formula Ratemaking, again referring to Schedule VI, in paragraph (v).

*The Energy Commission does not conduct a public hearing process to approve a revised rate structure (which may include a provisional rate in accordance with Schedule VI to the Recovery Plan Term Sheet) designed to implement the Recovery Plan as contemplated by, and in accordance with each deadline set forth in, the Legislative Reform Package, as enacted into law (the "Rate Public Hearing")*

In addition to explicit references to FRM in the RSA, PREPA's transformation plan requires that PREPA's rates be sufficient to recover PREPA's expenses and the costs of necessary investments. Historically, there has been political pressure to not increase PREPA's rates in response to cost and investment needs and therefore PREPA has had to sacrifice needed capital expenditures in order to remain solvent and to not run out of cash. The RSA was agreed as part of the overall transformation plan with the expectation that the rates would be sufficient to cover the costs and expenses.

If an FRM were not adopted, we could be left with little choice but to engage in an overlapping series of traditional annual rate cases. In essence, PREPA would constantly be involved in rate cases, which would not only entail greater time and cost, but would substantially increase uncertainty. That uncertainty, as well as under-recovery of PREPA's costs, could damage PREPA's recovery and undermine the RSA. A well-designed FRM would largely obviate those concerns, reduce rate making costs, and improve transparency and predictability for all.

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I cannot predict with certainty what the consequences would be of a failure by the Commission to approve a FRM. But, the RSA would be jeopardized if the approved rates do not assure that PREPA can effectively cover the reasonable costs of operations and investments and provide transparency to both the Commission as well as the people of Puerto Rico. FRM is a key step in PREPA's efforts to achieve them, while being as efficient as possible and avoid extensive and exhaustive administrative cost and burden which will ultimately be borne by the ratepayer.

7. **CEPR-SGH-01-09: Ref. Donahue Direct, I. 396-399 - At the cited portion of her Testimony, Ms. Donahue indicates that Restructuring will not solve PREPA's "July 1" problems.**
- a. **Please explain how a 1.29¢ per kWh rate increase allowed on June 30, as requested by PREPA would solve PREPA's "July 1" problems, and provide supporting revenue and debt service calculations.**

The following response was provided by Lisa Donahue, the CRO of PREPA.

First, I would like to be clear about what my testimony said, so I have included it again below:

- Q. Will the debt restructuring, if it is achieved, solve PREPA's short-term liquidity crisis?
- A. No. PREPA also needs to address separately its summer 2016 liquidity crisis, because the debt restructuring is not designed to and will not completely solve that problem. The liquidity crisis can be managed only by the Commission also establishing provisional rates for PREPA that are in effect until the new rates begin to be recovered. Again, I also am submitting a separate piece of direct testimony regarding PREPA's liquidity issues in support of PREPA's request for provisional rates

PREPA Ex. 11.0.

As has been described in PREPA's June 18 Submission of Information Requested by the Commission's June 15 Order, which addressed the question of provisional rates, the 1.29¢ per kWh provisional rate was necessary to ensure that PREPA's cash balances were adequate throughout FY 2017, which begins in July of 2016. The provisional rate of 1.29¢ per kWh is derived directly from the permanent rate request, and is based on all of the supporting revenue and debt service calculations supporting these rate petitions, and as filed in this docket. PREPA also provided in its June 18 Submission of Information Requested by the Commission Order of June 15 regarding provisional rates, the following answer to a similar question about the impact of the provisional rates on short-term liquidity:

*"The key document associated with the (Provisional Rate) decision is the document associated with the PREPA Governing Board meeting on May 23, 2016, to review and approve the PREPA rate increase. The document presented to the Board included various revenue requirement development analyses used to develop both the permanent and provisional rates. We have attached to this response a copy of that Board document. An important part of that document*

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*was an analysis of monthly PREPA cash balances with and without the provisional rate that PREPA has requested. It is depicted on pages 7 and 22. There was a clear determination at that time of the impact of this provisional rate request on PREPA's liquidity, albeit with the Corporation implementation assumptions in place at the time it was prepared."*

Specifically, on pages 7 and 22, the 'short-term' liquidity impact of not receiving the Provisional Rate is quite evident, with cash balances depicted first without the rate increase - and with and without relending, and then, secondly with the provisional rate increase. For example, with no provisional rate increase and no relending, cash balances could have fallen to zero almost immediately. The basic assumptions underlying relending assumptions at the time are listed at the bottom of these two pages.

The provisional rate was a critical element in addressing PREPA's short-term (summer of 2016, included) liquidity crisis, and that this liquidity crisis would have also continued throughout the remainder of FY 2017, had the provisional rate not been approved.

- b. Is it correct to understand that PREPA is currently expecting to finance its "July 1" problems with 2016 series bonds, the cost of which will be rolled into the Transition Charge that accompanies the Restructuring? If that is not the case, please explain why not.**

The following response was provided by Lisa Donahue, the CRO of PREPA.

Yes, the PREPARC petition seeking approval of a Restructuring Order included an assumption that July 1st, 2016 bond debt service would be re-financed as securitization or mirror bonds and included in the Transition Charge. Subsequent to the PREPARC filing, PREPA has finalized the terms of the July 1st relending as follows:

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The Forbearing Creditors will purchase three series of bonds totaling approximately \$264 million. The shortest term bonds (\$105 million of principal) will amortize in fiscal years 2018 and 2020 and pay 5.4% interest. The medium term bonds, totaling approximately \$64 million, will amortize over fiscal year 2020 and pay 7.5% interest. The longest term bonds, totaling approximately \$95 million, will amortize in fiscal years 2021 and 2022 and pay 10% interest. PREPA's advisors have taken care to shape the amortization schedule to minimize PREPA and the Corporation's aggregate debt service burden during the initial years, as well as to reduce the weighted average interest rate to below 8.5% (as compared to the 10% rate assumed in the petition).



**C. Questions for Witnesses Miranda, Sales, Sosa**

**1. CEPR-SGH-01-010: Ref. M/S/S Direct, II. 334-335 - What are PREPA's renewable energy portfolio requirements?**

The following response is a legal response and therefore is not assigned to a witness. The reference to renewable portfolio standards requirements is a reference to the applicable Puerto Rico statute, Act 82-2010, found at 12 L.P.R.A. § 8121, *et seq.*

**2. CEPR-SGH-01-011: Ref. M/S/S Direct, II. 336-339.**

**a. What is the expected annual amount, if any, of current and expected fuel cost savings from the conversion from oil to natural gas? Please provide supporting documentation.**

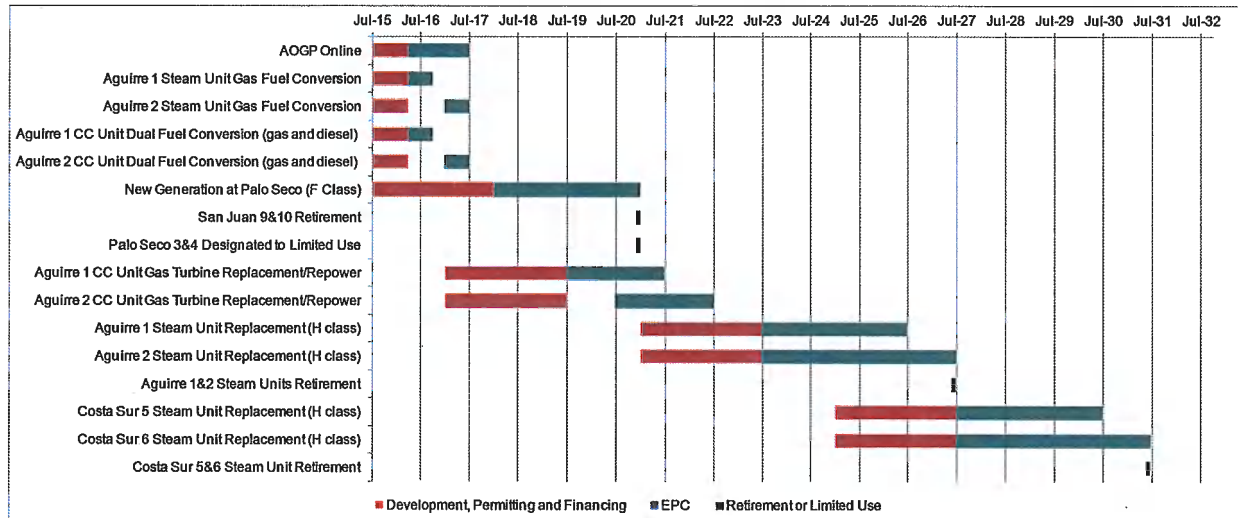
The following response was provided by Sonia Miranda, Director of the Directorate of Planning and Environmental of PREPA.

