COMMONWEALTH OF PUERTO RICO
PUERTO RICO ENERGY COMMISSION

IN RE: REVIEW OF RATES OF THE PUERTO RICO ELECTRIC POWER AUTHORITY	**MATTER NO.:** CEPR-AP-2015-0001 **SUBJECT:** EXPERT REPORT: REVENUE REQUIREMENT, FUEL AND PURCHASE POWER ADJUSTORS, IMPROVED REPORTING REQUIREMENTS

EXPERT REPORT

OF

Ralph C. Smith
&
Mark S. Dady

Larkin & Associates PLLC
15428 Farmington Road
Livonia, MI 48154
734-522-3420

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I. INTRODUCTION

A. Purpose of Report

Larkin & Associates PLLC was retained by the Puerto Rico Energy Commission ("Commission" or "CEPR") to provide advice on matters related to utility regulation. The purpose of our report is to address various issues presented in the rate case filing by the Puerto Rico Electric Power Authority ("PREPA" or "Company"). Our report, in particular, focuses on the revenue requirement being requested by PREPA. We also present background material, focusing on accounting information that was obtained from PREPA.

Our report is sponsored by Ralph C. Smith and Mark S. Dady.

B. Background and Qualifications of Ralph Smith, CPA

Ralph C. Smith is a Certified Public Accountant licensed in the State of Michigan and a senior regulatory consultant in the firm Larkin & Associates, PLLC, Certified Public Accountants, with offices at 15728 Farmington Road, Livonia, Michigan 48154.

I received a Bachelor of Science degree in Business Administration (Accounting Major) with distinction from the University of Michigan - Dearborn, in April 1979. I passed all parts of the C.P.A. examination on my first sitting in 1979, received my C.P.A. license in 1981, and received a certified financial planning certificate in 1983. I also have a Master of Science in Taxation from Walsh College, 1981, and a law degree (J.D.) cum laude from Wayne State University, 1986. In addition, I have attended a variety of continuing education courses in conjunction with maintaining my accountancy license. I am a licensed Certified Public Accountant and attorney in the State of Michigan. Since 1981, I have been a member of the Michigan Association of Certified Public Accountants. I am also a member of the Michigan Bar Association. I have also been a member of the American Bar Association (ABA), and the ABA sections on Public Utility Law and Taxation.

After graduating from the University of Michigan, and after a short period of installing a computerized accounting system for a Southfield, Michigan realty management firm, I accepted a position as an auditor with the predecessor CPA firm to Larkin & Associates in July 1979. Before becoming involved in utility regulation where the majority of my time for the past 36 years has been spent, I performed audit, accounting, and tax work for a wide variety of businesses that were clients of the firm.

During my service in the regulatory section of our firm, I have been involved in rate cases and other regulatory matters concerning numerous electric, gas, telephone, water, and sewer utility companies. My present work consists primarily of analyzing rate case and regulatory filings of public utility companies before various regulatory commissions, and, where appropriate, preparing testimony and schedules relating to the issues for presentation before these regulatory agencies.

I have performed work in the field of utility regulation on behalf of industry, state attorneys general, consumer groups, municipalities, and public service commission staffs concerning regulatory matters before regulatory agencies in Alabama, Alaska, Arizona, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New Mexico, New York, Nevada, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Utah, Vermont, Virginia, Washington, Washington D.C., West Virginia, and Canada, as well as the Federal Energy Regulatory Commission and various state and federal courts.

Appended to our expert report is Smith & Dady Ex. 1, which is a summary of my regulatory experience and qualifications.

C. Background and Qualifications of Mark Dady, CPA

Mark S. Dady is a Certified Public Accountant licensed in the State of Michigan and a regulatory consultant in the firm Larkin & Associates, PLLC, Certified Public Accountants, with offices at 15728 Farmington Road, Livonia, Michigan 48154.

I received a Bachelor of Business Administration degree in Accounting with high honors from Davenport University in Dearborn, Michigan in 2001. In addition, I received a Master of Science degree in Accounting from Walsh College in Troy, Michigan in 2006. I received my C.P.A. license in 2007 and I have attended a variety of continuing education courses in conjunction with maintaining my accountancy license. I have also been a member of the Michigan Association of Certified Public Accountants since 2007.

Prior to my employment with Larkin & Associates PLLC, I worked for an apparel retailer where my duties included shipping and receiving, inventory management, accounts receivable and accounts payable. I have been employed by Larkin & Associates PLLC since November 2001. As a certified public accountant and regulatory consultant with Larkin & Associates, PLLC, I have assisted with the review and analysis of regulatory filings, prepared computer spreadsheets and models, prepared discovery requests, performed accounting and regulatory research, drafted and edited testimony and written reports, and verified data. I have submitted testimony and/or reports in the following jurisdictions: California, Connecticut, Delaware, Mississippi, and Ohio. I have also performed analytical work on revenue requirement issues in the jurisdictions identified above as well as in Arizona, New Jersey, Pennsylvania, Virginia, and West Virginia.

Appended to our expert report is Smith & Dady Ex. 2, which is a summary of my regulatory experience and qualifications.

D. Larkin Firm Background

Larkin & Associates, PLLC, ("Larkin") is a Certified Public Accounting and Regulatory Consulting Firm. In April 1970, the certified public accounting firm of Larkin, Chapski & Co., was formed by former employees of Peat, Marwick, Mitchell & Co., a “big eight” accounting and auditing concern. In addition to the auditing, accounting and tax work typical of CPA firms, Larkin, Chapski & Co, specialized in the area of utility regulation. In September 1982, the firm was reorganized into Larkin & Associates, a certified public accounting and consulting firm with Hugh Larkin, Jr., as senior partner. As such, Mr. Larkin has ultimate responsibility for all regulatory consulting work performed by the firm. Part

IV of this proposal provides further details on the management of our utility regulatory project team. Larkin performs a variety of auditing and accounting services, but concentrates in the area of utility regulation and ratemaking. The firm has performed regulatory consulting services for numerous clients. Appendix II attached to this proposal provides summaries of some of Larkin's past work completed on various Arizona and other electric utility regulatory consulting engagements.

The firm performs independent regulatory consulting primarily for public service/utility commission staffs and consumer interest groups (public counsels, public advocates, consumer counsels, attorneys general, etc.). Larkin & Associates, PLLC has extensive experience in the utility regulatory field, providing expert witness testimony in over 800 regulatory proceedings, including numerous gas, electric, water, wastewater, and telephone utility cases.

E. Information Reviewed

In evaluating PREPA's revenue requirement we reviewed PREPA's filed testimony and exhibits, other background information, PREPA's responses to information requests, as well as the testimony and comments filed by Intervenors.

F. Input from Other Commission Advisors

In developing PREPA's revenue requirement we obtained input from a number of other Commission Advisors including:

Stephen Hill

Tim Woolf, Ariel Horowitz, and Jeremy Fisher of Synapse Energy Economics

Paul Chernick of Resource Insight

II. PREPA'S CONTINUING FINANCIAL CRISIS

A. PREPA's Inability to Access External Financing

As described in the Direct Testimony of PREPA's Executive Director, Dr. Quintana-Mendez, (PREPA Ex. 1.0) at pages 11-12:

> PREPA faced a severe debt and liquidity crisis in the summer of 2014, which threatened its ability to operate, including its ability to purchase fuel to run its power plants and thus to keep the lights on in Puerto Rico. At that time, PREPA faced maturities of approximately $730 million under revolving credit lines and approximately $400 million in principal and interest payments under its power revenue bonds. PREPA entered into forbearance agreements with its key creditors that gave it breathing room to work on its debt and liquidity crises. The financial situation in summer 2014 is addressed in more detail by Ms. Donahue's testimony. PREPA's financial crisis also was intertwined with PREPA not operating in an efficient and effective manner. PREPA was not achieving its mission, much less its vision.

As described in the Direct Testimony of PREPA's Chief Restructuring Officer, Ms. Donahue of AlixPartners, LLP (PREPA Ex. 2.0) at pages 10-11:

> Lacking sufficient rates, PREPA incurred substantial debt to fund capital expenditures and, in the case of the revolving credit lines, certain operating expenses. Over time, PREPA's ability to access the capital markets on reasonable terms dried up. As a consequence, PREPA's ability to fund essential investments was compromised and those investments that were made had to be funded from current operating revenues. This ultimately threatened PREPA's ability to satisfy its obligations to creditors and to provide safe and reliable service to its customers.
>
> As I discussed earlier, although the problems have existed for many years, the crisis really hit PREPA in the summer of 2014. At that time, negative cash flows (reflecting the insufficient rates), the ongoing recession, outdated generation plants, and PREPA's lack of access to capital markets led to financial and liquidity crises that threatened its ability to operate, including its ability to purchase fuel to run its power plants and thus to provide electricity to Puerto Rico.
>
> In August 2014, as a first step in addressing such crisis, PREPA negotiated forbearance agreements with key financial and fuel line creditors. The forbearance agreements were not a long-term solution. Rather, they afforded PREPA necessary breathing room and flexibility to work on real solutions. In fact, given PREPA's severe liquidity position at the time, the forbearance agreements permitted PREPA to use construction reserve funds for operating purposes. That is not a

> sustainable strategy. An operating entity cannot make a long-term practice of using funds designated for critical capital projects to instead fund operations. In addition, the forbearance agreements excused PREPA from the obligation to make monthly sinking fund payments to the bond debt service reserve fund totaling approximately $600 million annually. Absent this relief, PREPA would have run out of money several months ago. As is customary, the forbearance agreements imposed a number of obligations and milestones on PREPA, including an obligation to retain a CRO to be chosen by the governing board.
>
> The forbearance agreements were extended as we continued to work with all stakeholders to develop a recovery plan to transform PREPA into a modem self- sustaining utility. The continued forbearance allowed us the time required to develop the business plan, generate initial savings and ultimately negotiate the Recovery plan that became part of the Restructuring Support Agreement (RSA) that exists today.

Ms. Donahue describes the magnitude of PREPA's debt and liquidity issues at pages 11-12 of her Direct Testimony:

> PREPA has debt obligations of approximately $9 billion, including approximately $1.3 billion in principal and interest that will be due on July 1, 2016 under its existing revolving credit lines and power revenue bonds. PREPA currently has approximately $550 million in cash, including $146 million that is held in GDB accounts subject to a moratorium. PREPA has exhausted all of its debt service reserves because it has not been able to make any monthly sinking fund payments since late 2014. Thus, PREPA faces a liquidity crisis as well as a debt crisis. PREPA cannot meet its immediate financial obligations absent a financial restructuring and transformative change. Indeed, without action to restructure PREPA's debt and reduce its immediate cash flow burdens, PREPA faces a funding gap of more than $700 million as of July 1, 2016.

PREPA has reached a Restructuring Support Agreement ("RSA") with key creditors and a new special purpose entity, PREPA Revitalization Corporation ("PREPARC"), and has made it past its July 1, 2016 liquidity crisis. The Commission granted PREPA a provisional rate increase on June 27, 2016.[1] Despite all of these steps, PREPA financial situation remains uncertain, PREPA's bond ratings are poor, PREPA is viewed by the investment community as very risky, and PREPA remains generally unable to access external financial markets at reasonable terms on its own.[2]

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[1] The order granting a provisional rate increase was notified and published on June 24, 2016.

[2] Also see the expert report of Commission consultant Stephen Hill which addresses PREPA's bond rating and inability to access external financing on reasonable terms.

As described in the expert report of Commission Advisor Stephen Hill, PREPA's bond ratings have deteriorated to below investment grade.[3] All three of the major bond rating agencies[4] give PREPA a credit rating of "near default" or "default," meaning that the Company is unable to or very likely to be unable to meet its financial obligations to its creditors. PREPA has been and is currently working with a majority of its creditors to restructure its debt in order to lower costs for the portion of its debt held by those lenders.[5]

PREPA's November 9, 2016 Formula Rate Mechanism Update notes that one of PREPA's special circumstances is that PREPA has "No practical access to capital markets."[6]

PREPA has been unable to access external financing, other than for limited 2016 issuances.[7] As explained in Mr. Hill's report, PREPA's current financial condition is dire. PREPA is considered by financial markets to be an extremely risky investment. Consequently, PREPA is unlikely to be able to access the capital markets on its own for any "new" money.[8] If PREPA did try to attract capital in its current financial condition, it is likely that the cost rate required by investors would be too high to be cost-effective. Therefore, in its current financial condition, PREPA cannot raise from investors the monies necessary to build and maintain a reliable electric system. We view PREPA as being in a state of financial emergency that is likely to continue until PREPA's access to external financing on reasonable terms is restored.

B. Summary of the Deterioration of PREPA's "Net Position"

Governmental Accounting Standards Board ("GASB") Concepts Statement 4 identifies "Net Position" as the residual of all other elements presented in a statement of financial position. It is the difference between (a) assets and deferred outflows of resources and (b) liabilities and deferred inflows of resources. GASB Statement No. 63 provides guidance for reporting

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[3] As explained in Mr. Hill's report, bond ratings below "BBB-" are deemed "non-investment grade."

[4] The bond rating agencies are Moody's, Standard & Poor's, and Fitch.

[5] In its *Restructuring Order* (CEPR-AP-2016-0001), the Commission approved a "Transition Charge" that would lower the cost to ratepayers of that portion of debt whose bondholders participate in the debt restructuring described in that Order. In return for the participating bondholders agreeing to receive only 85% of the face value of their debt, receiving a lower-than-contract interest rate on that debt and deferring principal payments for five years, the Transition Charge ensures that the portion of PREPA's rates necessary to pay that reduced debt will be collected separately and differently from the rates to be determined in this rate proceeding. The restructured debt costs will be recovered in a separate charge which is lower than the costs would be if the debt were not restructured. Negotiations over the debt restructuring are ongoing and have not yet been concluded.

[6] See, PREPA's November 9, 2016, FRM Update, page 3 of 10.

[7] PREPA was able to achieve financial arrangements with some of the lenders who are participating the RSA which enabled PREPA to address its July 1, 2016 debt payment obligations. PREPA refers to these as its 2016A, 2016B, 2016C, etc. issuances.

[8] PREPA has been trying to refinance its existing bonds using a new special purpose entity, PREPA Revitalization Corporation ("PREPARC") in a process that was addressed in the Transition Charge proceeding. The refinancing and issuance of new PREPARC securitized debt has not yet been completed.

net position within a framework that includes deferred outflows of resources and deferred inflows of resources, in addition to assets and liabilities. GASB Statement No. 63 at pages 5-6 (paragraph 8) provides the following guidance for entity reporting of the Net Position:

> Statement of Net Position
>
> 8. The statement of net position should report all assets, deferred outflows of resources, liabilities, deferred inflows of resources, and net position. Governments are encouraged to present the statement of net position in a format that displays assets, plus deferred outflows of resources, less liabilities, less deferred inflows of resources, equals net position, although a balance sheet format (assets plus deferred outflows of resources equals liabilities plus deferred inflows of resources, plus net position) may be used. Regardless of the format used, the statement of net position should report the residual amount as net position, rather than net assets, proprietary or fiduciary fund balance, or equity. Net position represents the difference between all other elements in a statement of financial position and should be displayed in three components—net investment in capital assets; restricted (distinguishing between major categories of restrictions); and unrestricted.

PREPA's audited financial statements and monthly reports to its governing board present information about PREPA's net position. PREPA's FY2014 audited financial statements[9] at page 18 present the following summary of PREPA's Net Position:

Table 1: PREPA's Net Position from FY2014 Audited Financial Statements

Authority's Net Position
(In thousands)

	Year Ended June 30		
	2014	**2013**	**2012**
		(as restated)	*(as restated)*
Current, non-current and other assets	**$ 3,504,903**	$ 3,177,881	$ 3,283,933
Deferred outflows	**126,812**	177,283	218,648
Capital assets	**6,847,456**	6,838,558	6,799,176
Total assets and deferred outflows	**$ 10,479,171**	$ 10,193,722	$ 10,301,757
Long-term debt outstanding	**$ 9,413,195**	$ 8,987,971	$ 9,042,843
Other liabilities	**2,332,981**	2,052,946	1,834,036
Total liabilities	**$ 11,746,176**	$ 11,040,917	$ 10,876,879
Net position (deficit):			
Net investments in utility plant	**$ (253,448)**	$ (32,432)	$ (21,314)
Restricted	**–**	–	18,299
Unrestricted	**(1,013,557)**	(814,763)	(572,107)
Total net position (deficit)	**$ (1,267,005)**	$ (847,195)	$ (575,122)

[9] PREPA Exhibit I-2.

As shown in the above table, at June 30, 2014 PREPA had a total Net Position **deficit** of $1.267 billion. In comparison, PREPA's Net Position **deficit** (as restated in its audited financial statements) was approximately $575 million at June 30, 2012 and $847 million at June 30, 2013. A large and growing Net Position **deficit** is one indication of deteriorating financial health.

Note 14 to PREPA's FY2014 audited financial statements states, among other things, that:

> As of June 30, 2014, the Authority is in a net deficit position. The Authority faces a number of business challenges that have been exacerbated by the Commonwealth's economic recession, the volatility in oil prices, and the fact that the Authority has not increased rates to its customers at sufficient levels to offset the effects of its rising costs.

The following table uses information from PREPA's monthly reports to its Governing Board to summarize the changes in PREPA's Net Position that have occurred from June 2008 (when PREPA had a positive balance of approximately $143 million) through June 2016 (which shows that PREPA's Net Position deficit is approaching $2 billion):

Table 2: Changes in PREPA's Net Position from June 2008 through June 2016

Puerto Rico Electric Power Authority			
Changes in Net Position			
Line No.	Date	Net Position	Change in Net Position
	A	B	C
1	June 2008	$ 142,989,000	
2	January 2009	$ (78,933,000)	$ (221,922,000)
3	June 2009	$ (16,270,000)	$ 62,663,000
4	December 2009	$ (91,763,000)	$ (75,493,000)
5	June 2010	$ (146,695,000)	$ (54,932,000)
6	December 2010	$ (107,450,000)	$ 39,245,000
7	June 2011	$ (162,526,000)	$ (55,076,000)
8	December 2011	$ (296,125,000)	$ (133,599,000)
9	June 2012	$ (475,600,000)	$ (179,475,000)
10	December 2012	$ (702,033,000)	$ (226,433,000)
11	June 2013	$ (827,876,000)	$ (125,843,000)
12	December 2013	$ (936,385,000)	$ (108,509,000)
13	June 2014	$ (1,094,412,000)	$ (158,027,000)
14	December 2014	$ (1,213,284,000)	$ (118,872,000)
15	June 2015	$ (1,423,159,000)	$ (209,875,000)
16	December 2015	$ (1,793,452,000)	$ (370,293,000)
17	June 2016	$ (1,998,353,000)	$ (204,901,000)
	Cumulative Change	$ (2,141,342,000)	$ (2,141,342,000)
Notes and Source:			
Column B: Monthly reports prepared by PREPA			

PREPA's Net Position[10] began deteriorating markedly in 2009 and continued through the fiscal year ended June 30, 2016. PREPA's financial deterioration, as represented by the changes in PREPA's Net Position, during this period was over $2 billion. Other things being equal, if PREPA's rates had been adequate to cover its cost of service during this period, the

[10] PREPA's Net Position is similar to owners' equity including retained earnings of an investor owned utility.

Company's Net Position would not have deteriorated by over $2 billion. While not a precise indicator of the inadequacy of PREPA's rates to cover its cost of providing electric service to its clients, the changes in PREPA's Net Position can nevertheless be viewed as a rough "order of magnitude" approximation of by how much PREPA's rates failed to recover PREPA's cost of providing electric service. Being unable to access bond markets and having a Net Position deficit of approximately $2 billion are related signs of the severe financial difficulties that PREPA has been experiencing.

C. PREPA's Financial Statements for the Fiscal Year Ended June 30, 2014

At Exhibit I-2 of its application, PREPA has provided audited financial statements for the fiscal year ended June 30, 2014. PREPA's audited results for FY2014 are shown in PREPA's revenue requirement filing as the starting point for developing its proposed revenue requirement for FY2017 and for permanent rates that would be applied prospectively. However, virtually every line item in PREPA's results of operations for FY2014 has been replaced by PREPA (or significantly adjusted to reflect) PREPA's FY2017 projected results.[11] In other words, other than PREPA using the FY2014 data to set up its revenue requirement insofar as reflecting the various categories in its calculation (e.g., Labor and Non-labor Operating Expenses, Bad Debt Expense, Debt Service, Capex, etc.) the audited FY2014 data bears little resemblance to what PREPA is requesting in its filing for FY2017. In essence, PREPA has substituted its budgets and projections for FY2017 for the audited FY2014 results of operations and is using is FY2017 projections as the basis for its proposed revenue requirement.

PREPA's audited financial statements for FY2014 remain the most current audited financial statements that are available for PREPA. More than two full fiscal years have passed since June 30, 2014 (the balance sheet date of PREPA's FY2014 financial statements). That information is therefore viewed as being stale and unrepresentative of PREPA's going-forward operations, which reflect a presumed financial restructuring. Nevertheless, there are some key points about PREPA's dire financial condition contained in the Company's audited FY2014 financial statements that deserve to be highlighted.

1. Basis of Accounting Used by PREPA - Accounting Rules prescribed by the Governmental Accounting Standards Board the Uniform System of Accounts prescribed by the Federal Energy Regulatory Commission

PREPA's FY2014 audited financial statements at page 13 describe that PREPA is using the accounting rules prescribed by Governmental Accounting Standards Board and the Uniform System of Accounts prescribed by the Federal Energy Regulatory Commission as the basis for its accounting:

[11] A discussion of each component of PREPA's requested FY2017-based revenue requirement is presented in Chapter IV of our report.

Basis of Accounting

The accounting and reporting policies of the Authority conform to the accounting rules prescribed by the Governmental Accounting Standards Board (GASB). As such, it functions as an enterprise fund. The Authority maintains its accounting records on the accrual basis of accounting in conformity with U.S. generally accepted accounting principles. Although the Authority is not subject to all Federal Energy Regulatory Commission (FERC) regulations, the Authority has adopted the uniform system of accounts prescribed by FERC. The accounting and reporting policies of the Authority conform to the accounting rules prescribed by the Governmental Accounting Standards Board (GASB).

The Authority accounts for its operations and financings in a manner similar to private business enterprises; the intent is that costs of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges. Such accounts and these financial statements have been prepared on the basis that the Authority will continue as a going concern. Additional disclosures within the Notes to these financial statements, particularly in Notes 8, 11, 19 and 20, should be read in connection with consideration of the future ability of the Authority to continue as such.

The Uniform System of Accounts for Electric Utilities, as prescribed by the FERC can be found in the Code of Federal Regulations at Title 18, Chapter I, Subchapter C, Part 101.[12]

The FERC Uniform System of Accounts provides for a standardized accounting for electric utilities using a consistent account numbering system. The account numbering plan used the FERC System consists of a system of three-digit whole numbers as follows:

100-199 Assets and other debits.

200-299 Liabilities and other credits.

300-399 Plant accounts.

400-432, 434-435 Income accounts.

433, 436-439 Retained earnings accounts.

440-459 Revenue accounts.

500-599 Production, transmission and distribution expenses.

900-949 Customer accounts, customer service and informational, sales, and administrative and general expenses.

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12 *See, e.g., http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=054f2bfd518f9926aac4b73489f11c67&rgn=div5&view=text&node=18:1.0.1.3.34&idno=18.*

The Uniform System of Accounts provides the following general guidance for maintaining the utility's accounting records:

> A. Each utility shall keep its books of account, and all other books, records, and memoranda which support the entries in such books of account so as to be able to furnish readily full information as to any item included in any account. Each entry shall be supported by such detailed information as will permit ready identification, analysis, and verification of all facts relevant thereto.
>
> B. The books and records referred to herein include not only accounting records in a limited technical sense, but all other records, such as minute books, stock books, reports, correspondence, memoranda, etc., which may be useful in developing the history of or facts regarding any transaction.
>
> C. No utility shall destroy any such books or records unless the destruction thereof is permitted by rules and regulations of the Commission.
>
> D. In addition to prescribed accounts, clearing accounts, temporary or experimental accounts, and subdivisions of any accounts, may be kept, provided the integrity of the prescribed accounts is not impaired.
>
> E. All amounts included in the accounts prescribed herein for electric plant and operating expenses shall be just and reasonable and any payments or accruals by the utility in excess of just and reasonable charges shall be included in account 426.5, Other Deductions.

Note that paragraph E, quoted above, provides that only "just and reasonable" expenses shall be recorded for electric plant and operating expenses; any payments or accruals by the utility in excess of just and reasonable charges are to be included in a separate account, 426.5, Other Deductions.[13] Strict adherence to the Uniform System of Accounts combined with regulatory and financial audits designed to examine the utility's accounting are thus a primary way that regulators have of assuring that the utility's recorded plant and operating expense balances are just and reasonable.

2. Concerns Expressed About PREPA's Financial Condition and Liquidity and Ability to Repay Its Obligations

Note 19 to PREPA's FY2014 audited financial statements states as follows concerning PREPA's financial condition and liquidity:

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[13] Account 426 is generally considered to be one of the "below-the-line" accounts, in that costs recorded in that account are generally not allowed for purposes of determining the electric utility's revenue requirement, although exceptions can sometimes occur.