The assessment presented below corresponds to the initially recommended Portfolio 3 in Volume I of the Base Integrated Resources Plan (IRP). The most likely set of assumptions of PREPA's future is identified as Future 1, which includes the Aguirre Offshore GasPort (AOGP) project and the conversion of the Aguirre Power Complex to use natural gas. The IRP also includes the evaluation of a potential future state (Future 2) in which AOGP does not proceed and no additional natural gas is available outside of what is available today. These two futures, which imply different new generation integration schedules driven by MATS compliance, were compared to determine the expected costs savings from the conversion to natural gas. The fuel prices forecast used is shown in Appendix G of Volume III of the Base IRP, where it can be observed that the spread between Light Fuel Oil (LFO) and Natural Gas (NG) increases over time from a value of about 10.7 \$/MMBTU by 2018 to 15.66 \$/MMBTU by 2035.

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In case the AOGP is built and under Future 1 (limited capital – P3F1) the plan calls for converting the Aguirre units to burn the cleaner natural gas that will be available onsite, the repowering of the Aguirre combined cycle units 1&2, and the installation of a new F-Class combined cycle in the north to allow the designation of limited use of the Palo Seco and San Juan steam electric units for MATS compliance. Later by 2026/2027 the Aguirre steam units 1&2 are replaced by two efficient H-Class combined cycle units, and by 2030/2031 the Costa Sur units 5&6 are also replaced by two H-Class combined cycle units. Figure 1 shows this investment plan.



**Figure 1: Portfolio 3 Future 1 (P3F1- AOGP Case) Generation Investment Plan.**



Note that in this graph and in the one below, year 2015 is a proxy for the moment the IRP is approved and not the actual 2015 and future years.

In Future 2, without AOGP, natural gas from this project is not available to the Aguirre site steam units and combined cycle power units, thus an accelerated investment plan is necessary as the Aguirre steam units 1&2 need to be retired to attain MATS compliance. Aguirre steam units 1&2 would continue to operate on Heavy Fuel Oil (HFO) until several new distillate-fired combined cycle generation units could be built to replace Aguirre steam units 1&2 capacity. In this case (P3F2), the Aguirre units are replaced by two H Class combined cycle units one installed at Aguirre and the other at San Juan, burning distillate (LFO). At Palo Seco, the same F-Class unit indicated above is considered and at Aguirre the existing combined cycle 1&2 are repowered. Longer term by 2027/2028 Costa Sur 5&6 are replaced by two efficient H-Class combined cycle units. Figure 2 shows this investment plan without the AOGP, and as can be observed PREPA's fleet needs to be modernized much faster.

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**Figure 2: Portfolio 3 Future 2 (P3F2 - No AOGP Case) Generation Investment Plan.**

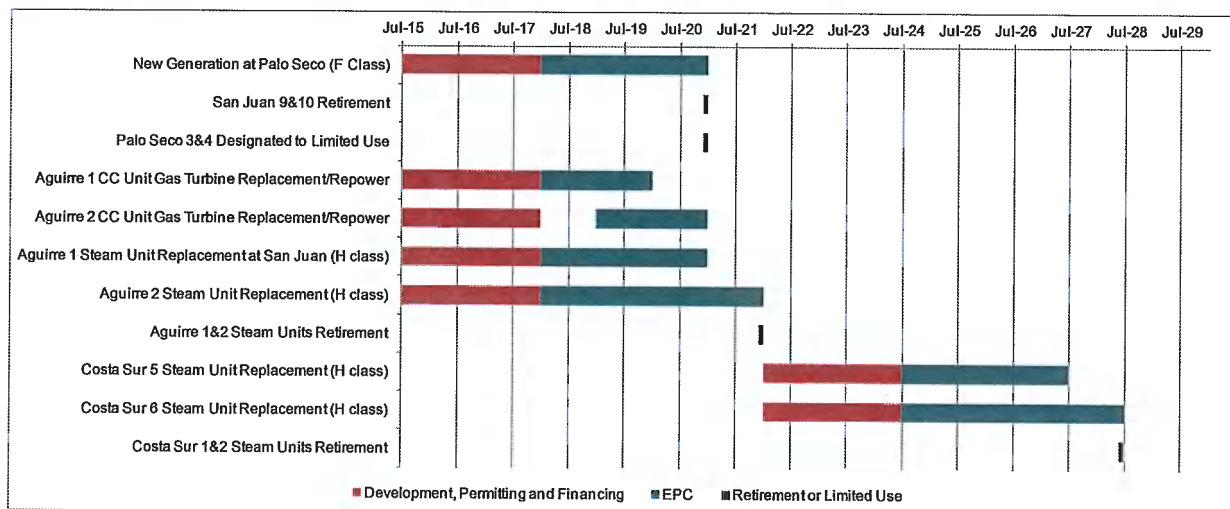


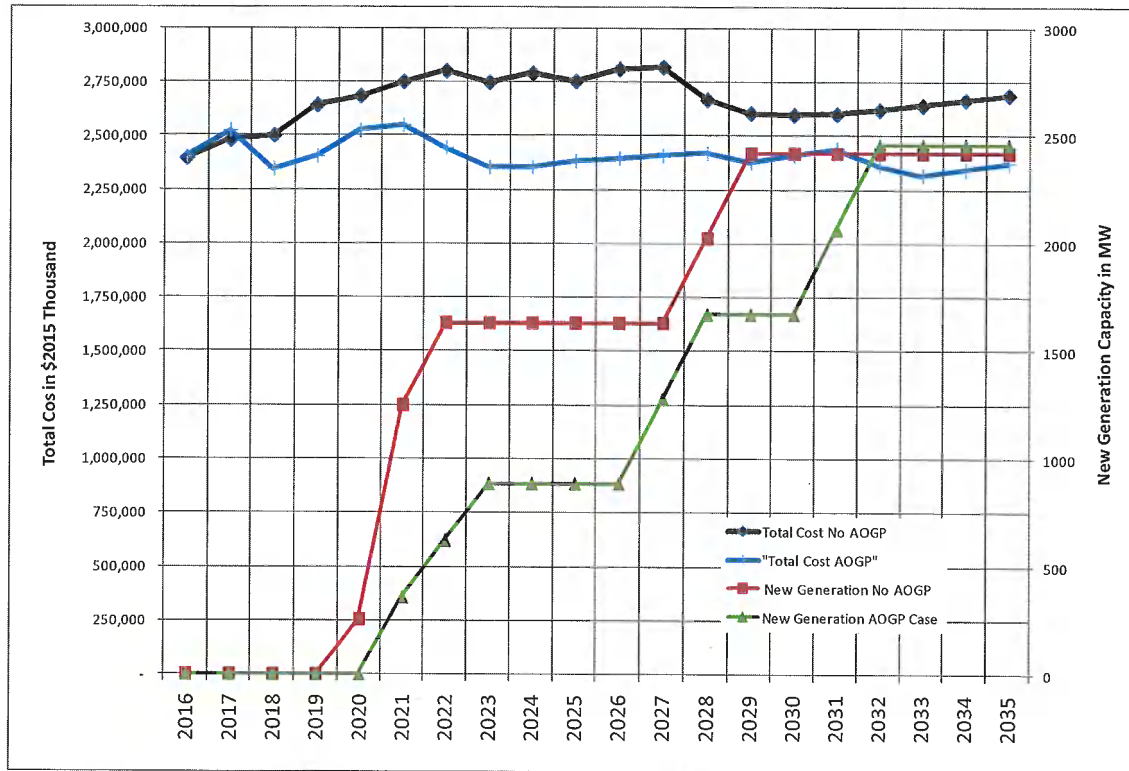
Figure 3 shows the total system costs, including the capital cost amortization<sup>2</sup>, fuel costs, and operating and maintenance cost, with and without the AOGP. We note that the total system costs in the case without the AOGP are consistently higher than the corresponding prices when this project is built.

Table 1 shows a comparison for Portfolio 3 between the cases with and without the AOGP. As can be observed, the case without the AOGP (no additional conversions to natural gas) has a present value of system costs, in the 20 year period evaluated, that is about \$ 2.5 billion higher than the case with the AOGP project and the Aguirre Power Complex conversion to natural gas. Also, if the AOGP is not built, the initial capital required (2016-2025) is 12% higher (\$ 386 million) and the average annual system costs differential until 2035 is in the order of \$ 248 million per year. The AOGP project and the conversions to natural gas have an evident economic advantage, in spite of the fact that in the case without the AOGP the long term capital costs are lower since there is no investment in the project, no need for conversion to gas of the Aguirre units, and lower capital investment of the H-Class units where the investment occur later and there is an impact on capital cost escalation on real terms.

Further documentation can be found in the IRP filings before the Commission.

<sup>2</sup> Calculated using 6.86% real cost of debt equivalent to 9% nominal as provided by PREPA's financial advisors.