19. Financial Condition and Liquidity

The Authority does not currently have sufficient funds available to fully repay its various obligations as they come due, and is working on extending the due date of the obligations and obtaining other concessions from its creditors, including pursuant to an exchange offer that would reduce the principal amount of some of its debts, obtaining more favorable covenants and other terms under its Trust Agreement via a consent solicitation, and obtaining new financing to provide relief and/or funds to repay the existing amounts of principal and interest or bring the outstanding balances current at the various due dates as well as to continue to operate and to finance capital improvement projects. The Commonwealth and its instrumentalities are also experiencing significant financial difficulties and may be unable to continue to repay amounts due to the Authority or to extend, refinance or otherwise provide the necessary liquidity to the Authority as and when needed. The Authority has receivables of over $803.7 million payable by the Commonwealth and related entities and is subject to significant uncertainty with regard to its ability to collect on such receivables. As a consequence, the Authority may not be able to avoid future defaults on its obligations. Management has plans to address the Authority’s liquidity situation and continue providing services and believes the Authority will be able to repay or refinance its obligations, as described above and Note 20. However, there can be no assurance that the affiliated or unaffiliated creditors will be able and willing to refinance or modify the terms of the Authority’s obligations, that management’s current plans to repay or refinance the obligations or extend their terms will be achieved or that certain services will not have to be terminated, curtailed or modified. See further discussion in Note 20.

3. Concerns Expressed About PREPA's Ability to Continue as a Going Concern

Similarly, the independent auditor's (Ernst & Young) opinion states as follows concerning PREPA's ability to continue as a going concern:

The Authority’s Ability to Continue as a Going Concern

The accompanying financial statements have been prepared assuming that the Authority will continue as a going concern. **As discussed in Note 19 to the financial statements, the Authority does not have sufficient funds available to fully repay its various obligations as they come due and has entered a process to restructure its long-term debt. The financial difficulties experienced by the**

> **Authority, including the uncertainty as to its ability to fully satisfy its obligations, raises substantial doubt about its ability to continue as a going concern.** Management's plans in regard to these matters are also described in Notes 19 and 20. The financial statements do not include any adjustments that might result from the outcome of this uncertainty. Our opinion is not modified with respect to this matter.[14]

These statements highlight the dire financial condition of PREPA and some of the significant challenges PREPA is facing. Without completion of the financial restructuring and other significant developments, such as collecting receivables due to PREPA from the Commonwealth and other clients, PREPA's ability to continue as a going concern has been called into doubt.

D. PREPA's Financial Statements for the Fiscal Year Ended June 30, 2015

As of the date of this writing, PREPA has not yet provided audited financial statements for the fiscal year ended June 30, 2015. PREPA's response to CEPR-RS-01-02 stated that: "PREPA looks forward to receiving the audited financial statements by November 2016. They will be provided to the Energy Commission as soon as they are available." However, PREPA's more recent response to request No. 11 from the October 31, 2016 conference call now indicates that: "Based on recent discussions with Ernest & Young, PREPA's auditor, it is believed that the FY2015 financial statements will be ready in January 2017."

Not having audited accounting information for PREPA on a timely basis could present an issue with PREPA's proposed Formula Rate Mechanism ("FRM"). PREPA's updated FRM proposal indicates that the "FRM processes will kick off upon receipt of audited financials or other acceptable reports (October) every year."[15] PREPA's proposed timeline for the FRM indicates that an initial step is to: "Obtain financial statements from previous FY (preferably audited)"[16] Delays in PREPA providing its audited financial statements could thus interfere with the optimal functioning of any procedure to update PREPA's revenue require and the contemplated reconciliations. Commission consultant Tim Woolf will address the implications in his report.

Also, not having audited financial statements for PREPA for FY2015 (the period ending June 30, 2015) or for subsequent fiscal years on a timely basis could present concerns for creditors. We note that PRASA, another Puerto Rico government owned utility, has already completed and posted its audited financial statements for its FY2015.[17]

Recommendation: PREPA should be required to address why it cannot produce audited financial statements on a more timely basis going-forward. Going forward, PREPA should

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[14] *See,* PREPA Exhibit I-2, Independent Auditor's Opinion. Emphasis supplied.
[15] See, PREPA's November 9, 2016, FRM Update, page 6 of 10.
[16] *Id*. at 7.
[17] We note that PRASA's audited financial statements for FY2015 contain cautionary statements about PRASA ability to continue as a going concern, as did PREPA's FY2014 audited financial statements. PRASA is a large customer of PREPA's.

take necessary steps to assure that its audited financial statements can be completed and made available on a more timely basis.

E. PREPA's Reported Operating Results for the 12 Months Ended June 30, 2016

PREPA's operating results for the 12 months ended June 30, 2016 are presented on PREPA's Monthly Report to the Governing Board for June 2016. A copy of PREPA's Monthly Report to the Governing Board for June 2016 is attached to our report as Smith and Dady Ex. 6.

PREPA's operating results for 12 months ended June 30, 2016 are the most recent complete fiscal year information available. These results have not been audited. We have used the results for FY2016 as one frame of reference for reviewing the reasonableness of components of PREPA's requested revenue requirement, which is largely based on PREPA's projections for FY2017.

F. PREPA's Operating Budget for Fiscal Year July 1, 2016 through June 30, 2017 (FY2017)

PREPA's approved budget for FY2017 was provided in response to CEPR-RS-03-05 and CEPR-RS-06-13(b). This PREPA budget, along with the related PREPA/AlixPartners Business Plan,[18] discussed in the next section, are the two primary sources of PREPA's estimated FY2017 based revenue requirement.

G. PREPA's Business Plan and Anticipated Cost Savings

PREPA's business plan has been provided in the Company's filing at PREPA Exhibit I-4.[19] Additional materials from reports by PREPA's Chief Restructuring Officer, Lisa Donahue of AlixPartners, to PREPA's Governing Board, were included in PREPA's filing as PREPA Exhibit I-3. PREPA's business plan and those additional materials from the Chief Restructuring Officer contain information concerning how PREPA is anticipating achieving cost savings and making operational improvements in various areas.

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[18] See, PREPA Exhibit I-4.

[19] The May 2016 version of the PREPA (AlixPartners) Business Plan and information on how it relates to PREPA's Rate Case Model (prepared by Navigant) was included in PREPA's filing. *See* PREPA Exhibit I-4, bates stamped pages I 001331 through I 001381.

III. REVENUE REQUIREMENT METHODOLOGIES FOR PREPA'S BASE RATES

The PREPA revenue requirements panel (Pampush, Porter, and Stathos[20]) discuss three different types of revenue requirement models that could be used to determine PREPA's base rates revenue requirement in this proceeding. As presented in PREPA's May 26, 2016 application, PREPA Ex. 5.0 at page 38, based on PREPA's FY2017 projections and assuming that the debt restructuring and Transition Charge revenues are being separately addressed from PREPA's base rates, PREPA estimated the following revenue requirement and base rate revenue deficiency amounts under three different revenue requirement methods:

Table 3: Estimated Revenue Requirement and Revenue Deficiency Amounts Under Three Different Revenue Requirement Methods

Revenue Requirement (excluding Transition Charge Revenue)

Method	Revenue Requirement	Revenue Deficiency
Modified Cash Basis	$2,958,930,536	$222,256,790
Cash Basis	$3,017,571,944	$280,898,199
Accrual Basis	$3,015,032,394	$278,358,649

Each of these three models is described below, noting the advantages and disadvantages of each.

Also, in Section D of this Chapter we will describe a fourth "hybrid" model that follows traditional ratemaking guidelines for public power utilities and includes a component for debt service coverage in the revenue requirement, while recognizing the financial realities faced by PREPA and its ratepayers relating to PREPA's near-term needs requires having an additional source (ratepayers) for funding its capital expenditures during the period when PREPA is not able to obtain financing at reasonable terms by issuing bonds.

The following discussion of the revenue requirement will focus only on the issues at play in this proceeding; specifically, the PREPA base rate revenue requirement to be determined in this proceeding. A separate portion of monies that PREPA will be collecting from ratepayers (revenues) will be collected through the Transition Charge ("TC"), the Calculation Methodology for which the Commission approved in Docket No. CEPR-AP-2016-0001. The Calculation Methodology is the method under which PREPA will collect costs related to the new securitization debt to be issued by PREPARC and for uncollectibles related to the TC revenue requirement. The TC will recover the debt service costs for the restructured debt. It will be administered by PREPARC, a new separate corporation created for that purpose. The actual TC will not be determined in this proceeding. Once determined through the Calculation Methodology, it will be collected from ratepayers in a separate

[20] *See* PREPA Ex. 5.0 (Direct) and Ex. 14.0 (Supplemental).

monthly Transition Charge on their bill. Consistent with the Commission's Order in the Transition Charge proceeding, Case No. CEPR-AP-2016-0001,[21] PREPA's total revenue requirement includes estimates of $394 million for PREPARC Securitization Debt Service and $109 million for the Transition Charge Gross-Up for the Collections Lag and Uncollectible Revenue. The Transition Charge revenue requirement (initially totaling that $503 million, which is the sum of those two components) will be collected from customers as a separate component of the bill for electric utility service. The Transition Charge revenue requirement will be adjusted quarterly as provided for in CEPR-AP-2016-0001.

Therefore, no matter which revenue requirement model is selected for use in this proceeding to determine PREPA's base rates, the revenues related to the PREPARC–issued securitization debt will be determined and collected separately from the revenues in this proceeding. Those Transition Charge revenues will ultimately be part of the full revenue requirement paid by PREPA customers.

In summary, the purpose of this PREPA base rate case is to determine the revenue requirement that PREPA will have relating to its provision of electric utility service, exclusive of the Transition Charges.

The discussion in this chapter of our report therefore focuses on the ratemaking methods that will be applied to determine PREPA's revenue requirement exclusive of the Transition Charges that would be collected by PREPA and remitted to PREPARC.

A. Rate Base / Rate of Return

The rate base/rate of return ratemaking model is one that is widely used in the U.S. to set rates for investor-owned utilities. The PREPA advisors refer to this methodology in their revenue requirement testimony as the "Accrual Basis" Approach. As noted by the PREPA advisors at page 15 of PREPA Ex. 5.0, the basic formula for a rate base/rate of return revenue requirement is:

$$\text{Revenues} = \text{Expenses} + \text{Depreciation} + (\text{Rate Base} \times \text{Rate of Return}). \quad (1)$$

The "expenses" in this ratemaking formula include all of the utility's prudently-incurred operating expenses (e.g., fuel, purchased power, operations, and maintenance expense, CILT, labor, pension funding costs). Depreciation is a non-cash expense that represents the reduction in the value of the utility plant assets with the passage of time, and represents a cash flow to the utility that provides a source of funding for new capital investments. The "rate base" is the value of the used and useful portion of the utility plant (generation, transmission, distribution, and other tangible assets) that has not yet been depreciated. It is the asset base to which the "return" is applied. That "return" is the annual percentage return that must be paid to the investors that provide the capital used to finance the building of the utility's rate base assets—it is equal to the cost to the utility of that capital.

[21] In Re: Petition for Approval of Transition Order filed by the PREPA Revitalization Corporation.

For the type of utilities to which this model applies, the capital is provided by equity investors (through the sale of stock and via retained earnings) and debt investors (through the sale of bonds), and the return used to determine rates will be a weighted-average return for both the equity and debt capital.

This methodology has worked well for many years for investor-owned utilities. However, it is not well-suited for public power utilities, although there are some that use it. The equity return portion of the rate base/rate of return model is the most problematic aspect when applied to public power utilities. Publicly-owned utilities do not sell ownership interests in their enterprises. They are "owned" by the municipalities, states, or political jurisdictions in which they operate. The "equity" that appears on the books of account for public power utilities represents earned surplus (also known as "retained earnings"), which is earnings from operations retained by the utility. It is not capital provided by issuing stock to investors. Also, as discussed earlier in our report PREPA's "Net Position" (the approximated equivalent of owners' "equity") as of June 30, 2016 (the most current fiscal-year-end information available) showed a deficit of almost $2 billion. Therefore, any equity return included in developing PREPA's rates would need to be based upon a hypothetical equity balance but would not compensate equity investors.[22]

Additionally, for public power utilities like PREPA that have negative earned surplus (the expenses have been greater than income for some period of time) and have negative equity balances,[23] a "return" on a negative capital balance has little practical meaning. In order to determine rates using this methodology for a company like PREPA, one would have to assume a hypothetical capital structure (see PREPA Ex. 5.0, p. 37). While an assumed capitalization can be a useful ratemaking tool in certain circumstances, in this instance it is not. The financial condition of PREPA should be assessed as directly as possible in this proceeding. Attempting to fit PREPA into a ratemaking methodology utilized by a different type of utility would fail to accomplish that goal. Too many assumptions would have to be included in a rate base/rate of return ratemaking model in this proceeding and it should not be considered a viable alternative.

Recommendation: we recommend that the rate base/rate of return ratemaking model not be used for PREPA in this proceeding for the reasons described above.

B. Debt Service Coverage Ratio

The debt service coverage ratio (DSCR) methodology, which the PREPA advisors term the "Cash Basis approach" to ratemaking, is commonly used for rate setting in the public power

[22] PREPA's "accrual method" calculations appear to assume an 80/20 debt/equity capital structure with a 12.0 percent equity return.

[23] As noted above, at June 30, 2016, PREPA has a "Net Position" deficit of approximately $2 billion. The Net Position of a government owned utility is similar to owner's equity and retained earnings of an investor owned utility. Since PREPA has a large deficit balance, that would be similar to negative owners' equity. Thus there is no actual positive balance representing the equity investment in the utility to which a return on equity authorized by the regulatory commission could be applied.

industry, as well as for public utilities that are organized as member cooperatives. In this method, the revenue requirement is composed of all the utility's operating expenses, plus the expected debt service costs multiplied by the DSCR. Or, written as a formula:

$$\text{Revenues} = \text{Operating Expenses} + (\text{Debt Service x DSCR}) \qquad (2)$$

This approach is straightforward; it does not require assumptions about what returns might or might not be appropriate or what the mix of capital ought to be. It simply adds up all of the utility's costs that are expected to exist during the rate year. The operating expenses are the same as those noted for the rate base/rate of return model, except for depreciation expense, which is a non-cash accrual.

Finally, as discussed previously, because the Commission needs to include in rates an ability for the utility to collect more than the minimum required amount in order to support financial stability, the debt service requirements are multiplied by the DSCR. Mr. Hill has recommended a DSCR of 1.4 times, which he indicates should be sufficient to put PREPA on a path toward financial stability when coupled with the financial restructuring being undertaken by the Company.

There is one aspect of PREPA's financial condition that this revenue requirement model is unable to address completely: capital expenditures. The Company has capital expenditures that must be made in order to maintain and improve its utility plant. During its period of forbearance which began in 2014, while some of the debt investors allowed PREPA to forego debt payments while PREPA was being restructured, cash flow was limited and the Company, in order to conserve cash, limited its capital spending to minimal levels approaching or even falling below basic maintenance.[24] Therefore, much needs to be done to shore up operational reliability.

The DSCR revenue requirement model can meet some of those capital expenditure needs through the cash flow available from the allowed DSCR in excess of the minimum required by the Trust Indenture. Currently however, if PREPA's capital expenditure needs exceed the monies allowed through the DSCR in this revenue requirement model, it would not be able to fund those capital expenditure requirements because it is currently unable to raise capital from the financial markets for that purpose.

In should be emphasized here that the normal course of events for a public power utility like PREPA is that the cash flows from the DSCR (in excess of the debt service) fund all capital expenditures unless they are not sufficient to do so. In that case, again under normal circumstances, the utility will utilize the capital markets by issuing debt sufficient for the additional monies needed to meet the capital expenditure requirements. That process of financing capital expenditures with investor-supplied debt spreads the cost of financing utility assets over the life of the asset (or life of the bond issuance), thereby lowering the

[24] See, e.g., the Expert Report of Dr. Horowitz and Dr. Fisher of Synapse, which addresses from an operational perspective PREPA's capital expenditures, maintenance, and electric system reliability.

annual revenue requirement impact to ratepayers of utility capital projects. Moreover, that is the condition to which PREPA should eventually be returned; i.e., when PREPA's internal cash flow in a year is insufficient to fund necessary capital projects, the utility can obtain the necessary incremental funding from the capital markets at reasonable cost. That is not currently the case. Therefore, this DSCR revenue requirement model is, at this time, unable to support PREPA's return to a more normal state of reliable operations.

C. The "Modified Cash Basis Approach"

The PREPA revenue requirement panel offers another ratemaking model which it calls a "modified cash basis approach." That revenue requirement model is designed to cover all of the Company's cash requirements—operating expenses (plus subsidies such as CILT) plus debt service plus capital expenditures. Under this approach, PREPA proposes to recover capital expenditures from PREPA ratepayers annually on a dollar-for-dollar basis. Focusing again only on the revenue requirement of concern in this proceeding (and not the Transition Charge), the revenue requirement equation for this method is as shown below:

$$\text{Revenues} = \text{Expenses} + \text{Debt Service} + \text{Capital Expenditures} \qquad (3)$$

This revenue requirement method is different from the DSCR method in that it directly includes the full amount of capital expenditures that the utility expects to make in the rate year. That is, for every dollar of expected capital expenditures, PREPA's revenue requirement would be increased by that same dollar, resulting in a dollar-for-dollar annual recovery of expected capital spending on new and replacement plant.[25] PREPA's proposed "Modified Cash Basis" approach is an unusual ratemaking model that is quite favorable to the utility. It is unusual to require ratepayers to pay directly on a dollar-for-dollar basis in the current period for the utility's capital expenditures.

This sort of ratemaking methodology—having ratepayers fund all of the utility's capital expenditures in the year incurred—would not normally be employed because it does not encourage fiscal discipline on behalf of the utility and could lead to unnecessary and uneconomic overbuilding. Additionally, it creates a mis-match between (a) the time when ratepayers would pay for the plant and infrastructure (in the year in which the expenditures occurred) and (b) the time frame from which that utility plant and infrastructure would be providing service (over the asset's useful life, or, if financed with bonds, over the period in which the bond financing would be outstanding.) Instead of financing utility plant over a long-term period, PREPA's proposal seeks to have ratepayers

[25] PREPA's proposed $336.6 million of estimated capital expenditures for FY2017 includes an amount for maintenance capital. If PREPA is following the Uniform System of Accounts, it should be appropriately distinguishing between maintenance capital projects and maintenance expense. There are some doubts about whether PREPA has been making this distinction appropriately. See, e.g., the Expert Report of Dr. Horowitz and Dr. Fisher, which recommends a reclassification from Capex to Maintenance Expense of certain costs.

effectively finance the plant by paying PREPA on a dollar-for-dollar basis in the current year for all of PREPA's capital spending in that year.

This form may be appropriate only in limited circumstances, such as where the utility has experienced a financial emergency and has no access to capital other than from its customers.

The PREPA advisors' "modified cash basis" approach therefore should not be considered as a permanent model for ratemaking for PREPA. Rather, it should be viewed as a temporary means of deriving an "emergency" component of the revenue requirement for PREPA as part of the overall process of restoring PREPA's financial health. If it is to be employed in the current case in order to address PREPA's financial emergency, it should be employed only during the period when PREPA does not have access to bond market financing at reasonable costs.[26]

As described below, we are recommending a different approach that combines the traditional DSCR approach with current year payment by ratepayers for PREPA's capital expenditures that are in excess of the amounts provided by the debt service coverage margin.

D. DSCR with CapEx, the "Modified DSCR"

The ratemaking formula based on a DSCR methodology that also accounts for PREPA's temporary inability to access the capital markets is shown as Equation (4), below.

Revenues = Expenses + (Debt Service x DSCR) + Additional CapEx (4)

In this revenue requirement model, as in the DSCR model shown in Equation (2), revenues are to be equal to all operating expenses and debt service costs adjusted to account for debt service coverage. The cash flows available to the utility from the debt service coverage will be available to fund expected capital expenditures.[27] If the Company's capital expenditure needs exceed the cash flows available from debt service coverage, then an additional increment (termed "Additional CapEx" in Equation (4)) is added to the revenue requirement to provide for the additional monies necessary to meet the utility's prudent and reasonable construction needs.

For example, if a hypothetical public power utility had expected rate year expenses of $800, and debt service of $200 with a DSCR of 1.5, rates would be designed to collect $1,100 in

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[26] PREPA's financial restructuring, if successful, would provide PREPA with a "window of opportunity," particularly during the period in which debt service payments are suspended, for bringing efficiencies and proper prudent utility management to its operations, and lowering its costs to sustainable levels.

[27] The cash flows available from debt service coverage are generated by the "coverage" (the total amount of the debt service times the DSCR) being greater than the debt service. The difference will be cash available to the Company to fund capital expenditures.

revenues for the rate year. [Revenues = $800 (expenses) + $200 (debt service) + $100 (DSCR margin)[28]]. As a result of that ratemaking process, the utility would have $100 cash available for funding capital expenditures. That cash flow would come from the coverage allowed above the actual debt service costs.

If the utility's capital needs are $100 or less, the "Additional CapEx" term in Equation (4) is zero; the capital expenditure needs are met by the traditional DSCR model. In that case, no further adjustment to the standard DSCR ratemaking formula is necessary. If, however, the utility's capital expenditure needs are $125 (and only $100 is available from the standard DSCR model), then an increment of $25 [$125 capital expenditure needs less $100 available cash flow from the DSCR margin] would be added to rates in this "Modified DCSR" ratemaking model as ratepayer funding of utility capital expenditures, i.e., as "Additional CapEx."

Based on the facts presented in the current PREPA rate case, for FY2017, PREPA is projected to have amounts of "Additional CapEx" that would be funded currently by ratepayers. Such funding of "Additional CapEx" by PREPA's ratepayers is necessary because, as explained herein, PREPA does not have access to external finance markets and cannot issue bonds at reasonable cost to finance its capital expenditures.

As discussed in this Report, because the additional capital expenditures allowed in this model are not investor-supplied funds but are, instead, ratepayer-supplied funds, they should be treated as such and not considered to be revenues, as would be the case if the capital expenditures had been funded by investors. The ratepayer-provided funding of PREPA's current year capital expenditures should be accounted for by PREPA as contribution in aid of construction. On PREPA's balance sheet the customer-contributed funding of capital expenditures would be an offset to PREPA's investment in plant. PREPA would record less net depreciation and amortization prospectively than if the customer-funding of PREPA's CapEx were accounted for as revenue, rather than as customer-provided funding of construction projects.

As noted above, the DSCR model shown in Equation 2 is widely-used for rate-setting by public power utilities (and electric cooperatives) . It would provide a reasonable basis for the ratemaking methodology for PREPA over the long-term. It should therefore be the method of choice after PREPA is returned to financial health. However, due to PREPA's current financial emergency condition and its inability to access the capital markets, that model is not currently sufficient to meet the needs to begin PREPA's return to a sound financial condition *and* to fund and operate a well-maintained electric grid.

Therefore, as long as PREPA continues to be blocked from accessing the capital markets, that standard DSCR ratemaking model should be augmented to account for necessary rate year capital expenditures that PREPA is not able to fund through other available cash flows.

Recommendations: While PREPA is in a state of financial emergency and cannot obtain external financing based on reasonable terms, ratepayers become the only available source

[28] $200 (debt service) x 1.5 = $300 (total debt service and margin); $300 (total debt service and margin - $200 (debt service) = $100 (DSCR margin).

for financing PREPA's needed capital expenditures. PREPA must make reasonable and necessary capital expenditures to be able to continue to provide reliable electric service and currently has no other reliable options for obtaining those monies other than from its ratepayers. Therefore, it is reasonable in this unusual circumstance to modify the standard DSCR ratemaking model to account for ratepayer funding of PREPA's necessary capital expenditures during this emergency period when PREPA has not other sources of financing.

It is also important to underscore that PREPA's capital budget for this case as well as any future budget undertaken during the period in which PREPA is unable to access investor-supplied capital should be *only the minimum necessary* to provide safe and reliable service to its customers, in order to minimize the impact of this ratemaking policy modification on ratepayers. Large capital projects that would be costly or projects of marginal benefit, or which can reasonably be deferred without impacting the reliability of electric service, should not be undertaken until the funds necessary to finance those projects over longer periods that are closer to the useful life of those utility assets are available from investors. Projects which are inconsistent with the Integrated Resource Plan that the Commission has approved, should not be included in PREPA's revenue requirement.

The ratemaking model set out in Equation (4), above, must be viewed, therefore, as a temporary solution to the unique financial problems currently faced by PREPA and its customers here in Puerto Rico.

The Modified DCSR ratemaking model is not intended to be a permanent ratemaking technique. Once PREPA is able to issue additional long-term debt, the Modified DSCR should no longer be employed for ratemaking purposes. At that time in an appropriate rate review proceeding before the Commission, ratepayers should be prospectively relieved of the aspect of providing annual dollar-for-dollar financing of PREPA's capital expenditures. At that point, PREPA would be financing its capital needs beyond its internally generated cash flow through the issuance of long-term debt and from the margin provided by the DSCR, as is normally done by public power electric utilities.

We recommend that the Commission utilize the Modified DSCR ratemaking model for purposes of determining PREPA's base rate revenue requirement in the current rate case.

Once PREPA is able to issue additional long-term debt at reasonable costs, the Modified DSCR should no longer be employed for ratemaking purposes, ratepayers should be relieved of the aspect of providing annual dollar-for-dollar financing of PREPA's capital expenditures that are beyond the amount of the DSCR margin. Once access to financial markets is restored and PREPA can issue debt at reasonable costs to finance capital expenditures, the Company should finance its capital needs beyond its internally generated cash flow through the issuance of long-term debt and from the margin provided by the DSCR, as is normally done by public power electric utilities.

Using the Modified DSCR method, along with Commission Advisor recommended adjustments, Smith and Dady Ex. 3 shows that this method produces a base rate revenue deficiency for PREPA in the current case of approximately $169.7 million, which is $52.6 million below the $222 million that was requested by PREPA and which was authorized by the Commission to be collected by PREPA in provisional rates. Chapter IV of our Report discusses the components of PREPA's revenue requirement in detail.