**Figure 3: Total System Cost and Capacity Addition Comparison; Portfolio 3 Base IRP**



**Table 1: Comparison of Portfolio 3 Future 1 (AOGP Case) – P3F1 – with Portfolio 3 Future 2 (No AOGP) – P3F2**

|                                     |            | P3F1   | P3F2   | Delta | %    |
|-------------------------------------|------------|--------|--------|-------|------|
| Total Present Value of System Costs | \$ million | 26,842 | 29,301 | 2,459 | 9%   |
| Average Annual System Costs         | \$ million | 2,415  | 2,663  | 248   | 10%  |
| FY 2016 - 2025 Total Capital Costs  | \$ million | 3,329  | 3,715  | 386   | 12%  |
| FY 2016 - 2035 Total Capital Costs  | \$ million | 5,252  | 4,674  | -578  | -11% |

- b. What is the expected difference in CO2 emissions from the conversion from oil to natural gas? Please provide supporting documentation.

The following response was provided by Sonia Miranda, Director of the Directorate of Planning and Environmental of PREPA.

The only conversion project considered for MATS compliance in PREPA's IRP is the Natural Gas Conversion Project of the Aguirre Power Complex ("the Project"). Although MATS regulation is only applicable to the Aguirre steam power generating units 1&2, the project consists of the conversion of the Aguirre Units 1&2 boilers and the Aguirre Combined Cycle combustion turbines, as well as the construction of a natural gas storage regasification and supply infrastructure (Aguirre Offshore Gasport).

On May 5, 2014, PREPA formally submitted to the Puerto Rico Environmental Quality Board (PREQB) a PSD Non Applicability Analysis and Construction Permit Application for the Project as part of the licensing process towards obtaining a construction permit. On June 6, 2014, PREPA also submitted updated information regarding the Project baseline and potential CO2 emissions. Once completed, the Project will result in a reduction of 429,292 tpy or 10% of CO2 emissions when using natural gas as the primary fuel (CO2 Emissions 3,701,819 tpy = 2,467,659 + 912,894 + 321,266) in comparison to the baseline emissions using Bunker C Fuel Oil (CO2 Emissions 4,131,111 tpy = 3,854,027 + 277,084). See Tables B-2 and B-3 for the Aguirre 1&2 and Aguirre Combined Cycle emissions, and Appendix C of the PSD Non Applicability Analysis and Construction Permit Application for the CO2 emission calculations submitted to the PREQB, included in Attachment MSS-1.

3. **CEPR-SGH-01-012: Ref. M/S/S Direct, I. 661 - To what extent is PREPA's "executive directorate" and "executive team" oversized. What positions should be eliminated and what would be the annual cost savings of eliminating those positions? Please provide supporting documentation.**

The following response was provided by Lisa Donahue, the CRO of PREPA.

In PREPA's testimony regarding the business plan, we summarized a variety of definitive improvement initiatives, and made reference to other opportunities that could still be explored. With respect to our reference regarding the size of the executive team, let me clarify.

PREPA's executive team could be considered oversized in the sense that the executive director has too many direct reports (12) and the team's weekly staff meetings, executive decision making processes, procedures, and authorities include approximately 20 individuals. This is not to say that some of the roles filled by those that are currently considered part of the executive team should be eliminated, but rather that the number of individuals that are considered part of the executive team could be reduced in order to streamline information flow and decision making and eliminate unnecessary bureaucracy. It is also important to note that the number of positions throughout the organization that are considered 'trust' (as opposed to 'career') could be

reduced to ensure that merit is the determining factor in personnel-related decisions rather than political, familial, or other non-value adding affiliation.

The Business Plan includes specific headcount targets for PREPA by year, which incorporate retirement and other attrition projections based on recent history. These projections have been used to estimate a subset of the labor-related cost reductions presented in the filing.

**4. CEPR-SGH-01-013: Ref. M/S/S Direct, Chart, p. 37.**

- a. Please describe in as much detail as possible the \$109 Million "SPV Gross-up" included in the "Restructured PREPA/SPV Cost Structure 2017," identifying each component of that amount. Provide supporting documentation and analysis.**

The following response was provided by Sonia Miranda, Director of the Directorate of Planning and Environmental of PREPA.

The \$109 Million "SPV Gross-up" refers to the portion of the Transition Charges that compensates both for the portion of the those charges that will be uncollectible ("Uncollectible Adjustment") and for the lag in the recovery of the collectible portion (the "Collection Lag Adjustment"). This "gross up" is a component of the Transition Charge addressed by the Commission in Docket CEPR-AP-2016-0001, *In Re: Puerto Rico Electric Power Authority Revitalization Corporation*; it is not a component of the PREPA revenue requirement that PREPA seeks to recover through rates at issue in this proceeding.

smv  
In particular, the "gross up" is addressed in Paragraph (4) of Appendix 2.0 to Resolution 2016-09 (the Restructuring Resolution) adopted by PREPARC, as authorized by the Commission's Restructuring Order of June 21, 2016 in Docket CEPR-AP-2016-0001 (see Appendix A to that Order, and Appendix 2 to Corp. Supp. Ex. 10.01.). The Collection Lag Adjustment is calculated based on a Collection Curve developed using historical collection data that estimates the amount of revenue expected to be collected during the applicable collection period. The Uncollectible Adjustment is also calculated based on historical collections data and represents the expected amount of Transition Charges that will not be collected within 120 days and are, accordingly, deemed uncollectible revenue (subject to subsequent credit for any such funds that are eventually collected). The \$109 million is an estimate of the amount of the required gross up at the inception of the Transition Charge. The actual Collection Lag Adjustment and Uncollectible Adjustment will also be "trued up" as part of the more general true up of the Transition Charges and collected revenues under the approved Transition Charge Calculation Methodology. As a result, to the extent that the actual level of uncollectible revenues or the actual collection lag differs from that projected,



Customers and bondholders are both fully protected. The calculation of these components of the Transition Charge (which will vary going forward depending on all the future changes in the applicable inputs) and the true up of the Transition Charges in general are also addressed in the mathematical Transition Charge model (PREPARC Ex. 9.01) submitted to and the Commission and accepted into evidence in Docket CEPR-AP-2016-0001.

**b. What portion of the \$709 Million of "Debt Service" represent PREPA debt? (as separate from debt to be owned by PREPARC or "the SPV").**

The following response was provided by Sonia Miranda, Director of the Directorate of Planning and Environmental of PREPA.

The portion of the \$709 Million of debt service to be paid by the PREPA base rate, not through the Transition Charge, is \$314 Million. Please note that this assumes \$700 million of uninsured bonds remain outstanding at PREPA and 5-year amortization of fuel and GDB lines of credit. The final debt service requirement will vary based on the actual level of participation in the securitization transaction.

**5. CEPR-SGH-01-014: Ref. M/S/S Direct, II. 783-788 - The witnesses indicate that in creating a sales forecast PREPA estimated the energy consumption and generation for FY 2015 by extrapolations of monthly data from 1993 through 2014.**

**a. Given the volatility of those historical data, please explain that represents a reasonable methodology.**

The following response was provided by Sonia Miranda, Director of the Directorate of Planning and Environmental of PREPA.

- To minimize the monthly fluctuation (volatility) of consumption, we use the gross energy production for this estimation. The IRP FY 2015 estimation includes the official data from July through December 2014. To get the final FY 2015 estimate, the average cumulative growth between January to June from Fiscal Year 2010 to 2014 was applied to the production for the first semester. To obtain the consumption, we multiplied the estimated production by official average system efficiency (consumption/production) from the FY's 2012, 2013 and 2014.
- For the Rate Case, the FY 2016 estimate was with official data through March 2016 and the following:

SMV



- Estimation of April 2016 gross energy production: The daily behavior through April 13 was applied to the rest of the month. The estimation was 1,665.2 mkWh. 1,675.4 mkWh the real production, a difference of 0.59%.
  - FY 2016 estimate: In the analysis of the data, we look at the behavior for the last two months in the fiscal years 2010 through 2015. In the last two fiscal years (2014 and 2015) the annual growth for those months was lower than the same period before FY 2011. Due to that fact, we used the annual growth of both months for the FY 2012 (1.36%), FY 2014 (0.71%) and FY 2015(-0.34%).
  - The consumption is the result of estimated energy production for FY 2016 multiplied by official average system efficiency (consumption/production) of the Fiscal Years 2013, 2014 and 2015.
- b. **Has any comparison been made, thus far, between the 2015 estimations that were used as the basis for forward sales forecast projections with the actual 2015 results? If not, why not?**

The following response was provided by Sonia Miranda, Director of the Directorate of Planning and Environmental of PREPA.