IV. PREPA'S REVENUE REQUIREMENT

A. The Revenue Requirement Claimed by PREPA in its Application

PREPA's Application presents a number of revenue requirement alternatives. Each revenue requirement methodology identified in PREPA's Application is discussed above in Chapter III of our report. PREPA proposes to have its revenue requirement be based on using what it has called the "Modified Cash Method."

PREPA's requested revenue requirement of $3.462 billion is shown on PREPA Schedule A-1 REV and is based on PREPA's projections for FY2017. This $3.462 billion consists of a base rate revenue requirement of $2.959 billion and a PREPARC revenue requirement of $503 million.[29] The instant proceeding and this Report only addresses the $2.959 billion.

B. PREPA Updates and Corrections

PREPA has submitted a number of corrections to its original filing that affect the revenue requirement. PREPA's revisions are briefly discussed below.

1. June 24, 2016 Revisions and Corrections

On June 24, 2016, PREPA filed a revision to Schedule A-1. PREPA revised its Schedule A-1 to identify rate year revenues at proposed and current rates. PREPA's Schedule A-1 REV shows the components for PREPA's cost of service that were considered by the Company in deriving its claimed base rate revenue deficiency of approximately $222 million, as well as the separate components of the initial Transition Charge revenue requirement which total approximately $503 million. The sum of PREPA's claimed base rate revenue deficiency and the Transition Charge revenue requirement is approximately $725 million.

2. November 16-17, 2016 Rebuttal (PREPA Ex. 23.0 and 23.1)

PREPA's rebuttal filing on November 16-17, 2016 in PREPA Exhibits 23.0 and 23.1 presents an additional round of corrections. On page 4 of PREPA Ex. 23.0 PREPA shows an updated revenue requirement deficiency of approximately $178 million, as follows:

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[29] The PREPARC revenue requirement includes $394 million of debt service for securitization and $109 million for gross-up for the collections lag and uncollectible revenue. The calculation methodology that will be utilized to compute the PREPARC revenue requirement was addressed by the Commission in Case No. CEPR-AP-2016-0001 in conjunction with the authorizations contained in the Puerto Rico Electric Power Authority Revitalization Act, Act 4-2016. PREPA has not yet completed its financial restructuring. To date, PREPA's legacy bonds that are the subject of the Restructuring Support Agreement ("RSA" - A copy of the RSA was filed with the Commission in Case No. CEPR-AP-2016-0001) have not been retired and no replacement securitization debt has been issued. Uncertainties continue to exist regarding the amount of securitization debt, the related interest rates, and whether PREPARC will be able to obtain an investment grade rating for the securitization bonds. For purposes of evaluating the PREPA base rate revenue requirement, the assumptions reflected in PREPA's filing concerning the PREPARC revenue requirement of $503 million or of the approximately $314 million of PREPA legacy bond debt service requirements that PREPA has estimated for FY2017 were not adjusted by us, since accurate replacement information for the actual securitization is not yet available.

Table 4: PREPA's Revised Proposed Revenue Deficiency of $178 million

Revenue Requirement	Current Rate Structure RR		Revised Proposed Rate Structure RR	Notes
Fuel & Purchased Power Expense	1,658,286,796	(182,411,548)	1,475,875,249	Removal of 11% gross-up
Labor & Other Operating Expenses	559,752,076	129,428	559,881,504	Direct Debit
Bad Debt Expense	85,383,767	(6,536,047)	78,847,719	Change in total RR
CILT Subsidy Recovery in Base Rate	37,685,194	(37,685,194)	-	CILT SUBA Rider
Energy Administration Assessment	5,800,000	-	5,800,000	
Debt Service (Principal & Interest)	314,389,739	-	314,389,739	
Capital Expenditure	336,557,808	-	336,557,808	
Adjustment for Other Income	(38,924,845)	-	(38,924,845)	
PREPA Revenue Requirement	**2,958,930,536**	**(226,503,361)**	**2,732,427,174**	
Base Rate Increase Requirement				
Fuel & Purchased Power Pass-through	$1,658,286,796	($182,411,548)	1,475,875,249	Removal of 11% gross-up
Current Base Rates	1,078,386,949	-	1,078,386,949	
Total Revenue	**$2,736,673,745**	**($182,411,548)**	**$2,554,262,198**	
Deficiency (Excess)	222,256,790	(44,091,814)	178,164,977	
Base Rate Change Required	20.6%	-4.1%	16.5%	

PREPA's revisions which produce the $44 million reduction from its previously requested amount of $222 million and its revised amount of $178 million can basically be summarized into the following three revisions:

1) Removal of a subsidy double count of approximately $37 million that was an error in PREPA's previous calculations of its revenue deficiency;

2) Making equal and offsetting adjustments to Fuel and Purchased Power Expense and Fuel and Purchased Power Adjustor Revenue of $182.4 million for "removal of 11% gross up".

3) Reducing Bad Debt Expense by approximately $6.5 million based on the reduced amount of Revenue Requirement related to the revisions described in (1) and (2).

3. Preliminary Analysis of PREPA Rebuttal Revisions to Base Rate Revenue Deficiency

Our preliminary assessment of these three PREPA rebuttal filing revisions is presented below.

a. PREPA's $37 million Double-Count of Special Rate Discount Subsidies

As discussed in Section IV-C-11-c of our Report, there was a $37 million double-count error in PREPA's filing for "subsidies" related to discounted rates. The $37 million impact was double counted by PREPA in its filing by including it both (1) in a "subsidy" amount of expenses that it included in its cost of service and (2) in the amount of revenue at current rates, which PREPA priced out using the discounted rates. We recommend that the $37 million double-count be removed from the calculation of PREPA's base rate revenue deficiency. Our calculation of this is presented in Section IV-C-11-c of our Report and is shown on Smith and Dady Ex. 5, page 4.

b. PREPA's Rebuttal Adjustments for Fuel and Purchased Power Expense and Fuel and Purchased Power Adjustor Revenue

The PREPA equal amount adjustments for $182.4 million to Fuel and Purchased Power Expense and Fuel and Purchased Power Adjustor Revenue are unnecessary. PREPA's new proposed adjustment to reduce Fuel Expense by $182.4 million is also counter to evidence that shows that the PREPA assumed amount of FY2017 Fuel Expense is substantially **understated** in comparison to forecasts of estimated fuel costs conducted by Commission Advisors Horowitz and Fisher which shows that PREPA expects FY2017 Fuel Expense to be approximately $1.225 billion (before performance savings of $107.7 million and $1.117 billion after those performance savings) and by PREPA's own more recent fuel forecast which shows that PREPA expects FY2017 Fuel Expense to be approximately $1.223 billion.[30]

Accordingly, we recommend that the Commission reject PREPA's new proposed adjustments to Fuel and Purchased Power Expense and Fuel and Purchased Power Adjustor Revenue.

c. PREPA's Rebuttal Adjustment for Bad Debt Expense

PREPA's adjustment for Bad Debt Expense in their rebuttal filing is a derivative adjustment that results from multiplying the estimated uncollectibles rate of 2.97% by the other PREPA rebuttal adjustments to FY2017 revenue and expenses. The application of the uncollectibles rate to those items reflects the concept that there is a correlation between PREPA's revenue requirement for other items and the level of Bad Debt Expense that PREPA will experience. PREPA proposes to decrease Bad Debt Expense by approximately $6.5 million in its adjustment; however, a decrease in this expense is contrary to the expectations of much higher Fuel Expense for PREPA for FY2017 than was reflected in PREPA's filing. While we believe the methodology used by PREPA for adjusting Bad Debt Expense (i.e., applying the 2.97% uncollectibles rate to the other changes) is reasonable, we find that the result (a decrease in Bad Debt Expense) is not reasonable given the expectations of that FY2017 Fuel Expense will be over $460 million higher than the amount PREPA reflected in its application.

We therefore recommend that the Commission reject this component of PREPA's rebuttal revisions and instead use the calculation shown on Smith and Dady Ex. 5, page 8, for the adjustment to FY2017 Bad Debt Expense. That calculation applies the 2.97% uncollectibles rate to the net amount of Commission Advisor adjustments, to derive an increase to Bad Debt Expense of $11.86 million.

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[30] *See,* PREPA's response to request no. 9 from the October 31, 2016 conference call, specifically PREPA's Excel file: [CEPR 161031 Request No. 9 Attach 01.xlsm]

C. Analysis of the Revenue Requirement (filed by PREPA on June 24, 2016) By Component

Based on its June 24, 2016 version of Schedule A-1 REV, PREPA's total claimed revenue requirement of $3.462 million includes the following components:

Table 5: Components of PREPA's Claimed Revenue Requirement and Commission Advisor Adjustments

Puerto Rico Electric Power Authority					Smith and Dady Ex. 3
Determination of Total Revenue Requirement and Change in Base Rates					Page 1 of 1
(Thousands of Dollars)					
Line No.	**Description**	**PREPA Proposed FY2017**		**Commission Advisor Adjustments**	**Adjusted Results**
		(A)		**(B)**	**(C)**
1	**Operating Expenses**				
2	Fuel	$ 655,968		$ 461,305	$ 1,117,273
3	Purchased Power	$ 819,907		$ -	$ 819,907
4	Generation Expenses	$ 122,411		$ 30,175	$ 152,586
5	Transmission Expenses	$ 34,222		$ 3,809	$ 38,031
6	Distribution Expenses	$ 169,277		$ 18,487	$ 187,764
7	Customer Billing Expenses	$ 84,945		$ -	$ 84,945
8	Administrative and General Expenses	$ 148,897		$ (17,681)	$ 131,216
9	Bad Debt Expense	$ 85,384		$ 11,788	$ 97,172
10	Energy Administration Assessment	$ 5,800		$ -	$ 5,800
11	**Subtotal Operating Expenses**	**$ 2,126,811**		**$ 507,883**	**$ 2,634,694**
12					
13	**Subsidies**				
14	Contribution to Municipalities (CILT)	$ 51,784		$ -	$ 51,784
15	Public Lighting	$ 93,241		$ -	$ 93,241
16	Special Customer Subsidies	$ 75,071		$ (37,041)	$ 38,030
17	Subtotal Subsidies	**$ 220,096**		**$ (37,041)**	**$ 183,055**
18					
19	Debt Service (Principal & Interest)	$ 314,390		$ -	$ 314,390
20	Debt Service Coverage			$ 125,756	$ 125,756
21	Subtotal Debt Service and Coverage	**$ 314,390**		**$ 125,756**	**$ 440,146**
22					
23	**Ratepayer Funding of Capital Expenditures**	**$ 336,558**		$ (187,896)	$ 148,662
24					
25	**Subtotal PREPA Base Rate Revenue Requirement**	**$ 2,997,855**		**$ 408,702**	**$ 3,406,557**
26					
27	**Revenue and Other Income**				
28	Other Income	$ (38,925)		$ -	$ (38,925)
29	Fuel and Purchased Power Adjustor Revenue	$ (1,658,287)		$ (461,305)	$ (2,119,592)
30	Base Rate Revenue at Current Rates	$ (1,078,387)		$ -	$ (1,078,387)
31	**Subtotal Revenue and Other Income**	**$ (2,775,599)**		**$ (461,305)**	**$ (3,236,904)**
32					
33	**PREPA Base Rate Revenue Deficiency (Excess)**	**$ 222,256**		**$ (52,603)**	**$ 169,653**
34					
35	**PREPARC Securitization (Transition Charge) Revenue Requirement - Note [b]:**				
36	Debt Service for Securitization	$ 394,237		$ -	$ 394,237
37	Gross-Up for Collections Lag and Uncollectible Revenue	$ 109,027		$ -	$ 109,027
38	**PREPARC (SPV) Revenue Requirement**	**$ 503,264**		**$ -**	**$ 503,264**
39					
40	**Total PREPA and PREPARC Revenue Requirements**	**$ 3,501,119**	[a]	**$ 408,702**	**$ 3,909,821**

Notes and Source

Col.A:	PREPA Schedule A-1 REV with reclassification of selected items for presentation clarity		
[a]	PREPA shows this amount on its Schedule A-1 REV net of PREPA's Other Income:		
	Total PREPA and PREPARC Revenue Requirements	$ 3,501,119	Line 40
	Other Income	$ (38,925)	Line 28
	Total PREPA and PREPARC Revenue Requirements per PREPA	**$ 3,462,194**	PREPA Schedule A-1 REV
[b]	The method for determinining the PREPARC revenue requirement for the new securitized bonds to be issued and the for determining the Transition Charge rates related to that was addressed and approved by the Commission in Case No. CEPR-AP-2016-0001.		
Col.B:	See Smith and Dady Ex. 4 for a summary of adjustments and Smith and Dady Ex. 5 for additional details		

Each line item affecting PREPA's base rate revenue deficiency (as well as some related groupings of costs) is discussed in this Chapter of our Report.

1. Fuel Expense

PREPA's revenue requirement on Schedule A-1 REV reflects $656 million of Fuel Expense, which is based on PREPA's forecasts for FY2017. This amount incorporates PREPA's assumptions about fuel savings. Specifically, PREPA's filing reflects projected fuel expense of $763.7 million, which the Company then reduced by $107.7 million to reflect projected fuel performance savings for FY2017. The table below provides a breakout of the components of the forecasted fuel performance savings:

Table 6: Summary of Projected Fuel Performance Improvement Savings

Description	Amount
Optimize - Generation Dispatch - Fuels	$ 13,200,647
Fuel Sourcing	$ 12,493,470
Fuel Supply Chain	$ 31,115,812
Spinning Reserves	$ 23,572,585
Forced Outages	$ 27,344,198
Total Fuel Performance Improvement	$ 107,726,712
Source: PREPA's Rate Case Financial Model	

PREPA's projected fuel cost for FY2017 is affected by fuel oil prices and is substantially lower than the amounts for FY2014 of $2.345 billion, and for PREPA's estimates for FY2015 and FY2016 of $1.901 billion and $1.015 billion, respectively, as shown in PREPA's Rate Case Financial model.[31]

In terms of the personnel at PREPA who are responsible for purchasing fuel, including the review and approval of fuel contracts, transportation and delivery, measuring and assuring contract performance as well as the review of fuel invoices, PREPA provided the following breakout of responsibilities in its response to CEPR-RS-01-05:

> <u>Fuel Purchasing</u>
>
> The Head of the Material Management Division is responsible for the procurement and award of contracts for fuel.
>
> <u>Review and Approval of Fuel Contracts</u>

[31] The PREPA Rate Case Financial Model is an Excel file containing PREPA workpapers and supporting calculations that was provided to the Commission by PREPA in response to a Commission requirement that PREPA supply working Excel files.

The Fuel Tender Reviewing Committee has the responsibility of evaluating proposals at a technical level and then recommends to the Reviewing Committee the lowest bidder meeting the terms and conditions of the tender. The members of this Committee include the: (1) Treasurer; (2) Head of Environmental Protection and Quality Assurance Division; and (3) Fuel Office Manager. In addition, the members of the Tender Reviewing Committee, which evaluates and awards tenders of fuel, includes the following members:

- Chief Financial Officer (the presiding officer);
- Director of Legal Affairs;
- Operations and Infrastructure Manager;
- Head of the Technical Services Division;
- Head of the Division of Electrical Conservation and Protection Electric System;
- Head of the Division of Electrical Distribution;
- Head of Material Management Division;
- Secretary of the Tender Reviewing Committee "A", who is responsible for meeting quote, coordinating legal assessments and submitting documents related to the award of the tenders.

The Executive Director ultimately gives final approval by signing the contract upon the Committee awarding the tender.

Contract Management

The Fuel Office Manager is responsible for managing fuel purchasing contracts, which includes arranging for the transportation and delivery of fuel, measuring and assuring contract performance and reviewing fuel invoices.

To assure that PREPA's fuel procurement and Fuel Expense is reasonable and prudently incurred, a management performance review is being recommended in conjunction with ongoing monitoring of PREPA's operating performance.[32] As discussed below, Commission Advisors Horowitz and Fisher have determined that PREPA's fuel expense forecast for FY2017 (before the performance improvement impacts) is not reasonable and needs to be adjusted.

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[32] *See* the Expert Report of Tim Woolf of Synapse which discusses the Formula Rate Mechanism and contains recommendations for the Commission's ongoing monitoring of PREPA's operating performance. Additionally, Chapter VII of our report discusses improvements to PREPA's reporting.

PREPA has stated that its projected fuel improvement performance is being achieved. No adjustment is being recommended to the $107.7 million of fuel performance improvements that is currently offsetting PREPA's projected fuel expense.[33]

We reviewed PREPA's accounting information in its trial balances[34] for fiscal years ended 2014, 2015, and 2016 concerning fuel expense, which were provided in the supplemental response to CEPR-RS-06-02. The table below provides a summary of PREPA's Fuel Expense, by account, for each fiscal period 2014, 2015, and 2016.

Table 7: Summary of Fuel Expense for FY2014 through FY2016

Trial Balance Description	FY2014 $000's	FY2015 $000's	FY2016 $000's
Gas Power Generation	$ 332,245,366	$ 396,795,863	$ 363,982,314
Steam Power Generation	$ 1,527,973,270	$ 1,077,289,761	$ 566,480,178
Natural Gas Pow	$ 484,781,346	$ 419,771,618	$ 280,044,755
Total Fuel Expense	$ 2,344,999,982	$ 1,893,857,242	$ 1,210,507,247
Source: CEPR-RS-06-02			

Because fluctuations in actual fuel costs will continue to be addressed in a fuel adjustor mechanism (certain specific of which are discussed in Chapter VIII of our report) our focus for PREPA's base rate revenue requirement was to assure that a reasonable amount is reflected for Fuel Expense for FY2017 (which is accomplished by reflecting the adjustment recommended by Drs. Horowitz and Fisher) and to review FY2017 Fuel Expense and Fuel Adjustor Revenues.

Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's budgeted Purchased Power Expense for prudence and reasonableness. We obtained advice from Commission Advisors Fisher and Horowitz of Synapse concerning the reasonableness of PREPA's fuel and purchased power expense. They have recommended an adjustment to increase PREPA's projected FY2017 Fuel Expense by $461.3 million based upon Synapse's conclusion that PREPA significantly under-budgeted Fuel Expense for FY2017. The $461.3

[33] The report of Commission consultants Horowitz and Fisher of Synapse, which addresses their review of PREPA's fuel expense, and which recommends a significant upward adjustment to the "pre-savings" amount of PREPA's budgeted FY2017 fuel expense also incorporated PREPA's $107.7 million estimate of fuel savings from performance improvements.

[34] A **trial balance** is a bookkeeping worksheet in which the balances of all ledgers are compiled into debit and credit columns. A company prepares a **trial balance** periodically, usually at the end of every reporting period. For FY2015 and FY2016, PREPA has monthly reports to its governing board that show the results of its operations, but does not yet have audited financial statements for either period. The trial balances provide additional accounting details, including listing of amounts by account, that are not contained in PREPA's monthly reports.

million increase to FY2017 Fuel Expense has been reflected in the development of the FY2017-based revenue requirement for PREPA.[35]

2. Purchased Power Expense

PREPA's revenue requirement on Schedule A-1 REV reflects $819.9 million of Purchased Power Expense. This amount incorporates PREPA's forecast and its assumptions about savings. Specifically, PREPA based its forecasted Purchased Power Expense on (1) forecasted purchased power expense of $828.4 million per the Company's approved annual budget for FY2017[36]; and (2) and purchased power performance improvements, which PREPA's expects to generate savings totaling $8.5 million. The $8.5 million is embedded in PREPA's overall performance improvement adjustment of $116.2 million as reflected on Company Schedule A-2.

As discussed above, the difference of $107.7 million ($116.2 million - $8.5 million) is reflected as an offset to the Company's projected Fuel Expense. The $8.5 million performance improvement relates to the optimization of generation dispatch, which is tied to the $13.2 million (embedded in the $107.7 million) of fuel performance savings noted above. In response to CEPR-JF-01-23, as it relates to the $21.7 million ($13.2 million + $8.5 million) of fuel performance savings, PREPA stated:

> Two factors drive this. First, PREPA now evaluates cost per MW between Natural Gas and No. 6 Fuel Oil and optimizes generation based on that calculation. Second, PREPA reduced usage of expensive EcoElectrica spot, and also limited the use of optional capacity at AES which was more expensive than PREPA base load units. These changes are part of the Sales and Operations Planning process that have been implemented at PREPA.

PREPA's projected purchase power cost for FY2017 compares with the amounts for FY2014 of $807.6 million, and for FY2015 and FY2016 of $783.9 million and $759.1 million, respectively, as shown in PREPA's Rate Case Financial model.

We also reviewed PREPA's accounting information in its trial balances for fiscal years ended 2014, 2015, and 2016 concerning purchased power expense, which were provided in the supplemental response to CEPR-RS-06-02. The table below provides a summary of PREPA's Purchased Power Expense for each fiscal period 2014, 2015, and 2016.

[35] *See, e.g.*, Smith and Dady Ex. 5, page 5 of 8.
[36] PREPA provided a copy of its approved annual budget for FY2017 in response to CEPR-RS-06-13.

Table 8: Summary of Purchased Power Expense for FY2014 through FY2016

Trial Balance Description	FY2014 $000's	FY2015 $000's	FY2016 $000's
Other Power Sup	$ 768,907,047	$ 742,906,069	$ 628,529,425
Purchase Power	$ 38,712,468	$ 46,810,650	$ 53,702,421
Total Purchased Power	$ 807,619,515	$ 789,716,718	$ 682,231,846
Source: CEPR-RS-06-02			

Because we recommend that fluctuations in actual purchase costs will continue to be addressed in a purchased power adjustor mechanism (certain specifics of which are discussed in Chapter VIII of our report) our focus for PREPA's base rate revenue requirement was assuring that a reasonable amount is reflected in PREPA's FY2017 projections for Purchased Power Expense and to assure a proper matching of FY2017 Purchased Power Expense with Purchased Power Adjustor Revenues. Based on our review, we are not recommending any adjustments to FY2017 Purchased Power Expense with Purchased Power Adjustor Revenues.

Commission Advisors Fisher and Horowitz of Synapse reviewed PREPA's budgeted Purchased Power Expense for prudence and reasonableness. We obtained advice from Commission Advisors Fisher and Horowitz concerning the reasonableness of PREPA's fuel and purchased power expense. They also are not recommending any specific dollar adjustments to PREPA's projected FY2017 Purchased Power Expense.

We have therefore used PREPA's FY2017 Purchased Power Expense amount for deriving the Company's base rate revenue requirement.

3. PREPA Projections of Labor and Non-Labor O&M Expenses for FY2017

As reflected in PREPA's Rate Case Financial Model, for the projected total O&M labor budget, PREPA included salaries and pension and employee benefits totaling $434.9 million as summarized in the following table:

Table 9: Projected Total Labor O&M Budget

Description	Amount
Salaries	$ 280,360,861
Pension & Benefits	$ 154,576,960
Total Operating Expense Labor Costs	$ 434,937,821

Additional discussion of PREPA's proposed Labor Costs and how they compare with actual information and PREPA work force levels is contained in Section C-17 of this Chapter of our report.

For the non-labor portion of the O&M budget, PREPA included non-labor operating expenses totaling $227.6 million as summarized in the following table:

Table 10: Projected Non-Labor O&M Budget

Description	Amount
Additional Safety Upgrades	$ 4,432,500
Materials	$ 32,863,721
Transportation, Per Diem and Mileage	$ 33,753,326
Property & Casualty Insurance	$ 20,200,000
Restructuring	$ 28,000,000
Retiree Medical Benefits	$ 22,220,000
Security	$ 21,210,000
Banking Services	$ 14,140,000
Maintenance & Utilities	$ 17,957,800
Other Miscellaneous Expenses	$ 32,786,908
Total Non-Labor Operating Expense	$ 227,564,255

For the non-fuel performance improvements, PREPA reflected three categories of such savings totaling $102.8 million, including Customer Service, Procurement, and Other (Net). A breakout of these categories of non-fuel performance improvements are summarized in the table below[37]:

Table 11: Summary of Non-Fuel Performance Improvements

Description	Amount
Customer Service	
Increasing Disconnection Costs	$ 3,750,000
Theft Recoveries and Reduced T&D Loss	$ 20,000,000
Total Customer Service Related Savings	$ 23,750,000
Procurement	
Fleet and Shops	$ 17,500,000
Procurement and Inventory	$ 37,500,000
Total Procurement Related Savings	$ 55,000,000
Other (Net)	
Medical Benefit Savings	$ 14,000,000
Headcount Reduction	$ 10,000,000
Total Other (Net) Related Savings	$ 24,000,000
Total Non-Labor Performance Improvements	$ 102,750,000

[37] Please note that the items listed by PREPA as "Customer Service Related Savings" appear to be revenue enhancements (i.e., programs to allow PREPA to collect more revenue), such as for significantly increased reconnection fees, rather than cost savings. The misclassification by PREPA of revenue enhancements as cost savings is not a problem of much significance in the revenue requirement calculation since the impact on determining the revenue deficiency amount tends to be the same; however, such misclassification could lead to issues in the class cost of service study. Commission Advisor Chernick is addressing PREPA's class cost of service study.

To calculate its projected O&M expenses for FY2017, PREPA began by using its recorded FY2014 O&M Expenses as a starting point. Specifically, PREPA derived its proposed FY2017 O&M expenses by multiplying the sum of the (1) projected total O&M labor expense, (2) projected non-labor O&M expense and (3) projected non-fuel performance improvements by the percentages shown in the table below for each category of recorded FY2014 O&M expense:

Table 12: Percentage of FY2014 O&M Expense by Category

Description	FY2014	Ratio
Generation Expenses	$ 160,541,902	21.87%
Transmission Expenses	$ 44,882,530	6.11%
Distribution Expenses	$ 222,007,687	30.24%
Customer Billing Expenses	$ 111,405,645	15.18%
Administrative and General Expenses	$ 195,279,419	26.60%
Total	$ 734,117,183	100.00%
Source: PREPA's Rate Case Financial Model		

In its requested revenue requirement, PREPA has reflected (1) Generation Expenses of $122.4 million; (2) Transmission Expenses of $34.2 million; (3) Distribution Expenses of $169.3 million; (4) Customer Billing Expenses of $84.9 million; and (5) Administrative and General Expenses of $148.9 million . The Company's projected expenses for each of these categories were calculated by incorporating PREPA's (1) projected total O&M labor budget, (2) projected total non-labor O&M budget, and (3) projected total non-fuel performance improvements. For each type of expense PREPA multiplied the sum of those components by the FY2014-based allocation ratios shown in the above table.

A discussion of the calculations related to each category of O&M expense shown in the table above is in the following sections of this report.[38]

PREPA's response to CEPR-RS-01-14 and to request no. 15 from the October 31, 2016 Conference Call provide details on the status of PREPA's achievement of its non-fuel savings initiatives. PREPA's response to request no. 15 from the October 31, 2016 Conference Call includes the following table showing a summary of PREPA's non-fuel performance improvement forecast and achieved levels:

[38] We note that Commission Advisor Chernick has found certain aspects of PREPA's class cost of service study inappropriate and Commission Advisors Horowitz and Fisher have found that PREPA's attempt to use FY2014 cost categories to allocate FY2017 operating expenses is problematic in certain respects, as described in their respective reports.

Table 13: Status Update Summary of PREPA's Achievement of Non-Fuel Performance Improvements

PREPA - Non-fuel performance improvement update
As of November 7th, 2016

Non-fuel Performance Improvement Initiatives ($mm)	FY17	Achieved and Comparable to Revenue Requirement* Achieved Annual Run Rate Savings	Achieved One-time Cash Savings	Total FY17 Savings Projection
Customer Service Savings				
General & Government Customer Collections	-	-	30.0	30.0
Reduction in CILT	20.0	20.0	-	20.0
Increased Cost of Disconnection	3.8	-	-	-
Theft recoveries + reduced T&D loss	20.0	20.0	-	20.0
Total Customer Service Savings	43.8	40.0	30.0	70.0
Procurement Improvement Savings				
Fleet and Shops	17.5	11.0	-	11.0
Procurement and Inventory	37.5	12.0	22.0	34.0
Total Procurement Improvement Savings	55.0	23.0	22.0	45.0
Other Improvement Savings				
Medical benefit savings	14.0	10.0	-	10.0
Retirement system savings	-	-	-	-
Net Attrition Due to Retirements	10.0	15.0	-	15.0
Total Other Improvement Savings	24.0	25.0	-	25.0
` **Total Savings**	**$ 122.8**	**$ 88.0**	**$ 52.0**	**$ 140.0**

As discussed in the following sections of this chapter and in their expert report, Commission consultants Horowitz and Fisher have determined that PREPA's labor and non-labor budgets for FY2017 were inadequate for the safe and reliable operation of the electric system. Based on the recommendations of Commission consultants Horowitz and Fisher, we have reflected the impact of their recommended adjustments to PREPA's FY2017 budgeted amounts for Generation Expense, Transmission Expense, Distribution Expense, Administrative and General Expense, and Capital Expenditures.

4. Generation Expense

PREPA has reflected Generation Expenses of $122.4 million in its requested revenue requirement. The Company's projected Generation Expenses were calculated by incorporating PREPA's (1) projected total O&M labor budget, (2) projected total non-labor O&M budget, and (3) projected total non-fuel performance improvements. Specifically, PREPA derived the proposed FY2017 Generation Expense of $122.4 million by multiplying the sum of its projected total O&M labor budget, projected non-labor O&M expense, and projected non-fuel performance improvement by the percentage of FY2014 O&M expenses that related to Generation Expenses. This calculation is reflected in following table:

Table 14: Calculation of FY2017 Generation Expenses

Description	Amount
Total Projected Labor	$ 434,937,821
Projected Non-Labor O&M	$ 227,564,256
Projected Non-Fuel Performance Improvements	$ (102,750,000)
Subtotal	$ 559,752,076
FY2014- Based Allocation of Generation Expense	21.87%
FY2017 Generation Expense	$ 122,410,515

We also reviewed PREPA's accounting information in its trial balances for fiscal years ended 2014, 2015, and 2016 concerning generation expense[39], which were provided in the supplemental response to CEPR-RS-06-02. The table below[40] provides a summary of PREPA's Generation Expenses as reflected in the trial balances for each fiscal period 2014, 2015, and 2016.

Table 15: Summary of Generation Expenses for FY2014 through FY2016

PREPA Trial Balance Description	PREPA Trial Balance Account	FY2014	FY2015	FY2016
Hydraulic Power - Operations	4011	$ 55,199,950	$ 51,020,791	$ 49,492,092
Other Power Gen - Operations	4012	$ 1,519,671	$ 1,411,448	$ 1,065,118
Other Power Sup - Operations	4014	$ 7,661,540	$ 6,967,043	$ 7,012,230
Hydraulic Power - Maintenance	4021	$ 82,196,034	$ 69,662,133	$ 65,295,679
Other Power Gen - Maintenance	4022	$ 2,636,387	$ 1,861,070	$ 1,768,793
Other Power Sup - Maintenance	4023	$ 11,328,319	$ 10,244,932	$ 10,037,274
Total Generation Expense		$ 160,541,902	$ 141,167,417	$ 134,671,186
Source: Supplemental Response to CEPR-RS-06-02, PREPA Expanded Trial Balance				

The amounts shown in the trial balances for Generation Expenses for FY2015 and FY2016 were different than the amounts reflected in PREPA's Rate Case Financial Model. As previously discussed, the projected Generation Expenses reflected in the Company's filing are based on the projected total labor, non-labor and non-fuel performance improvements.

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[39] The Generation related amounts in the trial balances tied to the Company's monthly reports to the Governing Board. The monthly reports refer to Generation as Other Production.

[40] Note that the account numbers listed are the accounts used by PREPA. Information showing the FERC account numbers was not provided by PREPA in its Trial Balances that were provided in response to CEPR-RS-06-02 but the FERC account information is presumably maintained by PREPA in its accounting system.

PREPA's FY2017 amount for Generation Expenses of $122.4 million compares with the following amounts from FY2014, FY2015, and FY2016: $160.5 million, $145.4 million and $126.3 million, respectively, as shown in PREPA's Rate Case Model.

Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's budgeted Generation Expense for prudence and reasonableness. We obtained advice from Commission Advisors Fisher and Horowitz of Synapse concerning the reasonableness of the components used by PREPA in calculating its projected O&M expense. Drs. Fisher and Horowitz have concluded that PREPA has not properly maintained its generation facilities in FY2015 or FY2016 to provide safe and reliable electric utility service. They have determined that PREPA's FY2017 budget amount for Generation Expense is inadequate for the safe and reliable provision of electric service. They have recommended adjustments to both the Company's labor and non-labor budget amounts for Generation Expense. Specifically, they have recommended increases to PREPA's FY2017 Generation Expense of $9.680 million for Labor and $4.495 million for non-Labor, for a total FY2017 Generation Expense increase of $14.175 million. Their recommended increase to FY2017 Generation Expense of $14.175 million has been reflected in our calculation of PREPA's base rate revenue requirement.[41]

Additionally, as discussed in conjunction with PREPA's forecast FY Capital Expenditures, Commission Advisors Fisher and Horowitz have recommended that $16 million for certain maintenance contracts be reclassified from Capital Expenditures to Generation Expense. This $16 million cost reclassification adjustment has also been reflected in the calculation of PREPA's base rate revenue requirement.[42]

5. Transmission Expenses

PREPA has reflected Transmission Expenses of $34.2 million in its requested revenue requirement. Similar to Generation Expenses, the Company's projected Transmission Expenses were calculated by incorporating PREPA's (1) projected total O&M labor budget, (2) projected total non-labor O&M budget, and (3) projected total non-fuel performance improvements. Specifically, PREPA derived the proposed FY2017 Transmission Expense of $34.2 million by multiplying the sum of its projected total O&M labor budget, projected non-labor O&M expense, and projected non-fuel performance improvement by the percentage of FY2014 O&M expenses that related to Transmission Expenses. This calculation is reflected in following table:

Table 16: Calculation of FY2017 Transmission Expenses

Description	Amount
Total Projected Labor	$ 434,937,821
Projected Non-Labor O&M	$ 227,564,256
Projected Non-Fuel Performance Improvements	$ (102,750,000)
Subtotal	$ 559,752,076
FY2014-Based Allocation of Transmission Expense	6.11%
FY2017 Transmission Expense	$ 34,222,179

[41] *See,* Smith and Dady Ex. 5, page 6 of 8

[42] *See,* Smith and Dady Ex. 5, pages 2 and 3 of 8. Because the $16 million adjustment was a reclassification it did not change the revenue deficiency amount.

We also reviewed PREPA's accounting information in its trial balances for fiscal years ended 2014, 2015, and 2016 concerning Transmission Expense, which were provided in the supplemental response to CEPR-RS-06-02. The table below provides a summary of PREPA's Transmission Expenses as reflected in the trial balances for each fiscal period 2014, 2015, and 2016.

Table 17: Summary of Transmission Expenses for FY2014 through FY2016

PREPA Trial Balance Description	PREPA Trial Balance Account	FY2014	FY2015	FY2016
Transmission - Operations	4015	$ 19,211,332	$ 14,893,411	$ 14,812,609
Transmission - Maintenance	4024	$ 25,671,198	$ 21,646,853	$ 19,275,839
Total Transmission Expense		$ 44,882,530	$ 36,540,264	$ 34,088,448
Source: Supplemental Response to CEPR-RS-06-02, PREPA Expanded Trial Balance				

The amounts in the trial balances for Transmission Expenses for FY2014 totaled the same amount that is reflected in PREPA's Rate Case Financial Model. However, the actual FY2015 and FY2016 amounts were different from the Model as the Model amounts were based on projections. As previously discussed, the projected Transmission Expenses reflected in the Company's filing are based on the projected total labor, non-labor, and non-fuel performance improvements.

PREPA's FY2017 amount for Transmission Expenses of $34.2 million compares with the following amounts from FY2014, FY2015, and FY2016: $44.9 million, $40.7 million and $35.3 million, respectively, as shown in PREPA's Rate Case Financial Model.

Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's budgeted Transmission Expense for prudence and reasonableness. We have reflected their recommendations concerning the reasonableness of the components used by PREPA in calculating its projected O&M expense. They have concluded that PREPA has not properly maintained its transmission and distribution facilities properly in FY2015 or FY2016 to provide safe and reliable electric utility service. They have recommended adjustments to both the Company's FY2017 labor budget and non-labor budget amounts. Specifically, Drs. Fisher and Horowitz have recommended increases to PREPA's FY2017 Transmission Expense of $3.330 million for Labor and $479,000 for non-Labor, for a total FY2017 Transmission Expense increase of $3.809 million. Their recommended increase to FY2017 Transmission Expense has been reflected in our calculation of PREPA's base rate revenue requirement.[43]

[43] *See,* Smith and Dady Ex. 5, page 6 of 8.

6. Distribution Expenses

PREPA has reflected Distribution Expenses of $169.3 million in its requested revenue requirement. Similar to Generation and Transmission Expenses, the Company's projected Distribution Expenses were calculated by incorporating PREPA's (1) projected total O&M labor budget, (2) projected total non-labor O&M budget, and (3) projected total non-fuel performance improvements. Specifically, PREPA derived the proposed FY2017 Distribution Expenses of $169.3 million by multiplying the sum of its projected total O&M labor budget, projected non-labor O&M expense, and projected non-fuel performance improvement by the percentage of FY2014 O&M expenses that related to Distribution Expenses. This calculation is reflected in following table:

Table 18: Calculation of FY2017 Distribution Expenses

Description	Amount
Total Projected Labor	$ 434,937,821
Projected Non-Labor O&M	$ 227,564,256
Projected Non-Fuel Performance Improvements	$ (102,750,000)
Subtotal	$ 559,752,076
FY2014-Based Allocation of Distribution Expense	30.24%
FY2017 Distribution Expense	$ 169,277,149

We also reviewed PREPA's accounting information in its trial balances for fiscal years ended 2014, 2015, and 2016 concerning Distribution Expense, which were provided in the supplemental response to CEPR-RS-06-02. The table below provides a summary of PREPA's Distribution Expenses as reflected in the trial balances for each fiscal period 2014, 2015, and 2016.

Table 19: Summary of Distribution Expenses for FY2014 through FY2016

PREPA Trial Balance Description	PREPA Trial Balance Account	FY2014	FY2015	FY2016
Distribution - Operations	4016	$ 153,180,492	$ 137,362,239	$ 133,539,493
Distribution - Maintenance	4025	$ 68,827,195	$ 60,021,022	$ 59,807,556
Total Distribution Expense		$ 222,007,687	$ 197,383,261	$ 193,347,048
Source: Supplemental Response to CEPR-RS-06-02, PREPA Expanded Trial Balance				

The amounts in the trial balances for Distribution Expenses for FY2014 totaled the same amount that is reflected in PREPA's Rate Case Financial Model. However, the FY2015 and FY2016 amounts were different as they were based on projections. As previously discussed, the projected Distribution Expenses reflected in the Company's filing are based on the projected total labor, non-labor, and non-fuel performance improvements.

PREPA's FY2017 amount for Distribution Expenses of $169.3 million compares with the following amounts from FY2014, FY2015, and FY2016: $222.0 million, $201.1 million and $174.6 million, respectively, as shown in PREPA's Rate Case Model.

Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's budgeted Distribution Expense for prudence and reasonableness. We have reflected the impact of their recommendations concerning the reasonableness of PREPA's FY2017 Distribution Expense. They have concluded that PREPA has not properly maintained its transmission and distribution facilities properly in FY2015 or FY2016 to provide safe and reliable electric utility service and that the FY2017 amount budgeted by PREPA for Distribution Expense is inadequate for the safe and reliable operation of the electric system. Drs. Fisher and Horowitz have recommended increases to both the Company's labor budget and non-labor budget amounts for Distribution Expense. They have recommended increases to PREPA's FY2017 Distribution Expense of $16.115 million for Labor and $2.372 million for non-Labor, for a total FY2017 Distribution Expense increase of $18.487 million. Their recommended increase to FY2017 Distribution Expense has been reflected in the calculation of PREPA's base rate revenue requirement.[44]

7. Customer Billing Expenses

PREPA has reflected Customer Billing Expenses of $84.9 million in its requested revenue requirement.[45] Similar to Generation, Transmission and Distribution Expenses, the Company calculated its projected Customer Billing Expenses by incorporating the (1) projected total O&M labor budget, (2) total non-labor O&M budget, and (3) total non-fuel performance improvements. Specifically, PREPA derived the proposed FY2017 Customer Billing Expense of $84.9 million by multiplying the sum of its projected total O&M labor budget, projected non-labor O&M expense, and projected non-fuel performance improvements by the percentage of FY2014 O&M expenses that related to Customer Billing Expenses. This calculation is reflected in following table:

Table 20: Calculation of FY2017 Customer Billing Expenses

Description	Amount
Total Projected Labor	$ 434,937,821
Projected Non-Labor O&M	$ 227,564,256
Projected Non-Fuel Performance Improvements	$ (102,750,000)
Subtotal	$ 559,752,076
FY2014-Based Allocation of Customer Billing Expense	15.18%
FY2017 Customer Billing Expense	$ 84,944,941

[44] *See,* Smith and Dady Ex. 5, page 6 of 8.

[45] Bad Debt Expense (aka Uncollectibles Account Expense), which under the Uniform System of Accounts is recorded in account 904) is sometimes grouped in Customer Accounts Expense (e.g., in the standard FERC Form 1 reporting). For PREPA, Bad Debt Expense is being evaluated separately, as discussed in the next section of our report.

PREPA's FY2017 amount for Customer Billing Expenses of $84.9 million compares with the following amounts from FY2014, FY2015, and FY2016: $111.4 million, $100.9 million and $87.6 million, respectively, as shown in PREPA's Rate Case Model.

We reviewed PREPA's accounting information in its trial balances for fiscal years ended 2014, 2015, and 2016 concerning Customer Billing Expense, which were provided in the supplemental response to CEPR-RS-06-02. The table below provides a summary of PREPA's Customer Billing Expense as reflected in the trial balances for fiscal years 2014, 2015, and 2016:

Table 21: Summary of Customer Billing Expense for FY2014 through FY2016

PREPA Trial Balance Description	PREPA Trial Balance Account	FY2014	FY2015	FY2016
Customer Accounts	4017	$ 111,403,940	$ 101,672,548	$ 93,338,123
Sales Expenses	4018	$ 1,704	$ 462	$ -
Total Customer Billing Expense		$ 111,405,645	$ 101,673,010	$ 93,338,123
Source: Supplemental Response to CEPR-RS-06-02, PREPA Expanded Trial Balance				

The amounts in the trial balances for Customer Billing Expenses for FY2014 totaled the same amount that is reflected in PREPA's Rate Case Financial Model. However, the FY2015 and FY2016 amounts were different as they were based on projections. As previously discussed, the projected Customer Billing Expenses reflected in the Company's filing are based on the projected total labor, non-labor, and non-fuel performance improvements.

No adjustment is being recommended to PREPA's proposed FY2017 Customer Billing Expenses.

8. Bad Debt Expense

PREPA reflected Bad Debt Expense of $85.4 million in its requested base rate revenue requirement. This proposed amount is substantially lower than the $191.5 million that PREPA recorded for FY2014. A review of PREPA's Rate Case Financial Model revealed that the Company's proposed Bad Debt Expense of $85.4 million is based on an uncollectibles rate of 2.97%.[46] According to the Company's updated business plan[47], under the Bad Debt Assumptions on page 5, it states that PREPA incurred a Gross Bad Debt expense of 2.97% in

[46] This is the ratio of Uncollectibles to Utility Operating Revenue.

[47] The updated Business Plan, which was developed by PREPA's restructuring consultant AlixPartners, was filed as PREPA Exhibit No. 3.02. The PREPA Business Plan also is presented in Exhibit I-4 of PREPA's Application.

FY2016 and that this assumption was used to determine bad expense calculations on a going forward basis.

The table below is from the referenced page in PREPA's business plan and reflects gross and net uncollectibles rates for FY2014, FY2015, and FY2016:

Table 22: Gross and Net Uncollectibles Rates for FY2014 through FY2016

Fiscal Year	General	Government	Total	BD Net	BD Gross
FY2014	99.28%	70.50%	93.93%	6.07%	6.47%
FY2015	100.94%	66.63%	94.71%	5.29%	5.59%
FY2016	103.61%	67.20%	97.11%	2.89%	2.97%
Source: Exhibit 3.02 - Business Plan					

In the table, the "BD" designation is the relationship of Bad Debt Expense to Revenues. As shown in the table, the 2.97% uncollectibles rate proposed by PREPA is reflected for FY2016 under the "BD Gross" column.

As discussed on page 23 of the direct testimony of PREPA witnesses Pampush, Porter and Stathos[48], the 2.97% uncollectibles rate[49] is a year-to-date FY2016 average percentage gross-up factor that is based on a 12-month rolling average of total collections to total billed revenue. It is applied to the total revenue requirement. In addition, the direct testimony of Messrs. Pampush, Porter, and Stathos discusses the difference between the proposed 2.97% uncollectibles rate to that used to develop the transition charge in the SPV filing of the Puerto Rico Electric Power Revitalization Corporation. Specifically, on pages 23-24 of Exhibit 5.0 it states:

> This value of 3% is significant lower than that in the pending "SPV" filing because the Transition Charge calculation uses an uncollectible revenue estimate based on a 120-day cutoff date. For the base rate revenue requirement, we analyzed actual all customer billing and collections data, and compared this to past year bad debt write off amounts. The SPV filing is part of the necessary steps to accomplish the debt restructuring. The SPV filing involves establishing the Transition Charges to be collected by PREPA as a servicer. The revenues collected under those charges are for amounts owed to the Revitalization Corporation. The SPV filing also seeks to establish the Adjustment Mechanism (reconciliation) associated with the Transition Charges. In the SPV filing, the bad debt expense percentages also took into account the reduced collection of revenues

[48] See Exhibit 5.0.

[49] Messrs. Pampush, Porter, and Stathos direct testimony refers to uncollectible rate of 3%, which is the 2.97% rounded up.

for the securitization charge that results from applying credits for the payments in lieu of taxes for municipalities. Failure to reflect those non-cash transactions would have left a deficiency in collections for the Transition Charges being collected for the securitized debt. Because the Revenue Requirement here is intended to reflect the overall revenue requirements of PREPA, and we have reflected CILT as a separate line item, the lower 3% bad debt expense is appropriate for this purpose.

Using the data from PREPA's Rate Case Financial model, the table below provides a summary of the components that PREPA used in its calculation of its proposed Bad Debt expense of $85.4 million:

Table 23: Summary of Components used in Bad Debt Expense Calculation

Line No.	Description	Amount
	Fuel & Purchased Power Expense	
1	Fuel	$ 763,695,078
2	Purchased Power	$ 828,393,012
3	Performance Improvement	$ (116,212,842)
4	**Fuel & Purchased Power Expense**	$ 1,475,875,249
5	CILT in F&PP Adjustment Clause	$ 182,411,548
6	**Total F&PP Adjustment Clause**	$ 1,658,286,796
	Non-fuel O&M Expense	
7	Salaries	$ 280,360,861
8	Pension & Benefits	$ 154,576,960
9	Total Labor Expense	$ 434,937,821
10	Other Expenses, O&M	$ 227,564,256
	Non-Fuel Performance Improvement	
11	Customer Service	$ (23,750,000)
12	Procurement	$ (55,000,000)
13	Other, Net	$ (24,000,000)
14	**Total Non-Fuel Performance Improvement**	$ (102,750,000)
15	CILT Subsidy Recovery Required in Base Rate	$ 37,685,194
16	Energy Administration Assessment	$ 5,800,000
17	Capital Expenditure (Maintenance & Investment)	$ 336,557,808
18	PREPA Debt Service (Principal & Interest)	$ 314,389,739
19	Adjustment for Other Income	$ (38,924,845)
20	Total	$ 2,873,546,769
21	Bad Debt Expense Rate	2.97%
22	PREPA Projected FY2017 Bad Debt Expense	$ 85,383,767
Source: PREPA's Rate Case Financial Model		

As shown in the table above, PREPA's proposed Bad Debt Expense was calculated using PREPA's proposed amounts for these components of the cost of providing electric service: (1) fuel and purchased power expense; (2) non-fuel O&M expense; (3) non-fuel performance improvements; (4) CILT subsidy recovery (rate base component); (5) Energy Administration Assessment; (6) proposed capital expenditures; (7) Debt Service; and (8) Other Income. Accordingly, to the extent that any of these items are adjusted, the adjustment would have a corresponding impact on Bad Debt Expense.

The FY2014 level of Bad Debt Expense of $191.5 million compares with PREPA's FY2015 and FY2016 recorded levels as follows, the amounts of which were taken from PREPA's trial balances:

Table 24: Comparison of Bad Debt Expense from FY2014 through FY2016

PREPA Trial Balance Description	PREPA Trial Balance Account	FY2014	FY2015	FY2016
Sales-Counter A [Bad Debt Expense]	4006	$ 191,533,358	$ 47,376,816	$ 17,978,422
			-75.26%	-62.05%
Source: Supplemental Response to CEPR-RS-06-02, PREPA Expanded Trial Balance				

PREPA's Bad Debt Expense was substantially less in FY2015 and FY2016 versus FY2014, as shown above. Specifically, as shown in the above table, Bad Debt Expense decreased from FY2014 to FY2015 and from FY2015 to FY2016. The same amount of $191.5 million is shown in PREPA's Rate Case Financial Model but there are large discrepancies between the FY2015 and FY2016 amounts of Bad Debt Expense from PREPA's trial balances (as shown above) and the FY2015 and FY2016 amounts from PREPA's Rate Case Financial Model (which are shown in the following table). PREPA should be required to provide explanations for these differences, and to indicate whether the estimated FY2015 and FY2016 in its Rate Case Financial Model had any impact on its estimates for FY2017.

The following table shows the relationship of Bad Debt Expense to Revenue for each year in PREPA's Rate Case Financial Model:

Table 25: Comparison of Bad Debt Expense as a Percentage of Gross and Net Revenue Requirement from FY2014 through FY2017

Bad Debt Expense As Percent of Revenue Requirement				
Component	FY 2014	FY 2015	FY 2016	FY 2017
Gross Revenue Requirement (millions of dollars)	$ 5,363.1	$ 4,572.1	$ 3,034.0	$ 2,958.9
Bad Debt Expense	$ 191.5	$ 58.5	$ 55.7	$ 85.4
Revenue Requirement Net of Bad Debt Expense	$ 5,171.6	$ 4,513.5	$ 2,978.2	$ 2,873.5
Bad Debt Expense:				
As a percent of Gross Revenue Requirement	3.57%	1.28%	1.84%	2.89%
As a percent of Net Revenue Requirement	3.70%	1.30%	1.87%	2.97%
Source: Amounts from PREPA's Rate Case Finanical Model, "RF Schedules" Tab				

To derive the adjusted Bad Debt Expense for FY2017 to use in computing the revenue requirement, we have applied the 2.97% uncollectibles factor to the adjustments to the net revenue requirement, which results in an increase to Bad Debt Expense of approximately $11.8 million.[50] However, as noted above, there are significant variances in the historic information (i.e., there are large fluctuations in this expense from year-to-year) and discrepancies have been noted between the FY2015 and FY2016 amounts for Bad Debt Expense between PREPA's trial balances and its Rate Case Financial Model, which cast doubt on the reliability of the 2.97% uncollectibles factor that PREPA has used for FY2017. We recommend that additional explanations be obtained by the Commission from PREPA prior to accepting the use of this uncollectibles factor.