- The next 5 year forecast used the estimation explained above in both cases (IRP and Rate).
- The following table shows the accuracy of this methodology since 2010:

**Total Consumption**

| Fiscal Year | Real      | Estimated | FY Official<br>data through | Abs.Change | % Change |
|-------------|-----------|-----------|-----------------------------|------------|----------|
| 2010        | 19,234.90 | 19,227.30 | March                       | 7.60       | 0.04     |
| 2011        | 18,501.41 | 18,843.10 | March                       | -341.69    | -1.81    |
| 2012        | 18,112.49 | 18,078.60 | March                       | 33.89      | 0.19     |
| 2013        | 18,221.18 | 17,966.70 | February                    | 254.48     | 1.42     |
| 2014        | 17,560.90 | 17,740.20 | March                       | -179.30    | -1.01    |
| 2015        | 17,280.08 | 17,200.90 | March                       | 79.18      | 0.46     |
| 2016 as May | 15,814.70 | 15,804.58 | March                       | 10.12      | 0.06     |

smv

**D. Questions for Witnesses Zarumba and Granofsky**

1. **CEPR-SGH-01-015: Ref. Z/G Direct, II. 674-675 - At the cited portion of the witnesses' testimony a process to update tariffs is discussed but begins with #5. Have four steps been eliminated or is the list mis-numbered?**

The following response was provided by Ralph Zarumba, Director, Navigant Consulting, Inc. ("Navigant"), and Eugene Granovsky, Managing Consultant, Navigant.

The list is mis-numbered due to a formatting error. The list should be 1 through 4, not 5 through 8.

**E. Questions for Witnesses Pampush, Porter, Stathos**

1. **CEPR-SGH-01-016: Ref. P/P/S Direct, II. 361-373 - The witnesses indicate that the debt service for PREPA's legacy (non-securitized) debt is approximately \$3.14 Million, the debt service for the SPV (PREPARC) is approximately \$394 Million, and that PREPA's bond covenants require a DSCR of 1.20. Please respond to the following questions:**

- a. **Are the debt service amounts cited for the 2017 rate year (7/1/2016 through 6/30/2017)? If not, please explain why not and identify the period for which the debt service amounts are pertinent.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Yes. The debt service amounts cited in testimony, \$314 Million for PREPA's legacy (non-securitized) debt and \$394 Million for the SPV (PREPARC), are for the 2017 rate year (7/1/2016 through 6/30/2017).

- b. **Please list, with reference to PREPA's Sch. D-2 electronic worksheet the individual debt issues used in determining PREPA's legacy debt service. If the witness are unable to answer this question, or the interest and principal for 2017 for the debt issued identified do not sum to approximately \$314 Million, please explain precisely how the \$314 Million debt service was estimated.**

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The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

The individual debt issues listed in D-2A represent outstanding debt as of the date of the filing submission. The PREPA Rate Case assumes that \$700 million of uninsured bonds, on a pro rata basis for each series, remain at PREPA. A detailed description of PREPA's debt service estimation methodology and assumptions can be found in Schedule F-4 Section 9 – Debt Service.

- c. **Please list, with reference to PREPA's Sch. D-2 electronic worksheet, the individual debt issues used in determining PREPA's Securitized debt service. If the witness are unable to answer this question, or the interest and principal for 2017 for the debt issued identified do not sum to approximately \$394 Million, please explain precisely how the \$394 Million debt service was estimated.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

The individual debt issues listed in D-2A represent outstanding debt as of the date of the filing submission. Because the Securitization transaction has not been tendered or completed, there is no way to identify exactly which issues will be exchanged and serviced through the Transition Charge. The PREPA Rate Case assumes that all bonded debt except for \$700 million of uninsured bonds, on a pro rata basis for each series, is exchanged for securitization bonds and serviced through the SPV. A detailed description of PREPA's debt service estimation methodology and assumptions can be found in Schedule F-4 Section 9 – Debt Service.

- d. **What is the total amount of PREPA legacy debt for which the \$314 debt service Million is applicable, based on the amount outstanding?**

smv  
The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

The PREPA Rate Case assumes that a total of \$1.595 Billion of bonded and other debt principal remains outstanding at PREPA and is not exchanged for securitization bonds.

- e. **What is the total amount of SPV (PREPARC) debt for which the \$394 debt service Million is applicable, based on the amount outstanding?**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

The PREPA Rate Case assumes that a total of \$6.846 Billion in debt principal (after and including principal reduction on applicable bonds) is outstanding after the completion of the securitization transaction and serviced by the SPV.

- f. **Does the DSCR of 1.20 required by the bond covenants apply to the PREPA legacy debt only? If not, please explain why not.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Yes. The PREPA debt assumed to be exchanged will be replaced by new debt with new and different debt covenants. The securitized debt will have safeguards other than DSCR requirements to ensure bondholder payment and risk mitigation. The debt assumed to remain at PREPA is composed broadly of bonded debt that is subject to the Trust Agreement, and non-bonded debt owed to banks and government agencies. Only the bonded debt is subject to the bond covenants.

- g. **In preparing their revenue requirement did the witnesses apply a DSCR to both PREPA debt and SPV (PREPARC) debt? If so, please explain why, and if not, please explain why not.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

smv  
No. We did not add an increment for DSCR either related to PREPA debt or to SPV debt. Our recommended Revenue Requirement is based on a Modified Cash Basis approach that included sufficient revenues for capital expenditure to meet all coverage requirements. We did include a trigger provision for Debt Service coverage in the revenue requirement under FRM to include additional revenue if the DSCR requirement is not met. (See PREPA Ex. 5.0 at lines 640-654.)

**h. What was the DSCR used in determining PREPA's revenue requirement?**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Please see the response to CEPR-SGH-01-016(g).

**2. CEPR-SGH-01-017: Ref. P/P/S Direct, II. 649-651 At the cited portion of their testimony, the witnesses indicate that the PREPA legacy debt service is composed of equal parts non-participating PREPA bonds and a 5-year amortization of fuel and GDB lines of credit.**

- a. Are the witnesses aware of the \$625 Million of "Lender Bonds" that are to be issued as part of the Restructuring (see pages 9 and 10, sub-paragraph "f." of the PREPARC Verified Petition for Restructuring Order)? If not, please so state. If so, please provide the witnesses understanding of the purpose of those PREPARC bonds and how they are different from the "fuel and GDB" lines of credit discussed at the cited portion of their testimony.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Yes, we are aware of the option for issuance of "Lender Bonds" as part of the Restructuring. The purpose of these bonds is the securitization of amounts owed to the fuel line lenders. As of the date of the Rate Case filing and the SPV filing, there was no agreement with the fuel line lenders to participate in the securitization. Therefore, the current assumption is that fuel lenders do not participate in the transaction, and as such no Lender Bonds are issued. The amount owed to the fuel line creditors is included in PREPA legacy debt, and not included in the debt service or principal amounts for PREPARC.

- b. If the fuel and GDP short-term debt amortization obligations of PREPA are currently accounted for in the Restructuring proceeding and will be included in the Transition Charge, please explain why those obligations should also be included in the rate proceeding? If they should not be included in the PREPA rate case, please so state.**

5mr



The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

The fuel and GDB short-term debt is not included in the debt service for the Transition Charge. As of the date of the Rate Case filing and the SPV filing, there was no agreement with the fuel line lenders to participate in the securitization. Therefore, the assumption reflected in both the Rate Case filing and the SPV filing is that the amount owed to the fuel line creditors is included in PREPA legacy debt, and not included in the debt service or principal amounts for PREPARC.

3. **CEPR-SGH-01-018: Ref. P/P/S Direct, II. 658-660. - The witnesses state that the debt service costs discussed in the Cash and Modified Cash ratemaking bases are "subsumed" in the rate of return approach. Please show that the total debt costs that result from the rate of return approach equal approximately \$314 Million for PREPA in 2017.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Under the Rate of Return approach (which we did not recommend), debt costs are not directly computed in the expense analysis. Instead, debt costs are captured by the cost-of-debt factor that is rolled into the weighted average cost of capital (WACC) and then applied to the Rate Base. Since debt costs are accounted for in the WACC applied to the Rate Base, we say that they are "subsumed" in the Rate Base analysis. One would include debt costs in the periodic expenses part of cost analysis or in the Return on Rate Base calculation but not in both places.

The Rate of Return approach is not designed to replicate historic costs if, as in PREPA's case, such a return would fail the capital attraction standard. Accordingly, computing the historic debt costs under the Rate of Return approach is not something that we did, since this would have been an underestimate of the true WACC. (See response to CEPR-SGH-01-019(b)).

4. **CEPR-SGH-01-019: Ref. P/P/S Direct, I. 753, PREPA Ex. 5.08**

- a. **Please provide, in Excel format, the RRA data used to create the graph in Ex. 5.08, including the name of each company, the date of the order, equity return, equity ratio, and overall return.**

smv



The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Please find these files attached to this responsive submission as Attachment PPS-1.

- b. Are the debt returns reported in the RRA publication embedded cost rates (based on the accounting value of the debt on the books of the utility), or are they marginal debt costs (based on current market values and interest rates)? Please explain.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

RRA did not compute the debt returns. The imputed cost of debt was computed by Navigant using authorized rates of return, return on equity, and equity ratio. The computations are shown in Attachment PPS-1 in green font.