9. Administrative and General Expenses

PREPA has reflected Administration and General Expenses of $148.9 million in its requested revenue requirement. Similar to Generation, Transmission, Distribution and Customer Billing Expenses, the Company's projected Administration and General Expenses were calculated by incorporating PREPA's (1) projected total O&M labor budget, (2) projected total non-labor O&M budget, and (3) projected total non-fuel performance improvements. Specifically, PREPA derived the proposed FY2017 Administration and General Expense of $148.9 million by multiplying the sum of its projected total O&M labor budget, projected non-labor O&M expense, and projected non-fuel performance improvement by the percentage of FY2014 O&M expenses that related to Administration and General Expenses. This calculation is reflected in following table:

Table 26: Calculation of FY2017 Administrative and General Expenses

Description	Amount
Total Projected Labor	$ 434,937,821
Projected Non-Labor O&M	$ 227,564,256
Projected Non-Fuel Performance Improvements	$ (102,750,000)
Subtotal	$ 559,752,076
FY2014-Based Allocation of Administration & General Expense	26.60%
FY2017 Administration and General Expense	$ 148,897,292

PREPA's FY2017 amount for Distribution Expenses compares with the following amounts from FY2014, FY2015, and FY2016: $195.3 million, $176.9 million and $153.6 million, respectively, as shown in PREPA's Rate Case Model.

We also reviewed PREPA's accounting information in its trial balances for fiscal years ended 2014, 2015, and 2016 concerning A&G Expense, which were provided in the supplemental response to CEPR-RS-06-02. The table below provides a summary of

[50] *See,* Smith and Dady Ex.5 , page 8 of 8

PREPA's A&G Expense as reflected in the trial balances for each fiscal period 2014, 2015, and 2016.

Table 27: Summary of A&G Expense for FY2014 through FY2016

PREPA Trial Balance Description	PREPA Trial Balance Account	FY2014	FY2015	FY2016
Administrative & General - Operations	4019	$ 197,894,337	$ 233,464,928	$ 232,101,478
Adminstrative & General - Maintenance	4026	$ 6,665,968	$ 5,484,363	$ 5,624,573
Administrative & General	4027	$ (21,076,465)	$ (24,439,206)	$ (23,362,246)
Joint Expenses	4028	$ (659,325)	$ (540,142)	$ (501,774)
Duplicate Charge	4029	$ (2,003,771)	$ (1,830,418)	$ (1,902,179)
Miscellaneous Income & Deductions	4265	$ 14,458,676	$ (1,273,153)	$ (5,390,030)
Total Administration and General Expense		$ 195,279,419	$ 210,866,372	$ 206,569,821
Source: Supplemental Response to CEPR-RS-06-02, PREPA Expanded Trial Balance				

A comparison of the information listed in the two above tables shows that the same amount of approximately $195.3 million for FY2014 is the same in PREPA's trial balance and its Rate Case Financial Model; however, there are significant differences between the FY2015 trial balance amounts for FY2015 and FY2016 of $210.9 million and $206.6 million, respectively, and the corresponding PREPA Rate Case Financial Model amounts of $176.9 million and $153.6 million, respectively. Explanations should be obtained from PREPA of these discrepancies.

Also, explanations from PREPA of exactly what is contained in some of its recorded A&G Expense components, such as the "Duplicate Charge" and "Joint Expense" items. should be obtained.

As noted above, Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's budgeted FY2017 operating expenses for prudence and reasonableness. Among their recommended adjustments to PREPA's expenses is a recommended decrease of $17.1 million for A&G labor expense, which we have reflected in the development of PREPA's revenue requirement.[51]

Additionally, as discussed below in section 19 of this Chapter of our Report, we have also removed approximately $624,000 of FY2017 budgeted fines and penalties because PREPA's response to CEPR-RS-05-32 indicates that for FY2017 PREPA has not received any notifications of related to environmental deviations or other matters.

[51] *See*, Smith and Dady Ex. 5, page 6 of 8

10. Energy Administration Assessment

PREPA's revenue requirement request includes $5.8 million for the Energy Administration Assessment. The $5.8 million is the regulatory fee that PREPA pays the Commission as established by Article 6.16(c) of Act 57-2014. PREPA is required to pay that amount annually by sending it to the Treasury who then sends it to the Commission. This assessment is paid in two installments of $2.9 million each. The first one needs to be sent by June 1, and the second one by December 1. This amount is based upon the two invoices of $2.9 million that were sent to PREPA by the Commission. The $5.8 million used by PREPA was verified to those invoices and to the amount specified in Act 57-2014. We are not recommending any adjustments to the $5.8 million for purposes of computing PREPA's revenue requirement.

11. Total Subsidy Recovery in Base Rates in PREPA's Schedule A-1 REV

Historically for ratemaking purposes PREPA has reflected recovery of the Contribution In Lieu of Taxes (CILT) by incorporating a 0.89 factor in the denominator of its Fuel and Purchased Power Adjustors. Act 57 requires that the CILT be removed from those Adjustors. For FY2017, PREPA has projected CILT of $51.784 million. PREPA's presentation of the amount of CILT in its base rate revenue requirements is discussed below. The Contribution to Municipalities amount in our presentation of PREPA's revenue requirement is broken out separately from the amounts for other subsidies.

On PREPA's Schedule A-1 REV, PREPA shows an amount for "CILT Subsidy Recovery Required in Base Rate" of $37.685 million. On its Schedule A-1 REV, PREPA also shows an amount of Operating Expenses for "CILT Subsidy Recovery in FCA and PPCA" of $182.411 million. The sum of the $37.685 million and the $182.411 million is $220.097 million. PREPA Schedule L-2 and PREPA's responses to information requirements such as CEPR-RS-01-11 make it clear that the $220.097 million is comprised of the following components:

Table 28: Components of PREPA's Proposed Total Subsidy Recovery

PREPA Total Subsidy Recovery in Base Rates Summary			
Line No.	Description		Amount
1	Contribution to Municipalities	$	51,783,821
2	Public Lighting	$	93,240,901
3	Special Customer Subsidies	$	75,071,020
4	Total	$	220,095,742
5	CILT Subsidy Recovery in FCA and PPCA	$	182,411,548
6	CILT Subsidy Recovery Required in Base Rates	$	37,685,194
7	Total	$	220,096,742
Source: PREPA Schedules A-1 REV and L-2 (L 000002) FY 2017			
PREPA response to CEPR-RS-01-11			
PREPA Ex. 4.0 at page 11			

Commission Advisor Chernick is addressing the subsidies for Public Lighting and most of the Special Customer Subsidies.[52] We discuss each of these three subsidy groups briefly below. There is a double-count issue with respect to some of the special customer subsidies and how PREPA has treated those in its calculation of the FY2017 revenue deficiency.

a. Public Lighting

Pending further input from Commission Advisor Chernick, we have reflected the Public Lighting subsidy amount of $93.242 million in determining PREPA's revenue requirement.

b. Contribution to Municipalities

To compute PREPA's base rate revenue requirement, we have reflected the $51.784 million of Contribution to Municipalities as the amount to be included in base rates. On a going-forward basis, CILT will no longer be collected by PREPA via the 0.89 factor that had been in the denominator of its Fuel and Purchased Power Adjustors. Rather, CILT will be included in PREPA's base rate revenue requirement.[53]

[52] As reflected in Chapter V of our Report, we have been asked to verify the PREPA requested FY2017 amount of subsidy for the Irrigation District and to address a subsidy for the AAA Preferred Rate to PRASA which PREPA has discontinued. Chapter V of our Report also includes a more detailed discussion of CILT and the requirement for PREPA to remove collection of CILT from the Fuel and Purchased Power Adjustors.

[53] Commission Advisor Chernick is addressing rate design for PREPA. A separate proceeding is being conducted by the Commission to address Transparent Bill requirements.

c. Special Customer Subsidies ($37 million Double-Count Issue)

As noted above, Table 28 includes a summary of PREPA's proposed FY2017 amounts for Public Lighting and Special Customer Subsidies, from PREPA's Schedule L-2 and PREPA's response to CEPR-RS-01-11.

Commission Advisor Chernick has identified the following double counts in his detailed review of PREPA's proposed Special Customer Subsidies and PREPA's revenue at existing rates:

1. $524,933 for the General Agricultural Service Tariff,
2. $16,438,851 for Low-Income Consumer Subsidies (RH3, LRS), and
3. $20,076,641 for the Fixed Public Housing Rate (RFR Tariff)

The total of these is $37,040,425.[54]

Based on Mr. Cherick's findings and recommendation, as described above, we have reduced the PREPA identified amount for Special Customer Subsidies of $75.071 million by $37.040 million to remove the impact of this double count from the derivation of PREPA's base rate revenue deficiency.[55] This adjustment to remove PREPA's double count of these subsidies reduces PREPA's requested FY2017-based revenue requirement deficiency by $37.040 million.[56]

12. Other Income

Because PREPA recovers some of its cost of providing electric service in the form of Other Income PREPA has subtracted its estimated FY2017 amount of $38.925 million on its Schedule A-1 REV.

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[54] PREPA appears to agree that its calculation of the revenue deficiency is overstated by $37 million due to the double-count of these items. PREPA's response to request no. 1 from the October 31, 2016 conference call, for example, acknowledges that the provisional rate increase should and will be lowered by approximately $37 million. Confirmation from PREPA that these items were double counted in its calculation of its claimed revenue deficiency was also obtained during a follow-up conference call held on November 15, 2016. Additionally, PREPA Ex. 24.0, at page 15 acknowledges that "the total error was $37M." PREPA Ex. 23.0 at page 4 reflects a decreases of $37.685 million for "CILT Subsidy Recovery in Base Rate."

[55] As noted above, Mr. Chernick has determined that PREPA used the current rates for existing LRS, RH3, RFR and GAS tariffs to determine the amount of revenues at existing rates (rather than imputing the higher GRS and GSS tariffs to them). We have therefore removed the $37.040 million double-count impact from the amount of subsidies that PREPA attempted to include in its requested cost of service. An alternative method of removing this double-count impact would be to increase PREPA's revenues at current rates by $37.040 million to reflect what the discounted rates would be at the full GRS and GSS tariffs (i.e., to state the revenue amount without the current discounts). Either method of addressing this matter would remove from PREPA's base rate revenue requirement deficiency calculation the double-count impact of those subsidies that was included by PREPA in its rate case application.

[56] *See,* Smith and Dady Ex. 5, page 4 of 8

PREPA's revenue requirement reflects the fact that PREPA receives income from sources other than its tariff rates for providing electric service. According to the response to CEPR-RS-03-07, examples of Other Income that PREPA receives includes: non-operating rental income, sinking fund interest income and other miscellaneous income. This response goes on to state that these sources of income, which are reasonably expected to be recurring, are applied as a credit against revenue requirement, such that a portion of PREPA's operating expense or other revenue requirement components can be covered by these sources of income. PREPA states that if Other Income was not applied as a reduction to revenue requirement, the Company's as-filed revenue deficiency of $222 million would increase to $261 million. We agree with PREPA that Other Income should be applied as a source of income that reduces the amount of its revenue requirement that must be collected from other sources.

Because PREPA recovers some of its cost of proving electric service in the form of Other Income, PREPA has subtracted its estimated FY2017 amount of $38.925 million on its Schedule A-1 REV. On Smith and Dady Ex. 3 we have reflected this Other Income on line 28 to show that it is a source of income that helps to cover PREPA's total revenue requirement.

For purposes of comparing the FY2017 amount used by PREPA to prior years and performing a reasonableness test, we reviewed PREPA's actual accounting information from its trial balances in an attempt to reconcile the amounts related to Other Income to the Other Income amounts reflected on the Company's monthly reports to the Governing Board. However, we were unable to tie the amounts shown as Other Income on the monthly reports to the trial balances. Prior to determining the amount of Other Income to reflect in setting PREPA's base rate revenue requirement, some additional explanations, including information on prior year amounts, should be obtained from PREPA.***

Recommendation: Determining whether the amount reflected by PREPA for Other Income is reasonable should be addressed by the Commission prior to approving a final revenue requirement in this case. If not provided in response to the current information requirements, the Commission should require PREPA to provide details concerning the components of Other Income for each year, in a manner so the amounts for FY2014, FY2015 and FY2016 can be traced to PREPA's trial balances.[57] PREPA should also be required to clearly indicate exactly what components are included in its estimated amount of Other Revenue for FY2017.

13. Debt Service Principal and Interest for Legacy Debt

PREPA's revenue requirement makes certain assumptions about the financial restructuring and securitization. Under PREPA's assumptions, some legacy debt would remain at PREPA, i.e., would not be retired, replaced with newly issue debt, or recovered through the Transition Charge. In this discussion, then, Legacy Debt refers to debt that does not participate in the restructuring and therefore is not recovered through the Transition Charge .

[57] This information has been requested from PREPA; however, as of the date of this writing it had not yet been received by us.

PREPA's Schedule A-1 REV reflects $314 million of debt service on that assumed retained legacy debt. The $314 million consists of $172 million of principal payments and $143 million of interest.[58]

These amounts are uncertain, and will likely be different once PREPA's financial restructuring is completed. The amounts and specific components of the legacy debt that would be retained at PREPA is not known with certainty. For the debt service in this proceeding Commission Advisor Stephen Hill and we have thus focused on PREPA's estimates of its retained "legacy" debt.[59] PREPA's rate case application has indicated that the FY2017 interest and principal payments for the legacy debt that is being assumed to be retained by PREPA would be approximately $314 million.

For purposes of computing PREPA's base rate revenue requirement we have used the $314 million proposed by PREPA with no adjustments.

After PREPA completes its financial restructuring, the legacy debt retained by PREPA and the related debt service will be different. The formula rate mechanism and performance review being addressed in the report of Commission Consultant Tim Woolf contains details on how that mechanism could work for addressing costs and debt service for PREPA that will change after the Commission's rate case decision.

14. Debt Service Coverage for Legacy Debt

PREPA's calculation of its revenue requirement was not based on applying a debt service coverage ratio (DSCR) to the principal and interest payments associated with legacy debt that was presumed to be retained at PREPA.[60] Rather, PREPA used a different approach, of including its projected FY2017 capital expenditures in its requested revenue requirement on a dollar-for-dollar basis. PREPA's projected capital expenditures are discussed in Part 15 below.

We have determined FY2017 debt service coverage to be included in PREPA's revenue requirement by multiplying the $314 million of FY2017 principal and interest by the 1.40 DSCR recommended by Commission Advisor Hill. As described in his expert report, Mr. Hill recommends that a credit rating of "BBB" be targeted to restore PREPA to financial health.[61]

Accordingly we have specifically included Debt Service Coverage Allowance of $126 million in the determination of PREPA's base rate revenue requirement. This provides for coverage

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[58] Additional details concerning the components of the principal and interest payments are discussed in Commission Advisor Stephen Hill's Expert Report.

[59] PREPA's amount of retained legacy debt is uncertain, and will be dependent upon the financial restructuring that is ultimately achieved.

[60] PREPA has indicated that a ratemaking DSCR for PREPA should be "at least" 1.57 and "preferably" 2.0. As shown on PREPA's Schedule A-2, the revenue requirement requested by PREPA results in a DSCR of 2.60. Mr. Hill addresses these points and explains why his recommended DSCR of 1.4 is sufficient.

[61] *See* Hill Expert Report.

of 0.4 times the amount of anticipated debt service, as recommended by Commission Advisor Hill.

Table 29: PREPA Debt Service Coverage Allowance

PREPA Debt Service Coverage Allowance		
Component	$Millions	Source
PREPA FY2017 Debt Service	$ 314	[1]
Debt Service Coverage Ratio	1.4	[2]
Debt Service Coverage Allowance	$ 126	[3]
Notes and Source:		
[1] PREPA Response to CEPR-SGH-02-05 Attachment 1		
(Confidential), Tab: FY2017 CUSIP Summary		
[2] Stephen Hill Expert Report		
[3] Debt Service x 0.4		

For purposes of computing PREPA's revenue requirement a debt service coverage margin of approximately $126 million has been reflected.[62]

15. Capital Expenditures

PREPA's requested revenue requirement includes a request for ratepayer funding of $336.6 million of projected FY2017 capital expenditures (Capex) on a dollar-for-dollar basis.[63] PREPA Ex. 3.0 at page 45 shows that the $336 million is comprised of $232.1 million for maintenance capital, $56.3 million for the Aguirre Offshore Gas Port ("AOGP") and $48.2 million for transmission and distribution projects. The details of PREPA's proposed FY2017 are listed on PREPA Schedule F-3 REV.

PREPA's Schedule F-3 REV was prepared before the Commission issued its Order in the Integrated Resource Planning ("IRP") proceeding, Case No. CEPRAP20150002. PREPA has not updated its proposed FY2017 Capex to reflect the impact of the Commission's IRP Order.

At pages 5-6 of his October 14, 2016 Supplemental Direct Testimony, PREPA witness Dr. Quintana states that PREPA does not believe that the Commission's IRP Order materially affects the revenue requirement at issue in this rate case. At page 7 of that testimony, he states that PREPA's proposed Formula Rate Mechanism ("FRM") "adjusts for any revenue requirement uncertainties, and preserves fully the Commission's lawful authority to review PREPA's spending." He states further that PREPA cannot revise its three-year business plan, such as for the AOGP. He notes that on the same day PREPA filed its Supplemental

[62] See, Smith and Dady Ex. 5, page 4 of 8, and Smith and Dady Ex. 3, line 20.

[63] PREPA is essentially seeking to recover from ratepayers in its annual base rate revenue requirement every dollar of its projected FY2017 capital expenditures, which PREPA projected to be $336.6 million.

Testimony, PREPA filed a Motion for Reconsideration of the IRP Order. PREPA's revenue requirement panel (Pampush, Porter, and Stathos) in PREPA Ex. 14.00 at page 3 urge that the $56 million amount of FY2017 Capex for the AOGP not be removed in light of the Commission's September 27, 2016 directive in the IRP Order.[64]

As explained in Parts III-B and III-D above, it is unusual to have ratepayers fund utility capital expenditures on a dollar-for-dollar basis. Normally capital expenditures are financed and the related cost is recovered over a long period, either approximating the life of the long-term debt used to finance the utility plant related capital spending, or over the useful life of the utility plan, i.e., as depreciation expense.

As also explained in Parts II-A, II-B, II-C, III-B, and III-D above, PREPA continues to be experiencing a financial emergency. Due to its current financial situation and poor bond ratings,[65] PREPA cannot access external capital markets. Since it presently has no viable external sources of financing capital expenditures, some recognition must be made in PREPA's revenue requirement to address PREPA's need to make capital expenditures.

Because PREPA currently does not have access to external capital we recommend that an allowance for Capex be included in the determination of PREPA's revenue requirement. This is an unusual ratemaking treatment and should only continue until PREPA's finances are stabilized and PREPA regains access to financing on reasonable terms. To reflect that PREPA's FY2017 Capex above the level of the Debt Service Coverage Allowance are being financed on a dollar-for-dollar basis by PREPA's ratepayers, we recommend that PREPA be required to account for the ratepayer funding of PREPA's Capex as a contribution in aid of construction. This accounting would reflect that the source of the financing of PREPA's Capex during FY2017 and continuing through the period of PREPA's financial emergency is being provided by PREPA's ratepayers and not by investors.

We note that the level of Capex projected by PREPA for FY2017 of $336.6 million is comparable to PREPA's Capex in FY2013 and FY2014 but is substantially higher than PREPA's actual Capex in FY2015 or FY2016:

[64] Commission Advisors Fisher and Horowitz of Synapse Energy Economics are addressing PREPA's Capex and the amount that should be reflected in the FY2017-based revenue requirement for Capex including the AOGP. The adjustment to reflect their recommendations is reflected on Smith and Dady Ex. 5, page 2 of 8.

[65] *See* the Expert Report of Commission Advisor Hill for a discussion of PREPA's bond ratings.

Table 30: Capital Expenditures from FY2012 through FY2017

PREPA			
Capital Expenditures			
($millions)			
Line			FY2017 Difference
No.	Period	Capex	From Prior Year
		(A)	(B)
1	FY 2012	$388.2	$ (51.68)
2	FY 2013	$360.1	$ (23.52)
3	FY 2014	$316.0	$ 20.56
4	FY 2015	$201.1	$135.48
5	FY 2016	$140.4	$196.13
6	FY 2017	$336.6	
Notes and Source			
Col.A: PREPA response to CEPR-RS-07-10			
Col.B: Calculated			

PREPA's substantially reduced capital spending in FY2015 and FY2016 may have had a detrimental impact upon the reliability of the electric system. Commission Advisors Fisher and Horowitz of Synapse discuss concerns regarding the safe and reliable provision of electric service by PREPA. They have reviewed PREPA's proposed FY2017 Capex and have recommended the following adjustments:

1. Limit the FY2017 amount for the AOGP to the $15 million authorized in the Commission's IRP Order. This reduces PREPA's proposal for FY2017 Capex (and the PREPA requested revenue requirement) by $43.2 million.
2. Cease purchasing AMI meters. This relates to PREPA Project PIV16677, acquisition of AMI meters. Their finding that PREPA's proposed AMI deployment is strategically flawed and recommendation that PREPA cease purchasing AMI meters reduces FY2017 Capex (and PREPA requested revenue requirement) by $3.5 million. The reduction relates to the use of less expensive AMR meters instead of AMI meters.
3. Reflect certain plant maintenance contract costs as Operating & Maintenance expenses rather than as Capex. This relates to PREPA projects PIV 15880, PIV 16945, and PIV 16946. This

recommendation shifts $16 million from FY2017 Capex to O&M Expense and has no net impact on PREPA's proposed revenue requirement.

After reflecting the adjustments recommended by Dr. Fisher and Dr. Horowitz, we have included an amount of $148.7 million of ratepayer-funded Capex in PREPA's revenue requirement. This is a reduction of approximately $187.9 million from PREPA's request of $336.6.[66]

To reflect the reclassification of certain plant maintenance costs from Capex to O&M Expenses, per their recommendation, have also increased PREPA's Generation Expense by $16 million as discussed above.[67]

16. Revenue at Current Rates

In computing the amount of revenue increase needed, revenue at current rates is subtracted from PREPA's proposed cost of service as adjusted in our Report. PREPA's Schedule A-1 REV shows $1.658 billion of fuel and purchased power revenue and $1.078 billion of base rate revenue at current rates, for a total of $2.737 billion.

The amount of revenue at current rates is affected by fuel and purchased power price fluctuations. Historically, PREPA's fuel and purchased power costs have been recovered in adjustor mechanisms, which have adjusted the fuel and purchased power components of PREPA's rates monthly.

For purposes of evaluating the amount of fuel and purchased power expense and revenues in PREPA's base rates, as described above, we obtained advice from Commission Advisors Fisher and Horowitz concerning the reasonableness of PREPA's fuel and purchased power expense, and they have recommended a significant increase of $461.3 million to PREPA's proposed amount of FY2017 Fuel Expense. Accordingly, for purposes of determining PREPA's revenue requirement, we have reflected PREPA's estimated amounts of revenue at current rates of $2.737 billion increased by the $461.3 million adjustment for Fuel Adjustor Revenue that is related to the recommendation of Commission Advisors Fisher and Horowitz that PREPA's FY2017 Fuel Expense be increased by $461.3 million.[68]

PREPA's projected revenues at current rates are also affected by PREPA's load and sales forecast. Dr. Fisher and Dr. Horowitz of Synapse reviewed PREPA's load forecasts for FY2017, as did Commission Advisor Chernick. While they have identified some concerns with PREPA's forecasting, they are not recommending specific adjustments to PREPA's revenue at current rates related to the load and sales forecast.

As shown on Smith and Dady Ex. 3, lines 27-31, we show total adjusted Revenue and Other Income for FY2017 of $3.237 billion.

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[66] *See,* Smith and Dady Ex. 5, page 2 of 8.
[67] *See,* Smith and Dady Ex. 5, page 3 of 8.
[68] *See,* Smith and Dady Ex. 3, lines 29 and 31.

17. Labor Costs and Work Force Levels

This section of our report supplements the earlier discussions on labor costs that were presented above in conjunction with the discussions of Generation Expense, Transmission Expense, Distribution Expense and Administrative and General Expense and Capital Expenditures for FY2017.

PREPA's Operating Expenses and Capex include Labor Costs. Properly managing its work force is cited by PREPA as a problematic area, which PREPA is taking steps to improve. PREPA Ex. 3.0 (the Direct Testimony of Sonia Miranda[69], Antonio Perez, and Virgilio Sosa) at pages 31-32, for example, states that, among other things, from an organizational standpoint, PREPA is an inefficient bureaucracy, has had an unacceptable safety record, had high absenteeism, and states that certain areas are overly staffed with non-value added administrative personnel, the executive directorate and executive team is oversized, and there also is a shortage of expertise in technical skill areas:

> Generally, the team encountered outdated human resource processes that were not conducive to a safe and productive workforce. Among the problems were inflexible work rules and high absenteeism. Paid leave was twice the industry norm at 80 days per year. The retirement system is projected to be insolvent by 2024 and needs immediate attention to thwart that result. There also is an unacceptable safety record, with more than 14,000 accidents and 15 fatalities over a 10 year period.
>
> Additionally, PREPA did not have any succession plans with approximately 1,050 staff currently eligible for retirement-many of which are in critical positions. PREPA is currently averaging 350 retirements per year.
>
> PREPA also lacked a formal performance management process and limited use of [Key Performance Indicators] KPIs. The team encountered low accountability and lack of leadership from top management. Often leaders and managers were placed in positions based on political affiliation vs. job qualifications. Job descriptions also were outdated or non-existent.
>
> From an organizational standpoint, PREPA is an inefficient bureaucracy with numerous silos. Certain areas are overly staffed with non-value added administrative personnel. In addition, the executive directorate and executive team is oversized. There also is a shortage of expertise in specific technical skill areas.

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[69] Ms. Miranda, PREPA's Directorate of Planning and Environmental, when PREPA filed its application, has since left PREPA. She was also a key participant on behalf of PREPA in the Integrated Resource Plan proceeding, has left PREPA. Dr. Quintana's Supplemental Direct Testimony (PREPA Ex. 13.00) at 11-12 confirms that Ms. Miranda has retired and states at page 12 that, should Ms. Miranda not be able to appear and testify personally, Dr. Quintana will join the panel of witnesses presenting PREPA Ex. 3.00.

PREPA's Ex. 3.0 indicates that PREPA has been taking steps to address these issues. At page 32, the PREPA Direct Testimony of Vega, Sales and Sosa indicates that PREPA headcount has declined by approximately 1,100 full time employees since 2014 through attrition, and PREPA expects an additional decline of approximately 600 full time employees by 2019.

PREPA reports its work force levels in its monthly reports to the governing board. The following table summarizes PREPA's work force at June 30, 2008 through 2016:

Table 31: PREPA's Work Force Levels at June 30, 2008 through June 30, 2016

Puerto Rico Electric Power Authority												
Fiscal Years Ended June 30												
			Yearly Work Force Per Company									PREPA
Line No.	Description		2008	2009	2010	2011	2012	2013	2014	2015	2016	Projected @6/30/2017
			A	B	C	D	E	F	G	H	I	J
1	Management	Reg.	2,808	2,789	2,651	2,630	2,600	2,513	2,302	1,989	1,908	
2	Conf./Carr.	Temp.	45	14	1	2	19	30	12	31	6	
3	U.T.I.E.R.	Reg.	5,110	5,049	4,836	4,672	4,501	4,359	4,178	3,769	3,680	
4		Temp.	94	6	1	75	268	358	195	161	9	
5		Emerg.	0	0	0	2	1	0	0	0	0	
6	U.T.I.C.E.	Reg.	942	951	927	904	871	839	794	700	642	
7		Temp.	35	8	1	0	0	0	0	0	0	
8	U.E.P.I.	Reg.	379	389	381	368	360	358	335	321	313	
9		Temp.	10	4	0	0	0	2	1	0	0	
10	U.P.A.E.E.	Reg.	6	6	6	6	6	6	5	4	4	
11		Temp.	0	0	0	0	0	0	0	0	1	
12	Total		9,429	9,216	8,804	8,659	8,626	8,465	7,822	6,975	6,563	6,694
Columns A through I: PREPA's monthly operating reports												
Column J: PREPA's response to CEPR-RS-05-34(a)												

PREPA's response to CEPR-RS-05-34 indicates that PREPA's FY 2017 approved budget reflects a level of work force of 6,694 employees as of June 30, 2017. This is the level of work force assumed in PREPA's FY2017 revenue requirement. PREPA has included $434.9 million of non-fuel operations and maintenance expense in its proposed FY2017 revenue requirement.

PREPA's Ex. 14.02.xlsm that was provided with PREPA's October 13, 2016 supplemental filing at the "Inputs" tab lists 6,710 as the "headcount" for FY2016. That compares with a work force of 6,563 at June 30, 2016 from PREPA's monthly report for June 2016, as shown in the above table. PREPA's response to CEPR-RS-07-10(c) explains that the work force assumed by PREPA for FY2016 in its model has not been revised or updated, and that PREPA's June 2016 (FY2016) report was not available at the time of PREPA's rate filing.

The following table summarizes the year-over-year and cumulative changes in PREPA's work force from June 30, 2008 through June 30, 2016:

Table 32: PREPA's Cumulative Changes in Work Force Levels from June 30, 2008 through June 30, 2016

Puerto Rico Electric Power Authority												
Fiscal Years Ended June 30												
				Changes in Work Force								Cumulative from 2008 to 2016
Line No.	Description		2008	2009	2010	2011	2012	2013	2014	2015	2016	
			A	B	C	D	E	F	G	H	I	
13	Management	Reg.		(19)	(138)	(21)	(30)	(87)	(211)	(313)	(81)	(900)
14	Conf./Carr.	Temp.		(31)	(13)	1	17	11	(18)	19	(25)	(39)
				0								
15	U.T.I.E.R.	Reg.		(61)	(213)	(164)	(171)	(142)	(181)	(409)	(89)	(1,430)
16		Temp.		(88)	(5)	74	193	90	(163)	(34)	(152)	(85)
17		Emerg.		0	0	2	(1)	(1)	0	0	0	0
18	U.T.I.C.E.	Reg.		9	(24)	(23)	(33)	(32)	(45)	(94)	(58)	(300)
19		Temp.		(27)	(7)	(1)	0	0	0	0	0	(35)
20	U.E.P.I.	Reg.		10	(8)	(13)	(8)	(2)	(23)	(14)	(8)	(66)
21		Temp.		(6)	(4)	0	0	2	(1)	(1)	0	(10)
22	U.P.A.E.E.	Reg.		0	0	0	0	0	(1)	(1)	0	(2)
23		Temp.		0	0	0	0	0	0	0	1	1
24	Total			(213)	(412)	(145)	(33)	(161)	(643)	(847)	(412)	(2,866)
Notes and Source:												
Work force changes have been derived from comparion PREPA's stated work force levels from its June monthly reports for each year												

The level of work force PREPA has assumed for FY2017 was taken from PREPA's response to CEPR-RS-05-34(a). As of the date of this writing, PREPA had not provided a breakout of the FY2017 work force by union affiliation and management.

In response to CEPR-RS-07-08 and CEPR-RS-07-09, PREPA provided the following information about its payroll and benefit costs in total, and the amounts recorded as O&M Expense, and the amounts charged to Capex. Table 33 shows PREPA's total payroll and benefit costs for FY2012 through FY2016 (in thousands of dollars) from PREPA's response to CEPR-RS-07-08:

Table 33: Total Payroll and Benefit Costs for FY2012 through FY2016 (in thousands of dollars)

Operating and Capital Expenses:		FY2012	FY2013	FY2014	FY2015	FY2016
Salaried and management temporary employees						
110	Basic salaries	$ 350,401	$ 332,939	$ 326,396	$ 267,662	$ 258,315
115	Overtime	57,743	56,218	36,705	35,775	38,981
120	Tiempo compensatorio	11,376	18,301	8,758	9,091	8,831
125	Fringe benefits (salaries and wages)	234,966	225,082	220,928	163,198	154,804
130	Fringe benefits (overtime)	11,895	13,144	8,040	5,560	4,958
Hourly wage and temporary employees						
150	Basic salaries	4,104	10,077	6,792	3,964	2,176
155	Overtime	1,075	2,982	1,468	844	546
165	Fringe benefits (salaries and wages)	1,669	4,269	2,796	1,727	971
170	Fringe benefits (overtime)	105	258	134	74	51
Total labor expenses		$ 673,333	$ 663,271	$ 612,018	$ 487,895	$ 469,633

In comparison with the total labor costs of $487.895 million for FY2015 and $469.633 million for FY2016, PREPA's projection for FY2017 has total labor costs of $525.140 million.[70]

Table 34 shows PREPA's total payroll and benefit costs charged to O&M Expense for FY2012 through FY2016 (in thousands of dollars) from PREPA's response to CEPR-RS-07-08:

Table 34: Total Payroll and Benefit Costs Charged to O&M for FY2012 through FY2016

Operating Expenses:		FY2012	FY2013	FY2014	FY2015	FY2016
Salaried and management temporary employees						
110	Basic salaries	$ 302,921	$ 279,112	$ 287,428	$ 239,017	$ 236,757
115	Overtime	43,771	41,918	31,221	32,110	34,552
120	Tiempo compensatorio	10,417	16,930	8,417	8,905	8,639
125	Fringe benefits (salaries and wages)	205,129	187,605	185,679	146,443	142,147
130	Fringe benefits (overtime)	9,229	10,111	6,987	5,061	4,424
Hourly wage and temporary employees						
150	Basic salaries	3,982	9,504	6,733	3,856	2,125
155	Overtime	916	2,759	1,444	803	530
165	Fringe benefits (salaries and wages)	1,603	4,060	2,757	1,685	947
170	Fringe benefits (overtime)	88	235	132	70	49
Total labor expenses		$ 578,057	$ 552,234	$ 530,797	$ 437,951	$ 430,168

[70] *See* PREPA's response to CEPR-RS-10(f) and (g) for the PREPA projections, which include FY2017.

As shown in the above table, PREPA's labor expense charged to O&M Expenses in FY2015 and FY2016 are notably lower than PREPA's actual labor costs in FY2012, FY2013 and FY2014. In comparison with PREPA's actual Labor Costs charged to O&M Expense of $437.951 million for FY2015 and $430.168 million for FY2016, PREPA's projection for FY2017 (that is the basis for PREPA's base rate revenue request) is $434.937 million.[71]

Table 35 shows PREPA's total payroll and benefit costs charged to Capex for FY2012 through FY2016 (in thousands of dollars) from PREPA's response to CEPR-RS-07-09:

Table 35: Total Payroll and Benefit Costs Charged to Capex for FY2012 through FY2016

Capital Expenses:		FY2012	FY2013	FY2014	FY2015	FY2016
Salaried and management temporary employees						
110	Basic salaries	$ 47,480	$ 53,828	$ 38,969	$ 28,645	$ 21,558
115	Overtime	13,972	14,300	5,484	3,664	4,429
120	Tiempo compensatorio	958	1,371	342	186	193
125	Fringe benefits (salaries and wages)	29,837	37,477	35,249	16,755	12,658
130	Fringe benefits (overtime)	2,666	3,032	1,052	499	534
Hourly wage and temporary employees						
150	Basic salaries	121	574	59	108	52
155	Overtime	158	222	25	41	16
165	Fringe benefits (salaries and wages)	66	209	39	42	24
170	Fringe benefits (overtime)	17	23	2	4	2
Total labor expenses		$ 95,277	$ 111,037	$ 81,221	$ 49,944	$ 39,466

PREPA's capitalized labor costs in FY2015 and FY2016 are lower than the amounts in FY2012, FY2013 and FY2014. Compared with the actual Labor Costs charged to Capex as listed in the above table, PREPA's projection for FY2017 is $90.203 million, which is more than double the actual FY2016 amount.

Recommendation: PREPA did not update any components of its revenue requirement in its Supplemental Testimony filing on October 14, 2016. PREPA's rebuttal testimony filed on November 16, 2016 likewise did not contain any revisions related to FY2017 labor costs.

PREPA's total FY2017 Labor Costs and the amount of Labor Costs charged to Capex appear to be high compared with recent information such as PREPA's actual total Labor Cost and Labor Costs charged to Capex for FY2015 and FY2016.

Also, the level of work force PREPA appears to have assumed for its FY2017 projections is higher than PREPA's actual work force at June 30, 2016, the end of PREPA's most recently concluded fiscal year. Moreover, PREPA has stated that it intends to obtain further work force reductions.

[71] *See* PREPA's response to CEPR-RS-10(f) and (g) for the PREPA projections, which include FY2017.

There are some important regulatory policy considerations for reviewing utility estimates of labor costs for a rate year. The revenue requirement authorized by the Commission for PREPA should not include Labor Costs for positions that PREPA does not expect to have, but should include adequate Labor Costs for PREPA to maintain and operate its electric system safely and reliably. If the Commission determines that PREPA's work force and Labor Cost for FY2017 is overstated and reflects positions that PREPA does not currently have and are not reasonably expected during FY2017, or includes Labor Costs that PREPA will not be incurring, an adjustment should be made to the FY2017 revenue requirement.

However, based on the findings and recommendations of Commission Advisors Fisher and Horowitz discussed above, they have found that during FY2015 and FY2016 PREPA did not adequately maintain its electric system to produce electricity in a safe and reliable manner. For FY2017, they have concluded that PREPA's operating expense labor and non-labor budgets are understated for generation, transmission and distribution and are overstated for administrative and general expense. Based on the recommendations of Commission Advisors Fisher and Horowitz we have adjusted PREPA's projected FY2017 labor costs upward by a net amount of $12.068 million consisting of the following components:

- a $9.680 million increase to Generation Expense
- a $3.330 million increase to Transmission Expense
- a $16.115 million increase to Distribution Expense, and
- a $17.057 million decrease to Administrative and General Expense.[72]

If this additional labor cost of $12.068 million for FY2017 is approved by the Commission for inclusion in PREPA's revenue requirement, we would expect PREPA to take appropriate actions to hire the necessary staffing needed to safely and reliably operate the electric system.

18. PREPA Fines and Penalties

PREPA's response to CEPR-RS-05-30 indicates that PREPA has been incurring fines and penalties for environmental non-compliance and identifies the following amounts and dates when those were incurred:

1. Total Amount: $37,500.00; Account: 01-4019-93000-556-630; July 2, 2015 and April 18, 2016; Basis: Non-Compliance with Emergency Planning and Community Right-to-Know Act Section 313 (Toxic Release Inventory (CAFO-02-2015-4301)

2. Total Amount: $62,077.51; Account: 01-4019-92316-556-630; March 8, 2016; Basis: Payment for removal action at the Palo Seco Ward (CERCLA-02-2008-42022)

[72] *See*, Smith and Dady Ex. 5, page 6 of 8, for how these Synapse-recommended adjustments to FY2017 labor costs have been reflected.

3. Total Amount: $50,137.50; Account: 01-4019-92316-556-630; FY 2016; Basis: Payment for stipulated penalties incurred for non-compliance with the Consent Decree (1999 and 2004 Modification) provisions.

Note: The information regarding FY 2017 will not be available until November 30, 2016, as per the requirements of the Consent Decree. Nevertheless, we provide the information that relates to FY 2016.

4. Total Amount: Subject to Injunctive Relief Negotiations (EPA-PREPA); Account: 01- 4019-92316-556-630; April 15, 2015 to MATS Compliance Date (based on IRP); Basis: Payment for non-compliance with MATS.

PREPA's response to CEPR-RS-07-16 shows that PREPA has been incurring fines and penalties for environmental non-compliance. PREPA's response lists the following environmental fines and penalties for fiscal years 2013 through 2016:

Table 36: Environmental Fines and Penalties for FY2013 through FY2016

No.	Date/Period	Reason	Agency	Account	Amount
1	2013	Consent Decree - Stipulated Penalties	EPA	01-4019-92316-556-630	$ 40,475.00
2		Vega Baja Superfund Consent Decree	EPA	01-4019-92316-556-630	$1,003,826.31
3	2014	Consent Decree - Stipulated Penalties	EPA	01-4019-92316-556-630	$ 43,887.50
4		Vega Baja Superfund Consent Decree	EPA	01-4019-92316-556-630	$ 302,717.65
5		Administrative Order (OA-12-AG-075)	JCA	01-4019-92316-556-630	$ 2,500.00
6	2015	Consent Decree - Stipulated Penalties	EPA	01-4019-92316-556-630	$ 44,125.00
7		CERCLA Consent Decree (02-2008-2022)	EPA	01-4019-92316-556-630	$ 62,077.51
8		EPCRA Consent Decree (02-2015-4301)	EPA	01-4019-93000-556-630	$ 18,750.00
9	2016*	Consent Decree - Stipulated Penalties	EPA	01-4019-92316-556-630	$ 21,887.50
10		EPCRA Consent Decree (02-2015-4301)	EPA	01-4019-93000-556-630	$ 18,750.00

Note:
*** = Includes information for the 1st and 2nd quarters only.**

PREPA's FY2014 audited financial statements (PREPA Exhibit I-2) discusses environmental matters at pages 82-101 and notes that PREPA has paid fines under the Consent Decree. At page 82 (PFE 000086) PREPA states that:

The Consent Decree includes stipulated penalties for certain events of non-compliance. Non-compliance events must be disclosed to the EPA in the corresponding report. Ordinarily, when a cover non-compliance event occurs, the Authority pays the stipulated penalty in advance in order to benefit from a 50% discount of the applicable stipulated penalty.

PREPA's response indicates that PREPA has been recording such fines and penalties in accounts 92316 and 93000.[73] The Uniform System of Accounts for Electric Utilities instruction 21-G provides that fines and penalties are to be recorded in account 426.3, Penalties.[74] The USOA further provides that account 426.3 penalties shall be used to record fines and penalties as follows:

> Account 426.3 Penalties.
>
> This account shall include payments by the company for penalties or fines for violation of any regulatory statutes by the company or its officials.

It appears that PREPA should be recording fines and penalties in FERC account 426.3, not in FERC accounts 923 or 930.

The amount of fines and penalties included in PREPA's FY2017-based revenue requirement request is identified in PREPA's response to CEPR-RS-05-31 as $624,446. In that response, indicates that its proposed FY2017 revenue requirement reflects that: "PREPA budgeted a total of $624,446 under account No. 01-4019-92316-556-630 to make payments claimed for the concept of stipulated penalties and fines that may occur for non-compliance with federal and state environmental laws and regulations."

PREPA's response to CEPR-RS-05-32, however, states that:

> PREPA has not received any notifications from the Environmental Protection Agency or any other US departments or agencies that PREPA will be subject to fines or penalties in FY2017 related to environmental compliance deviations or other matters.

PREPA's FY2017 budget therefore is based on a "concept" of penalties and fines that "may occur" but for which PREPA has not received any notifications. Since PREPA has not received any notifications from the Environmental Protection Agency or any other US departments or agencies that PREPA will be subject to fines or penalties in FY2017 related to environmental compliance deviations or other matters, we recommend that the FY2017 amount budgeted by PREPA for fines and penalties be removed from PREPA's requested revenue requirement.

PREPA's historical incurrence of fines and penalties also raises concerns going-forward. PREPA has proposed a Formula Rate Mechanism ("FRM")[75] which would allow PREPA to recover differences between its actual incurred costs and the amounts included in its base rate revenue requirement. Thus, if PREPA continues to incur fines and penalties,

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[73] PREPA's 5-digit account numbers appear to correspond with the FERC accounts 923 and 930 in the Uniform System of Accounts.

[74] *See, e.g.,* FERC Uniform System of Accounts for Electric Utilities, instruction 21-G: "G. Any penalties assessed by the Environmental Protection Agency for the emission of excess pollutants shall be charged to Account 426.3, Penalties."

[75] *See* the expert report of Timothy Woolf of Synapse Energy Economics, Inc. for a detailed discussion of PREPA's proposed FRM and his recommendations for an annual rate review process.

precautions should be considered to avoid having those amounts be charged to ratepayers under PREPA's proposed FRM.

Ideally, public utilities such as PREPA should be complying with laws and environmental regulations, rather than incurring fines and penalties for non-compliance.

Normally, utility expenses for fines and penalties are not allowed to be collected from customers. Passing utility-incurred fines and penalties onto customers could be considered to be bad public policy, as treating such costs as the responsibility of customers, rather than of the utility, could create a culture where the utility is willing to incur fines and penalties, since they become the responsibility of customers. The purpose of fines and penalties is to induce compliance. Passing on the cost of incurred fines and penalties to customers could reduce the incentives for the utility to achieve compliance.

Unfortunately for PREPA's ratepayers, PREPA is experiencing severe financial difficulties and there is no apparent source for funding any fines and penalties that PREPA is incurring, other than PREPA's customers. As noted elsewhere in this report and in the report of Commission advisor Stephen Hill, PREPA currently does not have access to new investor-provided financing. Moreover, as a government-run public utility, PREPA does not have shareholders who can take responsibility for costs that should not typically be required to be borne by customers.

Recommendation: PREPA should be put on notice that it will be expected to comply with laws and environmental regulations, and will be expected to achieve compliance, rather than continue to incur fines and penalties. PREPA should be required to present the Commission with plans for avoiding fines and penalties to the fullest extent practicable in the future.

PREPA should also be required to account for fines and penalties in the proper account in accordance with the guidance provided in the USOA described above, which indicates that such fines and penalties should be recorded in FERC account 426.3. Historically, as noted above, PREPA has recorded fines and penalties in FERC accounts 923 and 930, which does not appear to be consistent with the instructions provided in the USOA.

The FY2017 budgeted amount for fines and penalties of $624,446 is being removed from PREPA's requested revenue requirement[76] since PREPA has stated that it budgeted those fines and penalties on the basis that the "may occur" but as stated in PREPA's response to CEPR-RS-05-32, PREPA not received any notifications that PREPA will be subject to fines or penalties in FY2017 related to environmental deviations or other matters.

We also recommend that, should any non-compliance events occur during FY2017, that PREPA continue its policy of paying the stipulated penalty per the Consent Decree in advance in order to benefit from a 50% discount of the applicable stipulated penalty.

[76] *See*, Smith and Dady Ex. , page 7 of 8

19. PREPA AlixPartners and Other Advisor Fees

PREPA's October 11-2016 Supplemental Filing included an Excel file that shows amounts on the "Input" tab for Restructuring of $25 million for FY2016 and $28 million for FY2017. CEPR-RS-07-11 asked about those amounts.

PREPA's response to CEPR-RS-07-11(b) indicates that:

> In FY2016, PREPA's restructuring fees were approximately $57 million. Of the $57 million, approximately $24 million were paid to AlixPartners and another approximately $10 million were paid to PREPA's other advisors for their efforts including but not limited to the negotiation of the existing RSA, the issuances of the series 2016 A, B, C, D, and E bonds, management of the compliance discussions with the Environmental Protection Agency, pension analyses, workplace safety analyses, and other efforts tied directly to the transformation, financial and operational, of PREPA. The remaining approximately $23 million were paid to creditors and their advisors to cover the monthly fees that PREPA agreed to pay as part of its forbearance agreement and then restructuring support agreement with creditors.
>
> In FY2017, PREPA has budgeted to pay AlixPartners approximately $12 million, its other advisors approximately $9 million, and the creditors and their advisors approximately $7 million.

PREPA has indicated that its proposed revenue requirement for FY2017 includes the $28 million amount, which PREPA would propose to collect from ratepayers on a dollar-for-dollar basis.

A normal financially healthy utility (which PREPA is not) would typically record substantial amounts of costs associated with consultants that would have benefits for future periods as regulatory assets, where they can be addressed for rate recovery over appropriate periods, which would typically be longer than one year. Periods longer than one year for recovery of such costs would typically be used for a number of reasons including that the costs might be deemed to have benefit to future periods and to help mitigate the impact on ratepayers in a single year.

PREPA's responses to CEPR-RS-07-11(c) and (d), however, indicate that PREPA does not have the ability to finance such Restructuring Costs and therefore PREPA cannot record such costs as a regulatory asset or spread the cost recovery over multiple years. PREPA's response to CEPR-RS-07-11(d) states that:

> Certain PREPA restructuring costs, such as those associated directly with the SPV, will paid out of proceeds from the securitization and thus will be amortized over the life of the securitized bonds. PREPA restructuring costs included in the Other O&M Expenses are not associated with the issuance of new debt and are paid as an operating expense. PREPA does not have a foundation for capitalizing or the ability to finance these costs, so amortization is both impractical and inappropriate.

Because of PREPA's financial predicament, PREPA does not have the ability to finance these costs over a multi-year time period. Consequently, PREPA is asking its ratepayers to pay for these costs on a dollar-for-dollar basis in the FY2017-based rate year in its requested revenue requirement.

At some point, after PREPA's financial restructuring has been completed, the substantial amounts of costs being incurred by PREPA for AlixPartners and some of PREPA's other Restructuring advisors, would presumably cease or decrease substantially. However, at this time, there does not appear to be an alternative for PREPA's ratepayers to fund these large costs by reflecting their inclusion in PREPA's revenue requirement.

For purposes of deriving PREPA's base rate revenue requirement, we have not adjusted the amounts of AlixPartners and other PREPA Restructuring advisor costs at the amounts budgeted by PREPA for FY2017, i.e., the $28 million amount, noted above.

20. Allowance for Working Capital

Working Capital refers to cash and other liquid assets that a utility has on hand to cover the period between collection of revenue from the provision of utility service and paying cash expenses such as for payroll, vendor-provided materials and supplies, payroll taxes, etc. In utility rate cases, the Working Capital allowance can be determined in a number of ways including (1) a detailed lead-lag study, (2) a balance sheet analysis, or (3) applying a formula to operating and maintenance expenses. In utility rate case in which a formula is applied to O&M expenses, it is typical to exclude costs that are recovered in adjustor mechanisms or surcharges, such as fuel and purchased power for electric utilities or the cost of gas for gas distribution utilities.

PREPA has not included an allowance for Working Capital in its base rate revenue requirement request. An allowance for Working Capital is commonly considered where a utility is using the rate base/rate of return methodology for determining its revenue requirement. The Working Capital allowance becomes a component of the utility's rate base. As described above, in Chapter II of our report, we are not recommending that the rate base/rate of return methodology be used for determining PREPA's revenue requirement.

PREPA's Ex. 5.0 at page 34 also states that PREPA "did not make any provision for working capital in the modified cash approach due to the economically sensitive nature of the rate case, and are thus relying on scant existing cash reserves to cover immediate cash requirements." This statement is not entirely accurate, as PREPA's proposed revenue requirement under its "Modified Cash Approach" attempts to charge ratepayers for approximately $336.6 million on a dollar-for-dollar basis for its estimated FY2017 capital expenditures.[77] Since PREPA does not have access to external financing, providing for some level of ratepayer-funding for reasonable and necessary capital expenditures has been deemed appropriate on a temporary basis, preferably only for the duration of PREPA's

[77] PREPA's proposed current period ratepayer funding of capital expenditures is addressed in Chapter III, Sections B and D, and Chapter IV, Section C-16 of our Report.

financial emergency. As explained in Part 15, ratepayer funding on a dollar-for-dollar basis of PREPA's CapEx is being viewed as necessary in order to address PREPA's cash requirements during the emergency of PREPA's current financial crisis. Ratepayer dollar-for-dollar funding of CapEx in PREPA's revenue requirement should be terminated once PREPA regains its ability to obtain external financing on reasonable terms.