**5. CEPR-SGH-01-020: Ref. P/P/S Direct, II. 769-770.**

- a. Please explain why it is reasonable to apply a marginal cost of debt capital to a book value rate base.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

smv  
In the referenced discussion, PREPA's cost of debt provides a proxy or estimate for its overall cost of capital or Weighted Average Cost of Capital (WACC). The reasoning is that through the invariance proposition, PREPA's debt costs (which are 100% of its relevant capital structure) represent its overall cost of capital. Using the market value of debt in this discussion provides an approximation of PREPA's cost of capital, though we noted in our Report that this was for example purposes only and was not precise. Because PREPA is a highly-distressed firm and the market value of its debt diverges considerably from its book value, using PREPA's historical debt costs as a proxy for the WACC would substantially understate PREPA's true cost of capital.

As for why we used net book value in the calculations described in lines 769-770 of our report, such an approach is typical in a regulated rate case. The idea is that net book value is a reasonable approximation to fair value, and for the purposes of the

discussion, we concluded that net book value is an adequate representation of fair value.

Navigant did not recommend using the Rate Base / Rate of Return approach. However, we note that the Modified Cash Basis approach produces the results that one would obtain by using the Rate of Return approach and a 100% debt capital structure with an embedded or historical cost of debt.

**b. What is the current embedded cost rate of PREPA debt. Please provide all supporting workpapers.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

The embedded cost rate calculation is included in the revised Schedule D-1 submission.

**6. CEPR-SGH-01-021: Ref. P/P/S Direct, II. 852-854 - The witnesses testify that "significant investment is underway" regarding converting generation from fuel oil to natural gas. Please identify the projects referenced. Has this capital investment been undertaken prior to the approval of an IRP by the Commission? If so, what is the current level of investment and what is anticipated in the remainder of 2016 and 2017?**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Our understanding from correspondence with management is that the projects include the completed conversion of the Costa Sur generating facility from oil to natural gas and investment in the Aguirre Offshore Gas Port facility.

Our understanding is that the investment was undertaken prior to the approval of the IRP.

We believe the current level of investment is \$47 million for AOGP in FY 2016. Regarding the anticipated future investment, please refer to the summary schedule F-3.

**7. CEPR-SGH-01-022: Ref. P/P/S Direct, I. 947, Ex. 5.14.**

- a. **Are the DSCR values shown on Ex. 5.14 for coverage of PREPA and SPV (PREPARC) debt? If not, please indicate the debt base on which those coverage ratios are calculated.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

The DSCR values in PREPA Ex. 5.14 for both the Restructuring Scenario and No Restructuring Scenario include all PREPA and PREPARC debt, as applicable.

- b. **Please provide, in spreadsheet format, the data used to create the graph in Ex. 5.14.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Please refer to the Rate Case Financial Model submitted in the first deficiency response. Specifically, the income statement tab [IS].

- c. **Please explain why the DSCR coverages shown for 2017 are substantially different from those discussed by the witnesses at lines 789-803, and provide the supporting data for each DSCR estimate.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

smv  
The DSCR values discussed in lines 789-803 were calculated for the three revenue requirement approaches—Accrual Basis, Cash Basis, and Modified Cash Basis—assuming rate increases to revenue requirement. For Modified Cash Basis, two DSCR values were shown, one including Securitization and one excluding Securitization. The DSCR values shown in Exhibit 5.14 are calculated using Modified Cash Basis approach for revenue requirement assuming a 25% Base Rate increase for both the Restructuring Scenario and No Restructuring Scenario. The values shown in Exhibit 5.14 do not assume rate increase to revenue requirement, and as such are not directly comparable to the DSCR values discussed in lines 789-803 of testimony (Exhibit 5.0).

8. **CEPR-SGH-01-023: Ref. P/P/S Direct, II. 959-960 - Provide support for the witnesses' statement that, for rating agencies, balance sheet common equity levels are a key indicator of financial health for municipal utilities.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

One of the key credit metrics provided in the FitchRatings study of public power (provided in response to CEPR-SGH-01-025) is the Equity-to-Total Capitalization ratio. Because a purpose of the FitchRatings study is to help its users understand FitchRatings' credit opinions, we conclude that the inclusion of an equity leverage ratio by FitchRatings is an important factor in arriving at its opinion regarding the financial health of the utilities that were studied (which includes PREPA). Government and municipal entities may report equity as a "net position" (i.e., assets less liabilities).

9. **CEPR-SGH-01-024: Ref. P/P/S Direct, p. 49 - Please provide complete copies of the credit rating reports cited in the footnotes. The web addresses cited did not work.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Please find these files attached to this responsive submission as Attachment PPS-2.

10. **CEPR-SGH-01-025: Ref. P/P/S Direct, p. 50, footnote 17 - Please provide a complete copy in electronic form at the Fitch Public Power study cited.**

smv  
The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Please find this Excel file (native format) attached to this responsive submission as Attachment PPS-3.

11. **CEPR-SGH-01-026: Ref. P/P/S Direct, I. 1261 - Please explain how the classification tree approach is "relatively robust to outliers," as measured by what criterion?**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

The term robust in this context is used to describe a condition where one obtains approximately the same answer if some of the input values are changed somewhat.

In a linear regression, for example, far-flung observations in the X-space are considered "high leverage" observations because small changes in their values can have a considerable effect on the response variable (Y).<sup>3</sup> This is because a linear regression computes the deviations from the mean and squares them, accentuating the effect of high-leverage values.

In contrast, the classification tree finds the border between groups by reducing the number of misclassifications.<sup>4</sup> Values that are far from the border but that are in the correct class do not change the location of the border if their values were to change somewhat, and so the location of the border is relatively invariant to those points that are far from the border. The action (i.e., determining where to draw the border) takes place around the border itself, and not in far flung points.<sup>5</sup> There are other advantages of the technique as noted by Feldesman (2002) at his third point (see footnote 5).<sup>6</sup>

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<sup>3</sup> See, e.g., Gareth James, Daniela Witten, Trevor Hastie, and Robert Tibshirani, *AN INTRODUCTION TO STATISTICAL LEARNING WITH APPLICATIONS IN R*, (2013)(New York: Springer), pp. 97-97, at [https://web.stanford.edu/~hastie/local.ftp/Springer/ISLR\\_print1.pdf](https://web.stanford.edu/~hastie/local.ftp/Springer/ISLR_print1.pdf).

<sup>4</sup> In practice, rather than minimizing misclassification per se, the algorithm maximizes "gain" as computed by the difference in a pre- and post-split Gini index or entropy index. See, James et al., p. 312.

<sup>5</sup> See, e.g., "10.5 – Advantages of the Tree-Structured Approach," PennState Eberly College of Science, Stat 897D, Applied Data Mining and Statistical Learning, at <https://onlinecourses.science.psu.edu/stat857/node/55/>. The website notes: "Classification trees are also relatively robust to outliers and misclassified points in the training set. They do not calculate any average or anything else from the data points themselves."

<sup>6</sup> Mark R. Feldesman, "Classification Trees as an Alternative to Linear Discriminant Analysis," *American Journal of Physical Anthropology* 119:257-275 (2002), p. 258, noting that "The primary advantages are: 1) it is nonparametric, which makes questions of the appropriate distributional form moot; 2) it requires no advance variable selection, because variables are automatically selected for their efficacy in reducing classification errors; variables making little or no contribution to classification success are not used; 3) it is robust to outliers, which rarely define split points that correctly classify a significant number of cases (if they did, they wouldn't be outliers); 4) its results are invariant to monotone transformations of independent variables (e.g., logarithmic transformation will not change the tree structure); 5) it can use any combination of categorical and continuous predictor variables (e.g., height, weight, sex, age, hair color, or marital status); 6) it handles missing values in predictor variables by developing splitting rules based on alternate measurements (surrogates) that exhibit strong concordance with the primary splitting variable at any given point on the tree; and 7) cases with unknown and unknowable response (or classification) variables (e.g., fossils) can be placed in their/its own group and participate in tree construction, which contrasts with LDA, where groups with one or only a few cases

SMV



In PREPA Ex. 5.30, the location of the boundaries will not change if the purple (AA) points in the "Better" area are scattered even more extremely in that field. Given the large range of points in the A and AA-rated classes, this feature of the classification tree seemed useful in this case.

**12. CEPR-SGH-01-027: Ref. P/P/S Direct, p. 63.**

- a. Please explain why truncating the sample a) is a reasonable response to skewness and b) why the results of analyzing the smaller sample are expected to provide a reliable indication of the results that would be obtained with the original sample.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

**Part (b)**

Beginning with the last part of Part a (b) first:

- It is not true that we use a smaller sample than the original.
- It is true that each classifier is trained on less data, but both the final model and the overall analysis sees all of the data because we iterate the analysis 1,000 times, each on different random draws from the full sample. The approach is based on the insight that the actual data is representative of the population as a whole.<sup>7</sup> Accordingly, the sample that is drawn would reflect the population's characteristics. The actual data is the best (only) information about the population. Accordingly, drawing multiple samples from the data can provide us the insights about the population as a whole.

*smv*  
Because we use all of the data, it is accurate to characterize the approach as rebalancing or using iterative samples from the data, but not truncating the data. Truncation implies not using data, and we did not do that.

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must be excluded from calculation of the LDA because it is not possible to compute a meaningful covariance matrix on classes that small." (footnote omitted.)

<sup>7</sup> James et al., p. 188-189, "[F]or real data we cannot generate new samples from the original population. However, the bootstrap approach allows us to use a computer to emulate the process of obtaining new sample sets, so that we can estimate the variability of [the parameter of interest] without generating additional samples. Rather than repeatedly obtaining independent data sets from the population, we instead obtain distinct data sets by repeatedly sampling observations from the original data set." (Italics omitted.)



To provide additional context, consider the familiar regression framework. Modern data analysis does not typically run a regression once on the entire the dataset in order to create a predictive model. Modern data analysis has introduced the ideas of (1) a "training" dataset that is used to specify the model (determine coefficient values) and (2) a separate "testing" (or "holdout") dataset that is used to determine the predictive quality of the model.<sup>8</sup> As noted by James et al.:

Resampling methods are an indispensable tool in modern statistics. They involve repeatedly drawing samples from a training set and refitting a model of interest on each sample in order to obtain additional information about the fitted model. For example, in order to estimate the variability of a linear regression fit, we can repeatedly draw different samples from the training data, fit a linear regression to each new sample, and then examine the extent to which the resulting fits differ. Such an approach may allow us to obtain information that would not be available from fitting the model only once using the original training sample.<sup>9</sup>

One way of accomplishing this is to divide the data into two parts (randomly), then estimate the model on one part and test the model on another. Our approach does something similar, but it performs the analysis multiple times and averages the results, which is the nature of the bootstrap.

#### **Part (a)**

With this background in mind, we turn to (a) of the question asked of us. As is evident from PREPA Ex. 5.20, most of the data is clustered around A+ and AA-. When the variable of interest has low prevalence (as is true for High Yield public power observations), an algorithm that is run on the unbalanced data can get its best performance by making sure it properly parses the more popular observations.

smv  
To investigate whether this problem would occur when modeling the FitchRatings data, we ran the classification tree on all 425 observations, as one might run a traditional regression analysis. The table shows that—as hypothesized—the algorithm devotes almost no attention to getting the HY class right. The graph shows that the

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<sup>8</sup> Gareth James, Daniela Witten, Trevor Hastie, and Robert Tibshirani, AN INTRODUCTION TO STATISTICAL LEARNING WITH APPLICATIONS IN R, (2013)(New York: Springer), Chapter 5, at [https://web.stanford.edu/~hastie/local.ftp/Springer/ISLR\\_print1.pdf](https://web.stanford.edu/~hastie/local.ftp/Springer/ISLR_print1.pdf).

<sup>9</sup> James et al., p. 175. An example of information that might be obtained from the iterative approach that would not be seen by the single regression would be if one or a few observations were driving the results. The results of the regression would be different depending upon whether the random draw contained or did not contain those few observations.

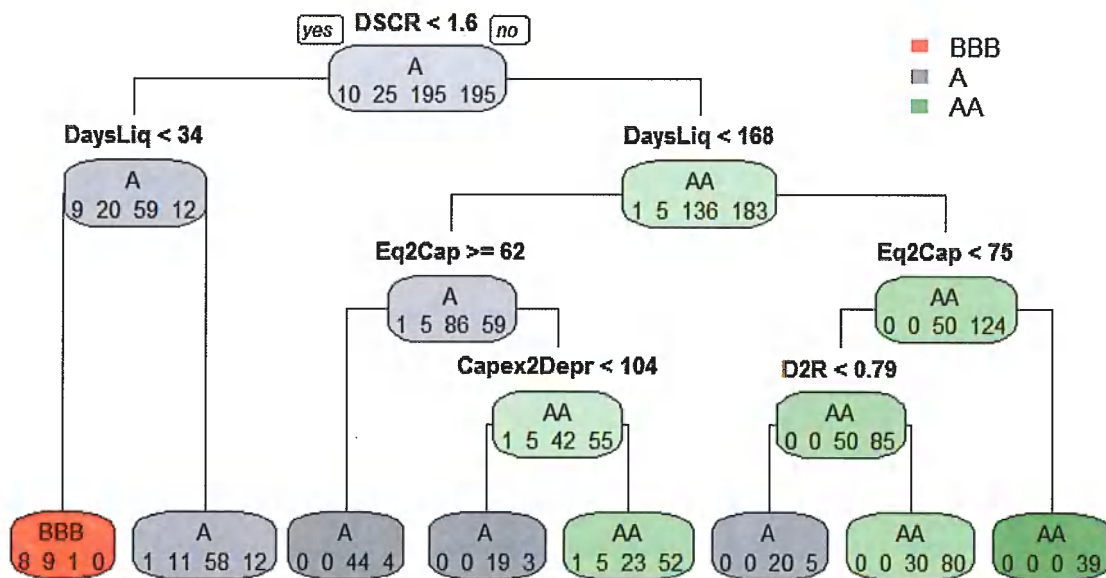
algorithm devotes its attention to the A and A-rated observations and produces multiple splits on these classes in order to differentiate between them:

> cm1\$table

```

Reference
Prediction HY BBB A AA
HY 0 0 0 0
BBB 8 9 1 0
A 1 11 141 24
AA 1 5 53 171

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Nevertheless, notice that the DSCR remains the most important determinant, as described in our Report and its value (1.6) is essentially the same as that computed through the bootstrapping and 1,000 iterations (i.e., 1.57). Days Liquidity emerges as an important second-tier determinant, with similar to the results in our report (approximately ½ a year) in the winners' bracket.

We do not offer this analysis as an alternative to the analysis in our Report, but simply as a way of illustrating and addressing an issue. In particular, we take no position on the validity of the variables in the lower tier of the A versus AA (i.e., Eq2Cap, Capex2Depr, and D2R) since we have not stress tested them.

- b. Is the statistical significance of the results reduced? If so, to what extent in this case?

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Most likely, yes, the "training" and "testing" approach results in lower goodness-of-fit and significance statistics versus the traditional method of using all data for the fit because the traditional approach can overfit the data and thereby provide artificially- (and misleadingly-) high goodness-of-fit and significance results.<sup>10</sup>

The statistical literature recognizes that there is a tradeoff between how well a model fits the training data and how well the model can handle new testing data. This tradeoff is called the bias-variance tradeoff. Error from bias (i.e., lack of fit) can only be decreased by creating a model with higher variance (i.e., reduced ability to provide a good prediction on new data).

Overfitting means that the model has low bias and looks good on paper (has good goodness-of-fit and significance statistics) but has high variance and does not predict well when given new data.<sup>11</sup>

The approach that we used, which was to iterate on data samples to train and then test the model—and then selecting the model that most often was able to best predict on the data—provides us with the confidence that the results reasonably represent the characteristics of the population.

With regard to statistical significance, lines 13-15 of PREPA Ex. 5.34 provide statistical significance measures for a classification tree approach in the form of the Diagnostic Odds Ratio. As explained in our Report (at lines 1520-1530), the Diagnostic Odds Ratio is a single indicator of test performance that it provides an indication of overall significance of the model (by ratings class). We determined using 95% confidence intervals that the model had predictive power for all classes, and in particular for the HY class that we were most interested in.

In contrast, in the all-in model showing in this Response to Part (a), the Diagnostic Odds Ratio for the HY class would be undeterminable because nothing was classified to the HY class.

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<sup>10</sup> James et al., e.g., p. 42 (referring to the fact that a more flexible model—such as a polynomial regression—can provide better fit to a dataset than the less flexible linear regression, but that the polynomial may not predict as well as the less flexible approach.)

<sup>11</sup> See, e.g., James et al., p. 22. Kuhn & Johnson devote a chapter to overfitting and its consequences as applied to classification models. See, Max Kuhn and Kjell Johnson, APPLIED PREDICTIVE MODELING, (2013)(New York: Springer), Chapter 4. Pages 72-73 also provide a discussion of the bootstrap approach (used here) to guard against overfitting.

SMV

**13. CEPR-SGH-01-028: Ref. P/P/S Direct, I. 1444 - Please provide a rating agency definition of "Full Obligation Coverage."**

The following response was provided by witnesses Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Full Obligation Coverage Ratio (a/k/a Coverage of Full Obligations) is defined as:<sup>12</sup>

$$\begin{aligned} & \text{Full Obligation Coverage Ratio} \\ &= [FADS + \text{Fixed Charges} \\ & - \text{General Fund Transfer and (or) PILOT Payments Excluded from Operating Expenses}] \\ & \div [\text{Total Annual Debt Service} + \text{Fixed Charges}] \end{aligned}$$

Where:

FADS = Operating Revenues – Operating Expenses + Depreciation + Amortization + Interest Income

PILOT = Payment in Lieu of Taxes

Full Obligations = "An obligation proxy that includes annual debt service plus a fixed-charge related to purchase power expense. The fixed charge is calculated as 30% of purchase power expense and is an estimate of the portion of purchase power costs that are associated with debt service."

**F. Questions for Witness Kaufman**

- smv
- 1. CEPR-SGH-01-029: Ref. Kaufman Direct, Exhibit 6.01 – Please provide a complete copy of Consulting Project No. 5 listed in Dr. Kaufman's vitae, a cost benchmarking study for PREPA in 2015.**

The following response was provided by Larry Kaufmann, PhD, Senior Advisor, Navigant.

A copy of the requested study is attached hereto as Attachment LK-1. Dr. Kaufmann was provided updated data on PREPA wages (including and excluding overtime) after this study was completed.

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<sup>12</sup> "Public Finance U.S. Public Power Peer Study—February 2015", FitchRatings, June, 2015, at tabs [Glossary] and [Ratio Definitions].

2. **CEPR-SGH-01-030: Ref. Kaufman Direct, II. 345-347] - Was the data for the electric utility in Hawaii for Hawaiian Electric Industries or Hawaiian Electric Company?**

The following response was provided by Larry Kaufmann, PhD, Senior Advisor, Navigant.

The data provided was for Hawaiian Electric Industries.

**G. Questions for Witness Hemphill**

1. **CEPR-SGH-01-031: Ref. Hemphill Direct, Ex. 7.01 - Please provide a complete copy of Dr. Hemphill's 2014 Electricity Journal article cited in his vitae.**

The following response was provided by Ross Hemphill, PhD, Senior Advisor, Navigant.

A copy of the requested article is attached hereto as Attachment RH-1.

2. **CEPR-SGH-01-032: Ref. Hemphill Direct, II. 124-125 - Dr. Hemphill testifies that there are no differences between traditional regulation and a formula rate mechanism with regard to the components used to calculate the revenue requirement. Please list the differences that do exist between traditional rate base/rate of return regulation and a formula rate mechanism.**

smv  
The following response was provided by Ross Hemphill, PhD, Senior Advisor, Navigant.

The fundamental equation for the revenue requirement is not inherently or necessarily different between formula and traditional ratemaking. Formula ratemaking can and often does use the same traditional overall revenue requirement formula (revenue requirement equals operating expenses plus the rate of return times rate base) for an entity with equity investors, or a similar formula using debt coverage for others) as traditional ratemaking, and formula ratemaking can and often does use the same components as traditional ratemaking. In the instant case, the revenue requirement panel testimony, PREPA Ex. 5.0, has presented multiple revenue requirement approaches, and it has recommended and used a modified cash basis approach. PREPA's proposed formula ratemaking mechanism ("FRM") starts with that same approach. As I stated on page 16 of my direct testimony, PREPA Ex. 7.0, under the proposed FRM, "the revenue requirement is calculated in the same manner as it was for the base year (Year 1) utilizing the same components with the updated inputs.



The rate structure for each class remains the same with no change to the interclass revenue allocation during the interim years. However, the rate components are recalculated using updated billing determinants in each interim filing. In Year 4, the entire process repeats with the re-establishment of the baseline through a rate case like what is described for Year 1." The proposed FRM does, however, contain an important feature related to the minimum debt service coverage ratio ("DSCR"), as discussed in my direct testimony. Please note that when I refer to my direct testimony, I am referring to the corrected version that PREPA is submitting by motion around the same time as the submission of these answers to the 2<sup>nd</sup> ROI.

To the extent that the question is asking more generally for differences between traditional ratemaking and formula ratemaking, at a high level, I would note (1) that formula ratemaking generally involves annual updates with updated inputs, while traditional ratemaking generally but not necessarily involves longer intervals between rate updates; and (2) that formula ratemaking often, although not necessarily, is combined with other regulatory structures, such as the updated billing determinants and modified DSCR features I referenced above for this case, and, for another example, performance metrics. Thus, formula ratemaking tends over time to more closely tie rates to actual costs.

I have discussed differences between formula and traditional ratemaking in my testimony, and they were discussed more recently in PREPA's Schedule N-1 REV submitted on June 30, 2016.

Please note that other types of alternative regulation use may price cap/indexing or other mechanisms which set the revenue requirement differently.

- smv
3. **CEPR-SGH-01-033: Ref. Hemphill Direct, II. 271-272 - Please explain how being "government-owned" prevents access to the capital markets.**

The following response was provided by Ross Hemphill, PhD, Senior Advisor, Navigant.

Government-owned entities do not sell equity shares in the private capital markets. However, they do have access to debt markets.

4. **CEPR-SGH-01-034: Ref. Hemphill Direct, II. 432-436 - Please explain what is meant by a "DSCR adjusted for total cost of capital," and provide a cite to a portion of PREPA's filing in this proceeding where that concept is discussed.**

The following response was provided by Ross Hemphill, PhD, Senior Advisor, Navigant.

My testimony contained an error at the referenced spot. PREPA is submitting a slightly corrected version of my testimony by motion around the same time as the submission of these answers to the 2<sup>nd</sup> ROI.

**5. CEPR-SGH-01-035: Ref. Hemphill Direct, II. 450-453 - Please provide the support on which Dr. Kaufman relies to show that traditional ratemaking "more often than not" causes overstated rates.**

The following response was provided by Ross Hemphill, PhD, Senior Advisor, Navigant. Please note that PREPA and Dr. Hemphill understand and assume the reference to Dr. Kaufmann to be a typographical error.

Dr. Hemphill respectfully states that the question does not correctly characterize his referenced testimony. Dr. Hemphill did not state that traditional ratemaking more often than not results in overstated rates. Dr. Hemphill stated, in context, that "ratemaking is an educated guess of what the future holds with respect to a multitude of factors that affect revenues and costs. In traditional ratemaking, the wrong guess is part of the process that results in, more often than not, an upward bias to the rates because of load growth and cost cutting. With an FRM, the process is overall much more precise and rate decreases in interim years are possible." Thus, load growth and cost cutting, if they are occurring, may increase revenues and may increase or reduce costs in relation to existing rates, but there are many other factors for how revenues and costs change downward or upward, such as changes in labor costs and inflation, in relation to existing rates. Dr. Hemphill was, thus, not opining that traditional ratemaking produces overstated rates in general, but was responding to how the "interim (non-base) year" adjustments in an FRM can eliminate a particular source of "more often than not" upward bias in traditional rates (on a year-to-year basis) in relation to future revenues and costs.

smv