PREPA's proposal stated at PREPA Ex. 5.0 at page 34 to apply a 1/8th factor for fuel and purchased power expense in its proposed fuel and purchased power adjustment mechanisms. During conference call discussions with PREPA, its advisors have indicated that continuing to adjust for fuel and purchased power costs on a monthly basis as PREPA has done historically (rather than on a quarterly basis, which PREPA has proposed) would largely eliminate a need to have a special Working Capital provision be included in the fuel and purchase power adjustors.[78]

21. Property Not Needed to Provide Utility Service

PREPA's response to CEPR-RS-05-33 indicates that PREPA has unused properties which are not needed for the provision of utility service. The properties listed in PREPA's response to CEPR-RS-05-33 have been recorded on PREPA's books at the cost of acquisition. The response indicates that PREPA is in the process of hiring a third party real estate management firm to develop a strategy for its unused real estate. In addition to appraising the value of PREPA's unused properties, the third party firm will work with PREPA to develop a plan to maximize the value of these properties through their sale, lease or other use.

Recommendation: We recommend that PREPA provide the Commission with updates concerning the appraised value of PREPA's unused property that is not needed for the provision of utility service, as well as PREPA's plans for maximizing the value of such properties.

D. Adjusted Revenue Requirement and Base Rate Revenue Deficiency

As shown on Smith & Dady Ex. 3, line 25, we show an adjusted base rate revenue requirement for PREPA of $3.407 billion, as compared to PREPA's proposed figure of $2.998 billion.[79]

Compared with the sum of other income and revenue at current rates of $3.237 billion (shown on line 31), this indicates a revenue deficiency of $169.7 million (as shown on line 33). The revenue deficiency of $169.7 million is approximately $52.6 million less than PREPA's claimed revenue deficiency of $222 million.

PREPA's base rates that have been implemented in the form of provisional rates should therefore be reduced by $52.6 million. Commission Advisor Paul Chernick is addressing

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[78] Chapter VIII of our Report addresses certain aspects of the fuel and purchased power adjustors in more detail, including the frequency of adjustment and specific costs to be included.
[79] *See*, Smith & Dady Ex. 3, line 25.

rate design. Commission Advisor Tim Woolf addresses a Formula Rate Mechanism[80] for adjusting PREPA's base rate revenue requirement prospectively and for monitoring PREPA's performance.

The next section of our report discusses certain requirements for a reconciliation between permanent and provisional rates, including information provided by PREPA concerning the effort and cost that would be entailed if a per-customer-based reconciliation were to be required.

E. Reconciliation of Permanent and Provisional Rates

By Order issued June 24, 2016, the Commission approved PREPA's proposal for provisional rates, reflecting an annual $222 million increase in the revenue being collected through the then-current rates. There is a requirement under the Commission's Rate Case Filing Rules and under Act 57-2017 that a reconciliation of the Commission approved permanent and provisional rates occur. The Commission's Rate Case Filing Rules at Section 2.02, Request for Provisional Rates, state that:

> Pursuant to Article 6.25(e) of Act 57-2014 and Section 6A(f) of Act 83-1941, when issuing a final order establishing permanent rates, the Commission shall order PREPA to adjust its customer's bills in order to credit or collect any difference between (a) the Provisional Rate charged by PREPA during the time period in which such Provisional Rate remained in effect and (b) the permanent rate which the Commission determines should have applied during such time period, so as to ensure that the Provisional Rates were just and reasonable. Such order shall reflect any upward or downward adjustment, effective as of the date the Provisional Rates were established, necessary to ensure the Provisional Rates were just and reasonable.

Section 2.02(C) of the Rules provide as follows:

> Pursuant to Article 6.25(d) of Act 57-2014 and Section 6A(e) of Act 83-1941, when filing a formal application for rate review, PREPA may include a request for the Commission to establish Provisional Rates. The Commission will not address any request for Provisional Rates made on any date after the date a formal application for rate review is filed. The application for Provisional Rates must be clearly marked as such and must include the following elements:
>
> ***
>
> C) It shall include a mechanism for tracking any increase or decrease resulting from the Provisional Rates, so as to ensure compliance with

80 As explained in Mr. Woolf's report, the term "Formula Rate Mechanism" does not imply strong regulatory oversight, and he recommends using a different term, "annual rate review" to describe his recommendations for a rate mechanism because it is more descriptive of what he recommends for the review process and Commission oversight of PREPA's operations.

Article 6.25(e) of Act 57-2014 and Section 6A(f) of Act 83-1941 (which require PREPA to credit or collect any difference between the Provisional Rate and the permanent rate established by the Commission accrued during the term in which the Provisional Rate remained in effect).

As noted in Part IV-D above, currently we are showing that PREPA has a base rate revenue deficiency of about $169.7 million, which is about $52.6 million lower than the $222 million increase that PREPA was allowed to start collecting in provisional rates. If the Commission determines that PREPA's base rate revenue requirement for permanent rates is lower than the amount PREPA has been recovering through the provisional rates, that reduction is retroactive back to the date on which PREPA started collecting the higher rate. PREPA therefore will need to return to ratepayers the excess over some period of time.

The increase in rates authorized by the Commission's June 24, 2016 Order Establishing Provisional Rates was put into effect on a cents/kWh basis. The permanent rates may be impacted by rate design recommendations being made by PREPA and by Commission Advisor Chernick. Our recommendations in this Report deal only with the revenue requirement.

We had discussions with PREPA at public technical conferences about how PREPA could comply with the requirement for PREPA to track the increase resulting from the Provisional Rates, so as to ensure compliance with Article 6.25(e) of Act 57-2014 and Section 6A(f) of Act 83-1941 (which require PREPA to credit or collect any difference between the Provisional Rate). In those discussions, PREPA indicated it could reconcile on a per-customer basis if necessary, and described a method for doing that. PREPA indicated that reconciliation of provisional and permanent rates on a per-customer basis would be possible using its customer billing system but would take an extended time. The process described by PREPA would involve combining, for each customer, the reconciliation of one month of provisional rates with a current month of billing under the permanent rates approved by the Commission. PREPA would do the current month's billing and would calculate a re-bill of one prior month during which the provisional rates were in effect. The per-customer billing reconciliation process for differences between Provisional Rates and Permanent Rates, that was described by PREPA would occur over a series of months, where the customer billings would include the current month (billed at the Permanent Rates) and one reconciliation month (based on the difference between Provisional Rates and Permanent Rates).

If the Provisional Rates were in effect from July 2016 through January 2017, i.e., 7 months, and the new Permanent Rates become effective commencing in February 2017, the reconciliation process described by PREPA would entail a process similar to the following:

In February 2017 PREPA would charge the Permanent Rate, and there would be an adjustment on the customers' billing to reflect over- or under- payment (based on the differences in July 2016 between the Provisional Rates that PREPA charged and the Permanent Rates).

Similarly, in March 2017 PREPA would charge the Permanent Rate, and there would be an adjustment on the customers' billing to reflect over- or under- payment (based on the differences in August 2016 between the Provisional Rates that PREPA charged and the Permanent Rates).

PREPA would continue this process for seven months (the number of months during which Provisional Rates were in effect) in order to complete the reconciliation on a per-customer basis between Provisional Rates and Permanent Rates. In other words, this billing process would be continued by PREPA until all of the months during which the provisional rates were in effect have been reconciled. PREPA could thus achieve a per-customer billing on a month-by-month rolling reconciliation basis. The rolling month-by-month rolling reconciliation approach would enable PREPA to minimize the cost of bill printing and mailing but would place an added burden on PREPA's customer service and billing resources, and would entail significant additional costs to PREPA if required.

PREPA was requested to provide cost estimates of doing it that way or on a higher more generalized level, such as by rate class. PREPA's customer billing system[81] could potentially accommodate a per-customer reconciliation process; however, that would entail substantial additional cost and effort, and is not recommended, particularly if there are other better alternatives that would comply with the legal requirements and which would produce a fair and reasonable result.[82] In response no. 16 to the October 31, 2016 Conference Call, PREPA provided the following information concerning how much PREPA anticipates it would cost to conduct the reconciliation and crediting/refunding process on a per-customer basis:

> REQUEST NO. 16:
>
> Customer service estimates on the cost to perform reconciliation – provide estimates for both the "worst case scenario" (having to calculate re-bills for all customers) and for other scenarios (such as a reconciliation by rate class).
>
> RESPONSE:
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> The following response was provided by Dwight Rodriguez, Head Customer Service Division, PREPA.
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> PREPA interprets this Request to refer to the "reconciliation" of PREPA's provisional or "temporary" rates addressed, among other places, in Section 6A(f) of Act 83-1941 as added by Act 57-2014 and amended by Act 4-2016, and in Section 2.02 of CEPR Reg 8720. Based on that interpretation PREPA defines a "worst case scenario" as one which would require a full re-bill of its customers. A full re-bill would cost approximately $130,000 in additional expenses for toner,

[81] PREPA uses the acronym "CCB" to refer to its customer billing system.

[82] For such alternatives, see Commission Advisor Woolf's Report and the additional discussion below from PREPA's response to request no. 17 from the October 31, 2016 technical conference call.

developers, paper, and labor per month of re-billing. A month of re-billing would be required for each month the provisional rate is in effect. This cost estimate does not include CCB programming, CCB bill presentation changes, or the effect of doubling the daily billing processing.

PREPA does not have similar information for the costs of any other scenarios, but scenarios that do not require historical individual re-billing of customers, all other things being equal, are expected to be materially less expensive.

Having PREPA incur an incremental cost of $130,000 per month for per-customer reconciled billings is not recommended. We recommend against this approach because the high cost is not justified by the benefit, particularly if there are other better alternatives that would comply with the legal requirements and which would produce a fair and reasonable result.[83]

Concerning whether there would need to be a separate filing by PREPA related to the reconciliation of the provisional rates and permanent rates, PREPA's response to request no. 17 from the October 31, 2016 Conference Call stated PREPA's view that the statutory provisions require the Commission to direct the reconciliation of PREPA's provisional and permanent rates in its final order in this rate case proceeding, but do not require the adjustments themselves to be made in this proceeding or prevent the Commission from examining and approving that reconciliation in a separate proceeding, including, for example, an annual Formula Rate Mechanism proceeding:

REQUEST NO. 17:

Does reconciliation need to be on a separate filing or within the final order? Include citations to any authority PREPA is relying upon.

RESPONSE:

The following response was provided by Gregory Rivera, Superintendent of Planning and Research, PREPA, with the assistance of PREPA's legal advisers.

PREPA interprets this Request to refer to the "reconciliation" of PREPA's provisional or "temporary" rates addressed, among other places, in Section 6A(f) of Act 83-1941 as added by Act 57-2014 and amended by Act 4-2016, and in Section 2.02 of CEPR Reg 8720. Article 6.25(e) of Act 57-2014, Section 6A(f) of Act 83-1941, and Section 2.02 of Regulation No. 8720 require the Commission, upon issuing its final order in this proceeding, to order PREPA to adjust its customers' bills to reflect the difference between PREPA's provisional rates and its

[83] For such alternatives, see Commission Advisor Woolf's Report and the additional discussion below from PREPA's response to request no. 17 from the October 31, 2016 technical conference call.

> Commission-approved permanent rates. That is to say, they require the Commission to direct the reconciliation of PREPA's provisional and permanent rates in its final order in this proceeding, but they do not require the adjustments themselves to be made in this proceeding or prevent the Commission from examining and approving that reconciliation in a separate proceeding including, for example, a proposed annual FRM proceeding.

Recommendation: If there are viable alternatives to a per-customer approach to the provisional versus permanent rate impact tracking that would produce a reasonable result, be fair to customers and help alleviate the cost to PREPA of compliance (which, as indicated above, would be substantial if a per-customer reconciliation were to be required), those alternative should be considered. The cost to PREPA of accomplishing the refunds/credits would be one significant consideration for how that reconciliation should be accomplished.

We recommend that the Commission use an alternative for the reconciliation of provisional and permanent rates that will not require PREPA to incur substantial additional costs, such as the $130,000 per month that PREPA has estimated would be required for a per-customer reconciliation and re-billing approach.

The Commission will need to decide the form and timing of the reconciliation. Commission consultant Tim Woolf will address the implications in his report of incorporating the reconciliation in a compliance filing by PREPA and/or in an annual FRM proceeding.

V. REVIEW OF CERTAIN SUBSIDIES

As part of the Commission Advisory Team, Larkin was requested to investigate and report on two specific areas of subsidies: (1) the Irrigation District and (2) the PRASA or AAA rate subsidy. We were also requested to review the amount being requested by PREPA for the CILT and to assure that PREPA's proposal to address CILT in the rate case is in accordance with Act 57 and other provisions that require elimination of CILT collection from PREPA's fuel and purchased power adjustors. We have coordinated our review of PREPA's subsidies with the rate design work being done by Commission Advisor Paul Chernick. Mr. Chernick's Expert Report addresses most of the other PREPA rate subsidies.

A. Irrigation District

For FY2017 PREPA projected a subsidy of $4.152 million for the Irrigation District.[84] The supporting information supplied by PREPA for this did not include any underlying calculations. It was simply a hard-coded input in PREPA's Excel file detail for Subsidies.

The FY2017 subsidy that PREPA has reflected for the Irrigation District compares with a budgeted FY2015 amount of $4.152 million and an estimated FY2015 amount of $4.502 million.

During the October 31, 2016 technical conference call, PREPA explained that the Irrigation District was historically a part of PREPA, going back to PREPA's origins. The subsidy is essentially the difference between the revenue that PREPA collects from the rates charged to three areas where PREPA owns assets and provides electricity for irrigation, i.e., to the Irrigation District, and the costs that PREPA incurs related to that service.

Details on the revenues and costs were requested from PREPA. In its response to item 4 from the October 31, 2016 conference call, PREPA explained that the Irrigation District subsidy is determined from the difference between the revenues from water sales and other revenues of the irrigation systems and their operating expenses. PREPA's forecast for FY2017 was based on the shortfall between revenues collected from the Irrigation District in FY2015 and PREPA's costs for FY2015. PREPA provided an Excel file showing details, which calculate an annual Irrigation District cost of service recovery shortfall amount of $4,156,409, which PREPA's supporting detail file indicates is "Other Revenues" and is for the "Contribution By Commonwealth Government"[85] and/or "Contribution by ELA".[86] If the Irrigation District cost recovery shortfall was apparently originally reimbursed to PREPA by the Commonwealth Government, as indicated by those designations. However, that no longer occurs. PREPA's response to CEPR-RS-08-01(a) states as follows:

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[84] There are three government-operated Irrigation Districts in Puerto Rico: (1) the Guayama and Juana Díaz Irrigation Districts in the south (PREPA refers to these as "SOUCO" and has grouped them together in its calculation of the subsidy); (2) the Valle de Lajas Irrigation District, in the southwest, and (3) the Isabela Irrigation District in northwestern Puerto Rico.

[85] Excel line 8.

[86] Excel line 49. The "ELA" designation appears to be an abbreviation for the Commonwealth Government.

REQUEST NO. CEPR-RS-08-01:

In response to Item No. 4 of the Commission's November 2, 2016 Letter, PREPA provided an Excel spreadsheet detailing how it derived the Irrigation District subsidy. The "TOTAL" tab of the above-referenced spreadsheet show a $4.156 million "Contribution by Commonwealth Government" in cell H7 and a "Contribution by ELA" in tab H49.

a. Are the "Contribution by Commonwealth Government" and the "Contribution by ELA" a reimbursement for PREPA's costs are established in Section 24(b) of Act 83?

RESPONSE:

The following response was provided by Ernesto Ramos Morales, Director of Finance, PREPA.

a. Yes; the line items are labeled as reimbursement for PREPA's costs as established in Section 24(b) of Act 83. PREPA does not receive this reimbursement from the Commonwealth Government for the Irrigation District subsidy, however.

On a November 15, 2016 conference call, PREPA representatives indicated that no reimbursement had been received by PREPA from the Commonwealth for many years for the shortfall in Irrigation District revenue below PREPA's cost of providing that service. No such reimbursement from the Commonwealth should be expected for the updated FY2017 amount of $4.156 million. This shortfall between the revenue received and PREPA's calculated cost of providing the service related to the Irrigation District thus appears to be a cost of service under-recovery to the Irrigation District that PREPA will need to recover from its electric utility service clients.

For purposes of determining the revenue requirement, we have treated PREPA's Irrigation District "subsidy" amount as one of the components of the subsidies that PREPA will need to recover from its electric utility service clients.

B. AAA Preferential Rate / PRASA

PREPA provides electric service to the Puerto Rico Aqueduct and Sewer Authority ("PRASA") at various locations under various rates. In FY2014, the AAA Preferential Rate[87] amounted to 22 cents per kWh. The Rate of 22 cents per kWh was applicable to all of PRSASA's accounts.

PREPA's subsidy detail reflects the following estimated annual amounts of cost of service recovery shortfall for the AAA Preferential Rate for fiscal years 2015 through 2020:

[87] PRASA's Spanish name is: the Autoridad de Acueductos y Alcantarillados ("AAA").

Table 37: Annual AAA Preferential Rates for FY2015 through FY2020

AAA Preferential Rate

FY	Cost $
2015	10,309,795
2016	(672,840)
2017	764,553
2018	16,918,670
2019	21,923,358
2020	25,982,418

The PREPA cost estimates for FY2017 through FY2020 are based on an AAA Preferential Rate of 16 cents/kWh. The FY2015 and FY2016 costs appear to be based on the AAA Preferential Rate of 22 cents/kWh that had been in effect prior to its cancellation by PREPA.

PREPA has cancelled the AAA Preferential Rate for FY2017. Accordingly, PREPA's proposed revenue requirement reflects a zero amount for FY2017 for any shortfall in recovering PREPA's cost of providing service to PRASA under the Preferential Rate.

PRASA has filed testimony requesting that the AAA Preferential Rate be restored. Reasons cited by PRASA include predictability which would help PRASA budget. Also, PRASA indicates that if it has to pay PREPA higher rates for electric service, that would leave less funding available to PRASA for infrastructure spending and maintenance.

The issue is therefore presented to the Commission of whether the AAA Preferential Rate should be restored, and, if so, how the shortfall to PREPA in collecting its cost of service from PRASA should be borne by PREPA's other customers.

It may be within the Commission's discretion to utilize a different per-kWh rate. Using a pre-specified per-kWh rate would provide the predictability and budgeting certainty that is being sought by PRASA. Using a rate that is higher than 16 cents/kWh could help minimize the impact of restoring the AAA Preferential Rate to PRASA upon PREPA's other customers. If PREPA incurs a shortfall in cost recovery between PREPA's cost of providing electric service to PRASA and the revenue being received by PREPA under the AAA Preferential Rate, such a shortfall could become a burden on PREPA’s other customers.

The following table estimates the impact on PREPA (and on PREPA's other ratepayers) of restoring an AAA Preferential Rate to PRASA at various per-kWh levels[88]:

[88] These calculations are based on the workpapers provided by PREPA. Prior to making its decision on restoring the AAA Preferential Rate, the Commission should seek updated estimates using current forecasts of PREPA's fuel costs. It is noted that PREPA's budget for FY2017 significantly understates FY2017 fuel expense, as discussed in some detail in the report of Commission Advisors Horowitz and Fisher.

Table 38: Estimation of Impact on PREPA of Restoring an AAA Preferential Rate to PRASA at the Per-kWh Levels

AAA Preferential Rate				
	Cost to PREPA in $millions			
FY	at $0.16/kwh	at $0.18/kwh	at $0.19/kwh	at $0.20/kwh
2017	$ 0.8	$ 0.4	$ 0.2	$ 0.0
2018	$ 16.9	$ 4.9	$ (1.1)	$ (7.1)
2019	$ 21.9	$ 9.8	$ 3.8	$ (2.2)
2020	$ 26.0	$ 13.8	$ 7.7	$ 1.6
Calculations are based on PREPA Excel file:				
[06 PREPA Response to EC Staff CEPR-PC-01-26 Attach 01.xlsm]				
Tab "AAA"				

It should be noted that, where the amounts listed in the table are negative, under the Preferential Rate arrangement, PRASA would not pay PREPA the higher flat per-kWh AAA Preferential Rate, but would instead pay PREPA based on the otherwise applicable billed tariff rates.

As noted above, PREPA has cancelled the AAA Preferential Rate and has thus reflected a zero amount of subsidy for this in determining its base rate revenue requirement. If a 16 cent/kWh rate were used, the subsidy amount (which would presumably be charged to PREPA's other customers) could become substantial, reaching approximately $26 million in 2020. At higher Preferential Rates per kWh, the subsidy (shortfall) amount each year would be lower.

Restoring an AAA Preferential Rate as requested by PRASA and opposed by PREPA appears to be a policy judgment for the Commission. We are not making a recommendation one way of the other as to whether the AAA Preferential Rate should be restored or, if it is restored, what the Preferential Rate per kWh should be.

We do recommend that if the Commission determines that an AAA Preferential Rate arrangement be restored, the impact on PREPA and PREPA's other customers should be considered. In evaluating the impact of restoring the Preferential Rate at various per-kWh levels, the Commission should have PREPA provide updated calculations that take into consideration more current PREPA forecasts of FY2017 fuel and purchased power cost.

C. Contribution In Lieu of Taxes (CILT)

As noted above (in Chapter IV, Section C-11 of our Report), PREPA has reflected a Contribution to Municipalities subsidy of $51.783 million for FY2017 in its proposed base rate revenue requirement.[89]

Historically, PREPA has included a factor of 0.89 in the denominator of its fuel and purchased power adjustors to collect CILT.

The actual adjustment formulas, according to PREPA's tariff manual are as follows:

$$FCC\left(\frac{\$}{kWh}\right)=\frac{\$/BBL\times BBL_{Estimated}\pm Adjustment_{C}}{0.89\times Total\ Estimated\ Net\ Generation\times E_{i}}$$

$$FCE\left(\frac{\$}{kWh}\right)=\frac{Purchased\ Power\ Cost_{Estimated}\pm Adjustment_{CE}}{0.89\times Total\ Estimated\ Net\ Generation\times E_{i}}$$

Where *FCC* is the fuel adjustment formula and *FCE* is the purchased power adjustment formula. The 0.89 factor in the denominator, according to PREPA's tariff manual, has been used to "include the effect of the contribution in lieu of takes to the Central Government and the municipalities."[90] This factor effectively represents a 12.36% surcharge[91] for the customers over the actual cost of fuel and purchased power, and is part of PREPA's revenues stated in PREPA's Results of Operations.

Each month PREPA is recording Fuel Revenue and Purchased Power Revenue and Fuel Expense and Purchased Power Expense. The Adjustor Revenues from which PREPA has collected the CILT are reflected on PREPA's Results of Operations and the related Fuel and Purchase Power Expenses are reflected on PREPA's Results of Operations. Both of those items are reflected above the line item from PREPA's Current Expenses. Fuel and Purchase Power and Other Expenses are included in Total Current Expenses in PREPA's presentation of its Results of Operations.

The following table presents an illustration of PREPA's Results of Operations (as reported by PREPA in its monthly reports to its governing board):

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[89] PREPA has also reflected a subsidy of $93.242 million for Public Lighting. *See, e.g.,* PREPA Schedule L-2.

[90] PREPA's Tariff Manual, pages 72 and 74, translation supplied, available at http://www.aeepr.com/Servicios/manuales.asp).

[91] 1 / 0.89 = 1.1236

Table 39: Result of Operations – Illustrative Example of PREPA's Reporting

B. Result of operations-budget comparison
(in million dollars)

	JANUARY 2015					
	Month			Fiscal Year-to-Date		
	Budget	Actual	Increase (Decrease) %	Budget	Actual	Increase (Decrease) %
Basic charges	84.4	81.4	(3.6)	661.2	641.3	(3.0)
Fuel adjustment	178.9	132.7	(25.8)	1,468.4	1,407.4	(4.2) [1]
Purchased power	84.0	73.1	(13.0)	588.6	544.2	(7.5)
Revenues from sales	347.3	287.2	(17.3)	2,718.2	2,592.9	(4.6)
Other	2.7	3.2	18.5	19.0	19.2	1.1
Total revenues	350.0	290.4	(17.0)	2,737.2	2,612.1	(4.6)
Fuel	158.9	117.9	(25.8)	1,303.5	1,252.3	(3.9) [1]
Purchased power	74.8	65.5	(12.4)	523.9	485.8	(7.3)
Other expenses	57.0	58.1	1.9	399.0	388.1	(2.7)
Total current expenses	290.7	241.5	(16.9)	2,226.4	2,126.2	(4.5)
1974 - sinking fund appropriations	49.2	49.2		328.6	328.6	
Reserve Account				(172.2)	(170.6)	(0.9) [2]
Rate Stabilization Fund	5.2	4.1	(21.2)	41.1	39.3	(4.4)
Interest on notes	4.3	4.5	4.7	30.1	30.8	2.3
Internal funds	(21.7)	(31.3)	44.2	114.7	86.8	(24.3) [3]
Contribution to municipalities	19.0	19.4	2.1	145.2	146.0	0.6
Other appropriations	3.3	3.0	(9.1)	23.3	25.0	7.3
Total	350.0	290.4	(17.0)	2,737.2	2,612.1	(4.6)

EXPLANATION OF MAJOR VARIATIONS

1. The decrease in the fuel adjustment and fuel expense for the fiscal year-to-date was due to lower fuel cost than budgeted.
2. In accordance with the forbearance agreement with insurers and bondholders controlling more than 60 percent of PREPA's power revenue bonds, (i) PREPA did not make any cash deposits to the sinking fund during the first seven months ended on January 2015 and (ii) a specified fractional amount of interest on power revenue bonds due October 1, 2014 and January 1, 2015 was transferred from the reserve account in the sinking fund to a separate, special defeasance fund held in the reserve account.
3. Internal funds have been accrued but not paid nor transferred to the Construction Fund. Actual amounts are maintained as part of the General Fund, to provide a reserve for current expenses.