Traditional regulation uses periodic filings to set rates at fixed levels, based on "test year" costs and the selected billing determinants, and those rates are then left in place to meet the utility's financial requirements generally for a number of years until a new filing is made. This is known as regulatory lag. As time passes, however, it is likely that the test year revenues and costs (whether historical, historical adjusted, current as of the rate setting, or future / projected) will necessarily become a "wrong guess" of the future revenues and costs as of when rates are in effect, that is, that the test year revenues and costs will not equal the actual future revenues and costs of the utility. In traditional ratemaking, such a discrepancy is more likely to result in a prompt corrective filing (almost always by the utility) when the resulting revenues are *inadequate*, while an adjustment may be less likely to be sought if revenues exceed

costs due, for example, to load growth or cost cutting. A formula rate both more precisely tracks actual costs and revenues (to the extent revenues are part of the design) and results in symmetric updates to rates for both increases and decreases in costs (and possibly revenues).

## H. General Questions

1. **CEPR-SGH-01-036: Please provide a calculation showing the embedded cost rate of each of the PREPA legacy debt issues that will remain on the PREPA balance sheet after the Restructuring. Please provide supporting documentation.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Please refer to the embedded cost rate calculation included in the revised Schedule D-1 submission (in PREPA's third and final response to the Commission's completeness order).

### 2. CEPR-SGH-01-037: Ref. Sch. D-2 Worksheet

- a. **Are the bonds listed on tab D-2A all of PREPA's bonds outstanding in May 2016, i.e., including those that are to be Restructured? If not, please explain why the combined debt service for 2017 shown on that tab is \$637 Million rather than \$314 Million.**

smv  
The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Yes. The bonds listed on tab (Schedule) D-2A include all of PREPA's bonds outstanding as of May 2016, including those that are to be restructured.

- b. **Please identify each of the bonds that is expected to remain on PREPA's books after the Restructuring.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

The individual debt issues listed in Schedule D-2A represent outstanding debt as of the date of the filing submission. Because the Securitization transaction has not been tendered or completed, there is no way to identify exactly which issues will be exchanged and serviced through the Transition Charge. The PREPA rate case assumes that all bonded debt except for \$700 million of uninsured bonds, on a pro rata basis for each series, is exchanged for securitization bonds and serviced through the SPV. A detailed description of PREPA's debt service estimation methodology and assumptions can be found in Schedule F-4, Section 9 – Debt Service.

- c. **Does PREPA have any bond or other debt obligations that are not shown on tab D-2A of Sch. D-2 Worksheet? If so, please provide a listing of those obligations with the same data that is included in D-2A of Sch. D-2 Worksheet, and explain why they were omitted.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

PREPA does not have any other bonded debt obligation, however, PREPA does have outstanding lines of credit that must be repaid. These obligations do not have the same characteristics as the bonded debt shown in Schedule D-2A, and thus the same data cannot be provided for these debts.

- d. **Please provide the coupon rate and issuance costs associated with each bond issue listed on tab D-2A of Sch. D-2 Worksheet.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

We are not in possession of or have access to information on the costs of issuance for the bonds listed in Schedule D-2A. The coupon rate can be found in column L titled "Coupon" in Schedule D-2A.

- e. **Please explain why the interest for 2017 is presented as net of "estimated subsidies," and explain what those subsidies are.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

PREPA has outstanding issuances that are subsidized by the U.S. federal government called Build America Bonds. The amount of interest that PREPA pays and its actual interest cost is "net of subsidies," whereas the actual amount received by creditors is "gross of subsidies."

**3. CEPR-SGH-01-038: Ref. Regulation 8720, Section 2.13(A), Schedule K-1-PREPA Affiliates - Please respond to the following questions regarding PREPA Holdings and its affiliates:**

- a. **Please provide the income statements, cash flow statements and balance sheets for the most recent two years for each of the affiliates within PREPA Holdings: PREPA Networks, Consolidated Telecom of Puerto Rico, and InterAmerican Energy Sources. If the Company is unable to comply with this request, please explain why.**

The following response was provided by Ernesto Ramos, the CFO of PREPA.

The financials of subsidiaries are consolidated with the Audited Financial Statements of PREPA. (Please refer to pages 36 and 37 of the audited FY 2014 financial statements.)

- b. **Why do these affiliates (PREPA Networks, Consolidated Telecom of Puerto Rico, InterAmerican Energy Sources) exist?**

The following response was provided by Ernesto Ramos, the CFO of PREPA.

PREPA Networks, LLC, InterAmerican Energy Sources, LLC and Consolidated Telecom of Puerto Rico, LLC exist as independent entities from the Authority, which they are dedicated to maximize and exploit the market of electric infrastructure, either directly or indirectly.

- c. **Do these affiliates (PREPA Networks, Consolidated Telecom of Puerto Rico, InterAmerican Energy Sources) operate within PREPA and contribute to PREPA's bottom line, or does PREPA contract with the affiliates for their services, and, therefore, do their charges to PREPA appear as expenses on PREPA's income statement? Please explain the arrangement for each of the three affiliates.**

The following response was provided by Ernesto Ramos, the CFO of PREPA.



The subsidiaries (PREPA Networks, LLC, Consolidated Telecom of Puerto Rico, LLC and InterAmerican Energy Sources, LLC) do not operate within the Authority. They are independent entities and the Authority's relationship with them is with a contract and the subsidiary operating as an independent contractor.

- d. **If PREPA Holdings three affiliates are operated as contractors to the utility (as opposed to cost centers within the utility), please indicate where the charges related to those operations are found in PREPA's rate filing.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Affiliate costs are not included in the filing except to the extent that they may provide specific services are directly related to the operation of the electric grid to PREPA under any existing contracts.

- e. **Do these affiliates hire their own employees or do they utilize the services of PREPA employees; and, if the latter is the case, please explain how the cost of those employees is allocated between PREPA and the affiliates.**

The following response was provided by Francis Pampush, PhD, Director, Navigant; Lucas Porter, CFA, Managing Consultant, Navigant; and Dan Stathos, CPA, Associate Director, Navigant.

Yes, these affiliates do hire their own employees.

- smv  
f. **How many employees does each of the three affiliates have?**

The following response was provided by Ernesto Ramos, the CFO of PREPA.

PREPA Networks, LLC has 50 employees, Consolidated Telecom of Puerto Rico, LLC has 8 employees, and InterAmerican Energy Sources, LLC has no employees.

- g. **Please explain why PREPA Holdings has two separate subsidiaries (PREPA Networks, and Consolidated Telecom of Puerto Rico) that do the same type of work and have the same board members.**

The following response was provided by Ernesto Ramos, the CFO of PREPA.

PREPA Networks, LLC is dedicated to provide domestic and international wholesale telecommunications and other wholesale services. Consolidated Telecom of Puerto Rico, LLC is dedicated to provide retail telecommunications services.

- h. Please describe the operations outside the Commonwealth of Puerto Rico of each affiliate (PREPA Networks, and Consolidated Telecom of Puerto Rico).**

The following response was provided by Ernesto Ramos, the CFO of PREPA.

Consolidated Telecom of Puerto Rico, LLC has no operations outside PR. PREPA Networks, LLC operates a submarine cable station and has interests in various systems of international submarine cable.

- i. Please explain whether or not a conflict of interest exists between PREPA and its sales of traditional utility-sourced power and InterAmerican Energy Sources, which "develops, finances, constructs and operates" renewable power projects? If not, please explain why not.**

The following response was provided by Ernesto Ramos, the CFO of PREPA.

There is no conflict of interest, since InterAmerican Energy Sources (IES) is a limited liability corporation authorized to do business in the Commonwealth of Puerto Rico. IES operates independently from PREPA. Although both share the goal of reducing the price of electricity in Puerto Rico, IES operates as a private company, self-funded and has no governmental employees. PREPA's participation is as a stockholder. IES competes in the market as any other company authorized to do business in Puerto Rico.

- j. Please provide recent examples to explain how and to what extent InterAmerican Energy "finances" and "constructs" renewable and non-renewable power projects.**

The following response was provided by Ernesto Ramos, the CFO of PREPA.

InterAmerican Energy Sources, LLC is not funding any project or building.

- k. **Has InterAmerican Energy Sources "financed" or "constructed" any projects during the period of PREPA's forbearance agreement with creditors? If so, please describe those projects.**

The following response was provided by Ernesto Ramos, the CFO of PREPA.

InterAmerican Energy Sources, LLC is not funding any project or building.

- l. **Was the operation of PREPA Holdings and its affiliates restricted in any way or addressed by the forbearance agreement with PREPA's creditors? If so, how?**

The following response was provided by Ernesto Ramos, the CFO of PREPA.

There is no particular requirement on PREPA Holdings in the forbearance agreement.

smv

**SWORN STATEMENT IN SUPPORT OF ANSWERS  
AS PER COMMISSION REQUIREMENTS**

I, Sonia Miranda Vega, of legal age, engineer, married, and resident of Vega Alta, Puerto Rico, in my capacity as Director of Planning and Environmental Protection, of the Puerto Rico Electric Power Authority ("PREPA"), under oath declare as follows:

1. My name and personal circumstances are those stated above. If called as a witness, I could testify competently as to the subject matter of this Affidavit.
2. The information supplied herewith comes from the records and information known by management and is held as true by the Puerto Rico Electric Power Authority.
3. I believe the information included in these answers is true on the basis of my personal knowledge or on the basis of the information supplied to me by employees and advisors of the Authority. I have specified for each of the requirements copied above the person or persons who supplied the relevant information for answering.
4. For all the requirements set forth above, moreover, the Authority's counsel assisted in preparing these answers. Such assistance was provided pursuant to the attorney-client privilege and/or work product doctrine, which the Authority does not waive.

RESPECTFULLY SUBMITTED.

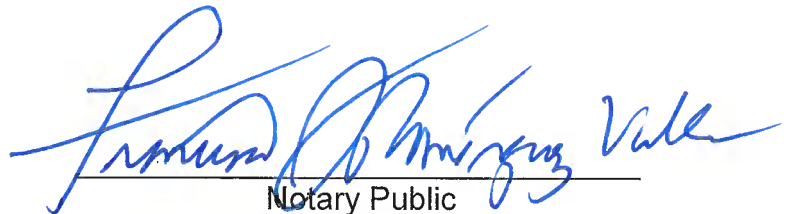
In San Juan, Puerto Rico, on July 5, 2016.

  
Sonia Miranda Vega

Affidavit No. 1945

Sworn and subscribed before me by Sonia Miranda Vega, of the personal circumstances above mentioned, whom I personally know, in San Juan, Puerto Rico, on July 5, 2016.



  
Notary Public

CERTIFICATE OF SERVICE

I hereby certify that I have sent the above PREPA'S RESPONSES TO THE COMMISSION'S SECOND REQUIREMENT OF INFORMATION to the Puerto Rico Energy Commission, to its General Counsel, via [afigueroa@energia.pr.gov](mailto:afigueroa@energia.pr.gov), [tnegron@energia.pr.gov](mailto:tnegron@energia.pr.gov), and [gbonet@energia.pr.gov](mailto:gbonet@energia.pr.gov), on July 5, 2016.



Nitza Vázquez Rodríguez  
TSPR No. 9311  
Executive Advisor  
Puerto Rico Electric Power Authority  
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