PREPA's Results of Operations also contain a specific line item for the Contribution to Municipalities (CILT); however, as shown above, that item is separate from and below the line for Total Current Expenses.

The following table shows comparisons of PREPA's historic Fuel Adjustor and Purchased Power Adjustor Revenue compared with the Fuel and Purchased Power Expenses. The net amount of adjustor revenue above the related expense is also compared with the amounts reported by PREPA for the Contribution to Municipalities:

Table 40: Comparisons of PREPA's Historic Fuel Adjustor and Purchased Power Adjustor Revenue with the Fuel and Purchased Power Expenses and Net Fuel and Purchased Power Adjustor Revenue Over Expenses with Contribution to Municipalities

Comnparison of PREPA's Fuel Adjustor Revenue with Fuel Expense										
And Purchased Power Adjustor Revenue with Purchased Power Expense										
Companrison of Net Fuel and Purchased Power Adjustor Revenue over Expenses with Contribution to Municipalities										
Line No.	Description	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
		A	B	C	D	E	F	G	H	I
1	Fuel adjustment revenue	2,473.2	2,161.6	2,256.0	2,578.9	3,185.1	2,862.0	2,633.3	2,129.8	1,366.0
2	Fuel expense	(2,303.0)	(1,919.8)	(2,006.9)	(2,291.4)	(2,901.8)	(2,603.6)	(2,345.0)	(1,893.9)	(1,210.5)
3	Fuel extra expense claimed	(96.3)								
4	Total	73.9	241.8	249.1	287.5	283.3	258.4	288.3	235.9	155.5
5	Divide by Fuel adjustment revenue	2,473.2	2,161.6	2,256.0	2,578.9	3,185.1	2,862.0	2,633.3	2,129.8	1,366.0
6	Total	0.03	0.11	0.11	0.11	0.09	0.09	0.11	0.11	0.11
7	Purchase power revenue	745.8	752.6	777.5	740.3	766.5	845.3	904.0	884.2	764.0
8	Purchase power expense	(661.1)	(671.8)	(693.7)	(660.9)	(684.1)	(755.8)	(808.2)	(789.3)	(682.2)
9	Total	84.7	80.8	83.8	79.4	82.4	89.5	95.8	94.9	81.8
10	Divide by Purchase power revenue	745.8	752.6	777.5	740.3	766.5	845.3	904.0	884.2	764.0
11	Total	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
12	Fuel Total	73.9	241.8	249.1	287.5	283.3	258.4	288.3	235.9	155.5
13	Purchase Power Total	84.7	80.8	83.8	79.4	82.4	89.5	95.8	94.9	81.8
14	Total	158.6	322.6	332.9	366.9	365.7	347.9	384.1	330.8	237.3
15	Contributions to municipalities	188.3	131.7	190.4	172.9	241.2	141.9	160.9	233.7	(60.3)
16	Difference	(29.7)	190.9	142.5	194.0	124.5	206.0	223.2	97.1	297.6
Notes and Source:										
Source: All information is from PREPA's Monthly Operating Reports for the 12 month periods ending June 30										

As we discussed before, PREPA has historically billed a 12.36% surcharge adder component in its Fuel and Purchase Power Adjustors to its clients for CILT. This surcharge has produced Revenue in excess of Fuel and Purchased Power Expense for PREPA each year in the amounts shown on the above table.

PREPA has reported fuel and purchased power adjustor revenue and fuel and purchased power expenses on its Schedule A-1 REV in the Fuel Pass-through line. After PREPA's rates are re-set in the current rate case, PREPA will no longer be applying the Adjustor Revenue in excess of its Fuel and Purchase Power Expense that to cover expenses other than CILT.

The 0.89 factor historically used by PREPA in the denominator of the Fuel and Purchase Power Adjustors (i.e., the FCC and FCE rate components of PREPA's Tariff noted above) will be removed. PREPA's rate case proposes exclude the 0.89 factor from the denominator of the FCC and FCE adjustment formulas.

PREPA has proposed an alternative method for billing and collecting the CILT by including it in base rates would appear to be just and reasonable and, if properly calculated, would not interfere with the bondholder contractual rights that are articulated in the 1974 Trust Agreement.

PREPA's response to request no. 15 from the October 31, 2016 Conference Call claims that PREPA has achieved a $20 million annual run rate “savings” for "Reduction in CILT." This corresponds with the amount PREPA has reflected for FY2017 in its proposed revenue requirement.

PREPA has also stated in that response as follows concerning its billings to municipalities for consumption of electricity by for-profit ventures:

> Fiscal year-to-date, PREPA has billed municipalities an average of approximately $2 million per month for consumption of electricity by for-profit ventures. In some cases, municipalities have objected to these charges on the basis of a lack of clarity about the prevailing regulation as well as a lack of agreement about which of their ventures are for-profit and which are not. PREPA believes that these objections will be resolved in the near term and that it will collect on these billings at a rate of approximately 75% (or approximately $1.5 million per month) in FY2017. The additional $2 million of savings ... are expected to come from billing municipalities for their consumption above the statutory usage cap.

It is unclear to us from the information provided by PREPA to date whether and how the additional billings by PREPA to municipalities for consumption of electricity by for-profit ventures have been reflected in PREPA's revenue requirement.

Recommendations: We recommend that the Commission eliminate the collection of CILT from the Fuel and Purchase Power Adjustors. Such elimination of the 0.89 from the Fuel and Purchase Power Adjustors prospectively. (Eliminating the 0.89 factor is also consistent with PREPA's proposals for the going-forward versions of the Fuel and Purchased Power Adjustors.) As noted above, such elimination appears to be required by law.

We recommend that the CILT Subsidy be reflected as a specific line item in determining PREPA's base rate revenue requirement. For purposes of determining PREPA's base rate revenue requirement, we have currently reflected the amount of $51.783 million for FY2017.

We recommend that PREPA clarify exactly how and where the billings of approximately $2 million per month for consumption of electricity by for-profit ventures have been reflected in its revenue requirement.

VI. METHODS USED BY UTILITY REGULATORY COMMISSIONS TO MONITOR UTILITY OPERATIONS, FUEL PROCUREMENT AND CONSTRUCTION PROJECTS

We have been asked to provide information based on our experience for methods that have been used by utility regulatory commissions to monitor utility operations, fuel and purchased power procurement and major construction projects. We have therefore included in this chapter discussions of three methods that have been and are currently being used: (1) surveillance reporting, (2) management performance and regulatory financial audits, and (3) independent monitors.

A. Periodic Surveillance Reporting

One method of monitoring utility operations is via surveillance reporting. This can be done on a periodic basis, such as quarterly or annually. PREPA already prepares monthly reports to its governing board and makes those publicly available by posting them on its web site. Those could be utilized, possibly with some enhanced reporting, to aid in the Commission's monitoring of PREPA's operations. Since PREPA already has a process in place to produce monthly reports containing information that is useful for regulatory oversight, we are not recommending that a surveillance reporting regime be instituted for PREPA at this time. Continuing the monthly reports, possibly with some enhanced information (as described in Chapter VII below), is recommended for PREPA.

B. Management Performance and Regulatory Financial Auditing

Utility procurement of fuel and purchased power (as well as renewables) can be reviewed in detail outside of a rate case by having management performance and regulatory financial auditing. The focus of the management performance audit is to assure that best practices are being used to procure fuel and purchased power, as well as looking into the management of generating facilities. The focus of regulatory financial auditing is different than independent auditing of financial reports. Generally, the objective of independent auditing of financial reports is to assure that the financial information is reported in accordance with generally accepted accounting principles and does not contain material misstatements or omissions. Generally, the objective of regulatory financial auditing is to assure that costs being used for regulatory purposes, such as the basis of cost recovery via rates, are stated properly in compliance with the Uniform System of Accounts and are reasonable and prudently incurred, and that the costs being included in specific recovery mechanisms, such as fuel and purchased power adjustors or surcharges for renewables, are reasonable and comply with the purpose of those adjustors. We have attached to our report in Smith & Dady Ex. 7 illustrative examples of management performance and regulatory financial auditing guidance that has been used by auditors (including ourselves) working for the Public Utilities Commission of Ohio. One of the advantages of having the management performance and regulatory financial audits conducted outside of the context of a utility rate case is that the investigations are not constrained by rate case time clock rules, such as the 180 days requirement that applies to the Commission's review of PREPA's rates in a rate case.

C. Independent Monitors for Major Utility Construction Projects

The use of Independent Monitors to review and report upon major utility construction projects is another means of providing regulatory oversight. Independent monitoring teams consisting of engineers, economists and accountants are currently being utilized by the Georgia Public Service Commission to monitor the construction by Georgia Power Company of Plant Vogtle Units 3 and 4, which are new nuclear units, and by the Mississippi Public Utilities Staff to monitor the construction by Mississippi Power Company of the Kemper County Integrated Coal Gasification Combined Cycle ("IGCC") plant and related facilities. Under an independent monitoring arrangement, the engineers typically visit the construction site periodically, making observations and talking with the utility employees and contractor management personnel working on-site, and independently evaluating construction progress and identifying and reporting on problems and concerns, such as issues that are causing cost overruns and schedule delays. The economists and accountants that are part of the independent monitoring team typically do not visit the construction site but may visit utility offices to review accounting cost details and are involved with reviewing construction cost estimate updates and actual cost information off-site from records and budgets that are provided by the utility. Telephone conference calls among the independent monitoring team and regulatory commission and periodically between the team and the utility's construction management and financial officers are also typical of this form of regulatory monitoring of large-impact utility construction projects.

VII. IMPROVED REPORTING REQUIREMENTS

PREPA files monthly reports with its governing board. PREPA's monthly reports are available publicly and are posted on PREPA's web site. An example of one of PREPA's monthly reports, for June 2016, is attached to this report as Smith and Dady Ex. 6.

We believe that PREPA's monthly reports provide an array of information that is useful in regulatory monitoring of PREPA's operations.

We recommend that the following enhancements be considered for PREPA's monthly reporting:

- Short narrative explanations for significant variances (1) between budgeted and actual data and (2) between current prior year data.
- Information on Labor Costs, including how current month and year-to-date payroll, pensions, OPEBs and other employee benefit costs being incurred compare with prior year amounts and current year budgets.
- Information on PREPA's debt service coverage ratio.
- Until PREPA's financial restructuring is completed, information on the status of the financial restructuring, including significant events that have occurred during the reporting month.

We recommend that PREPA keep the Commission updated on its progress with participants to the RSA and other lenders concerning the financial restructuring, including efforts to obtain an investment grade credit rating for the new debt to be issued by PREPARC and meetings with members of the PROMESA board. PREPA should provide the Commission with copies of any formal presentations that it (or PREPARC) make to credit rating agencies or to the PROMESA board, and should provide a concise monthly narrative report to the Commission regarding the status of PREPA's financial restructuring.

VIII. FUEL AND PURCHASED POWER ADJUSTORS

Two of PREPA's largest expenses are for fuel and purchased power. PREPA currently recovers fluctuations in fuel and purchased power expense via special rate adjustor mechanisms that are adjusted monthly. PREPA has proposed certain revisions to those adjustor mechanisms, including the following: (1) revising the definition of costs that are included in the adjustors to conform with categories of Fuel Expense and Purchased Power Expense that are recorded on PREPA's books (versus basing the adjustors on oil prices), (2) removing the CILT component of the current adjustors (a factor of 0.89 has been included in the current versions of the adjustors to provide for CILT; however, that factor must be removed from the current adjustors and CILT must be provided for in a transparent manner, which PREPA proposes); (3) including a portion of fuel and purchased power costs in base rates, and having the adjustor mechanisms only address fluctuations above or below the amounts reflected in base rates; (4) prospectively having quarterly fuel and purchased power rate adjustments (rather than monthly), and (5) including an extra cost element for working capital to provide for the increased delay in addressing fuel and purchased power cost fluctuations in quarterly (rather than monthly) rate adjustments.

We are addressing the accounting costs that PREPA proposes to include in its Fuel and Purchased Power Adjustors. We also address the frequency of updating these Adjustors and the proposal by PREPA to include an added component for Working Capital in the Adjustors, where such proposal is based on revising the adjustor update frequency from monthly adjustments (as currently is being done) to less frequent quarterly adjustor updates.

A. Fuel Adjustor - PREPA Proposed Costs

In this section, we address the accounts that PREPA uses to record Fuel Expense, and that PREPA proposes to use prospectively for its Fuel Adjustor.

As presented in its filing on Schedule A-6, PREPA proposed to include the following costs in the Fuel Adjustor:

A. Purchase Fuels

1) Residual Number 6

2) Light Distillate No. 2 (Diesel)

3) Natural Gas

4) Propane

5) Additives

B. Cost of Fuel Transportation (40 ¢ per barrel)

C. Inspection

D. Laboratories

E. Storage

F. Handling

G. Delays

H. Taxes

1) Municipal Patent (applies to fuel No. 6 and 2)

2) Excise Tax (applies to fuel No. 2)

3) Federal Tax (applies to fuel No. 6 and 2)

I. Fuel Hedging

PREPA's response to CEPR-RS-05-04 stated the following information about the FERC accounts in which PREPA records such costs:

> All costs related to Fuel are registered in the following accounts:
>
> • Gas Power Generation – Fuel: account 01-4008, sub-account 54700
>
> • Steam Power Generation – Fuel: account 01-4009, sub-account 50100
>
> • Natural Gas Power Generation – Fuel: account 01-4041, sub-account 54701
>
> Costs registered in these accounts are used for the computation of the monthly amount to recover or reimburse to clients.
>
> All payables are registered initially on account 01-2321, sub-account 23225, with the exception of tank rental costs, fuel inspection and sampling, and the invoices from Natural Gas, which are on account 01-2321, sub-account 23215.

In response to CEPR-RS-05-06 PREPA provided information from July 2013 through June 2016 for its Fuel Expense for each of the above components. A summary of that information by fiscal year is shown in the following table:

Table 41: Fuel Expense by Component for FY2014 through FY2016

PREPA's Fuel Expense By Component				
July 2013 through June 2016 by Fiscal Year				
Line No.	Component of Fuel Expense	FY2014	FY2015	FY2016
		(A)	(B)	(C)
1	A. Purchase Fuels			
2	1) Residual Number 6	$ 1,367.1	$ 1,024.7	$ 523.3
3	2) Light Distillate No. 2 (Diesel)	$ 319.3	$ 361.9	$ 341.6
4	3) Natural Gas	$ 484.8	$ 419.8	$ 280.0
5	4) Propane	$ 0.2	$ 0.1	$ 0.1
6	5) Additives	$ -	$ -	$ -
7	B. Cost of Fuel Transportation (40 ¢ per barrel)			
8	C. Inspection	$ 0.4	$ 0.4	$ 0.6
9	D. Laboratories	$ 2.0	$ 1.1	$ 1.3
10	E. Storage	$ 10.7	$ 10.8	$ 11.4
11	F. Handling	$ 1.1	$ 1.5	$ 2.1
12	G. Delays	$ 0.2	$ -	$ -
13	H. Taxes (taxes)			
14	1) Municipal Patent (applies to fuel No. 6 and 2)	$ 8.3	$ 7.1	$ 3.5
15	2) Excise Tax (applies to fuel No. 2)	$ 4.1	$ 5.6	$ 8.8
16	3) Federal Tax (applies to fuel No. 6 and 2)	$ -	$ -	$ -
17	I. Fuel Hedging	$ 6.0	$ -	$ -
18	Totals	$ 2,204.0	$ 1,833.0	$ 1,172.7
Source: PREPA's response to CEPR-RS-05-06 Attach 01.xls				

PREPA's response to CEPR-RS-05-07(a) states that PREPA does not forecast or budget fuel costs by kind of expenses. On the other hand, as shown in Table 41, PREPA does record its actual Fuel Expense by components. All the details are included in the total cost of each type of fuel. For budget purposes PREPA excludes the 0.40¢ per barrel related to the handling cost, because it is included in the Production O&M costs. Since PREPA's Government Board did not approve a FY 2016 budget, the FY 2015 budget remained in force.

PREPA's response to CEPR-RS-05-07(a) provided the following budget amounts for the components of Purchased Fuel Expense:

1) Residual Number 6

The 2015 budget of Residual Number 6 was $1,312,585,780. The forecasted cost of Residual Fuel Oil No. 6 for fiscal year 2017 is $387,448,918.53.

2) Light Distillate No. 2 (Diesel)

The 2015 budget of Light Distillate No. 2 (Diesel) was $385,266,748. The forecasted cost of Distillate Fuel Oil No. 2 (Diesel) for fiscal year 2017 is $168,314,322.49.

3) Natural Gas

The 2015 budget of Natural Gas was $527,472,163. The forecasted cost of Natural Gas for fiscal year 2017 is $202,010,093.64.

4) Propane

The forecasted cost of fuel transportation (40¢ per barrel) for fiscal year 2017 is $5,921,743.42.[92]

As noted above, PREPA has indicated that it does not budget Fuel Expense by each of the components listed and that PREPA's board did not approve a FY2016 budget.[93] Using monthly fluctuations in PREPA's actual recorded fuel costs as the basis for the fuel adjustor would be one way of avoiding concerns about PREPA not having an approved budget, or not budgeting for Fuel Expense in the same detail listed in PREPA's Schedule A-6 and tracked by PREPA for accounting purposes.

PREPA's response to CEPR-RS-05-08 provided the following information about the Fuel Hedging costs that were incurred by PREPA in prior years:

> During fiscal year 2012, the Authority entered into a 2012 Commodity Swap Agreement that provided it with protection against increases in the price of fuel of oil No. 6 covering contracts for 10.2 million barrels from June 2012 through October 2013. The premium amount established for this swap was $29.2 million, which was amortized from June 2012 to October 2013.
>
> The Authority paid to its counterparties $6.4 million and $21.9 million for fiscal years 2014 and 2013, respectively. This derivative instrument expired in October 2013 and had no outstanding balance as of June 30, 2014.
>
> There have been no fuel price hedging strategies since the commodity swap that ended in October 2013 of FY2014.

PREPA's response to CEPR-RS-05-08(c) indicated that there have been no hedges initiated since the beginning of FY2014 and PREPA did not realize a gain or loss on the commodity swap at the end of FY2014.

Recommendations: PREPA has not incurred Fuel Expense for Additives in the last three fiscal years through FY2016, and has not incurred expense for Delays or Fuel Hedging in the last two fiscal years (FY2015 and FY2016). We recommend that such costs **not** automatically be included in PREPA's Fuel Adjustor, but rather, if PREPA is budgeting for such costs or actually incurs costs for Additives, Delays or Fuel Hedging, that PREPA first

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[92] Note: it is unclear from PREPA's response whether this is the cost for Propane or for Transportation.

[93] Although PREPA's governing board did not formally adopt a budget for FY2016, it appears that PREPA continued to update its short-term forecasts of fuel oil during FY2016, and PREPA did make monthly adjustments to its fuel and purchased power adjustor rates in FY2016.

petition the Commission, explaining its need and reasons for incurring such costs, and await a Commission ruling prior to including such costs in its Fuel Adjustor.

We recommend that the other categories of Fuel Expense be included in PREPA's Fuel Adjustor, subject to regulatory review.

We recommend that PREPA's fuel procurement be subject to a management performance audit to assure that PREPA is using best practices and that its purchases of fuel are prudent and reasonable, and that the costs included in PREPA's Fuel Adjustor be subject to periodic regulatory financial audits to assure that such costs have been properly accounted for and are reasonable.

B. Purchased Power Adjustor - PREPA Proposed Costs

In this section, we address the accounts that PREPA uses to record purchase power and renewables expense, and that PREPA proposes to use prospectively for its Purchased Power Adjustor.

In Schedule A-6 to is application, PREPA proposed to include the following costs in the Purchased Power Adjustor:

A. Energy Purchase to cogenerators AES and EcoEléctrica

1) Payment for Energy

2) Payment for Capacity

B. Energy Purchase to Renewable Energy Projects

1) Payment for Energy

2) Costs Associated with Renewable Energy Certificates (REC's)

a) Registration in the North American Renewables Registry

PREPA's response to CEPR-RS-05-12 indicates that all of the aforementioned costs are recovered through PREPA's current Purchased Power Adjustment Clause.

In response to CEPR-RS-05-09(a), PREPA stated that the costs for purchased power from AES and EcoEléctrica are recorded on its books in the following accounts:

> All costs related to Purchase Power AES and Ecoeléctrica are registered in the following accounts:
>
> • Ecoeléctrica: account 01-4014, sub-account 55500-050-609-0000 (PUERTO RICO POWER & ELECT/Other Power Supply Expense/ Purchased power/ Compra Energía Ecoeléctrica/ Unspecified)
>
> • AES: account 01-401, sub-account 55500-050-610-0000 (PUERTO RICO POWER & ELECT/Other Power Supply Expense/Purchased power/Compra Energía AES/Unspecified)

> Costs registered in these accounts are used for the computation of the monthly amount to recover or reimburse to clients.
>
> All payables are registered initially on account 01-2321, sub-account 23235 (Accounts Payable/Purchased Power-Ecoelectrica, AES y Energia Renovable).

PREPA provided copies of its invoices from AES and Ecoeléctrica for FY2014-2015, FY2015-2016, and FY2016-2017 in response to CEPR-RS-05-10 and CEPR-RS-05-11, respectively.

In response to CEPR-RS-05-09(a), PREPA stated that the costs for purchased power for renewables are recorded by PREPA as follows:

> Renewables: account 01-4042, subaccounts 54710 (Solar Power), 54711 (Wind Power), 54712 (Waste to Energy Power), 54713 (Landfill Gas), 54714 (Certificate of Renewal Energy), 54715 (Net Metering Customer 75%) to 54716 (Education Dept. 25%)
>
> Costs registered in these accounts are used for the computation of the monthly amount to recover or reimburse to clients. All payables are registered initially on account 01-2321, sub-account 23235 (Accounts Payable/Purchased Power-Ecoelectrica, AES y Energia Renovable).

In response to CEPR-RS-05-13 PREPA provided information on its historic costs for purchased power and renewables. In response to CEPR-RS-05-14, PREPA provided the following FY2016 actual and FY2017 budgeted information for Purchased Power and Renewables expenses by component:

> A1. Energy Purchase to cogenerator AES
>
> The values provided for fiscal year 2016 are historic figures.
>
> 1) Payment for Energy

Table 42: AES Payment for Energy for FY2016 and FY2017

Fiscal Year	AES Payment for Energy
2016	$150,298,640.40
2017	$149,190,627.09

2) Payment for Capacity

Table 43: AES Payment for Capacity for FY2016 and FY2017

Fiscal Year	AES Payment for Capacity
2016	$146,634,222.71
2017	$155,948,959.70

A2. Energy Purchase to cogenerator EcoEléctrica

The values provided for fiscal year 2016 are historic figures.

1) Payment for Energy

Table 44: EcoElectrica Payment for Energy for FY2016 and FY2017

Fiscal Year	EcoEléctrica Payment for Energy
2016	$136,679,450.40
2017	$161,876,137.62

2) Payment for Capacity

Table 45: EcoElectrica Payment for Capacity for FY2016 and FY2017

Fiscal Year	EcoEléctrica Payment for Capacity
2016	$195,140,972.86
2017	$225,557,014.44

B. Energy Purchase to Renewable Energy Projects

1) Payment for Energy

Table 46: Renewable Energy Projects Payment for Energy for FY2016 and 2017

Fiscal Year	Renewable Energy Projects Payment for Energy
2016	$44,505,691.17
2017	$114,402,755.91

3) Costs Associated with Renewable Energy Certificates (REC's)

Table 47: Renewable Energy Certificates Associated Costs for FY2016 and FY2017

Fiscal Year	Renewable Energy Certificates Associated Costs
2016	$9,260,434.74
2017	$21,417,517.61

a) Registration in the North American Renewables Registry

Table 48: Cost of Renewable Energy Registration in NAR for FY2016

Fiscal Year	Cost of Renewable Energy Registration in NAR
2016	$3,254.81

Recommendations: We recommend that the categories proposed by PREPA for Purchased Power and Renewables be included in PREPA's Purchased Power Adjustor.

We recommend that PREPA's procurement of purchased power and renewables be subject to a management performance audit to assure that PREPA is using best practices and that its purchases are prudent and reasonable, and that the costs included in PREPA's Fuel Adjustor be subject to periodic regulatory financial audits to assure that such costs have been properly accounted for and are reasonable.

C. Frequency of Updating the Fuel and Purchased Power Adjustors and PREPA's Proposal for an Added Working Capital Component

PREPA’s Fuel and Purchased Power Adjustors provide for the recovery by PREPA of fuel and purchased power costs, which are large and which historically have been volatile.

Currently PREPA's Fuel and Purchased Power Adjustor rates are adjusted monthly, primarily to reflect changes in fuel oil prices. PREPA's current tariff provision for the Fuel Adjustor provides for monthly adjustment based on fuel costs applicable to the billing period, which are defined as follows:

> Fuel cost applicable to the corresponding billing period. It is an average between the estimated fuel cost for the billing month and the historical fuel cost for the second month previous to the billing month, based on the fuel price for PREPA of a fuel oil barrel of 42 US gallons, plus transportation, storage, handling, and any other required expense before using it in PREPA’s generating units. The heating value of Residual oil #6 is used to convert natural gas measuring units into barrels.

PREPA proposes to have the Fuel and Purchase Power Adjustors updated on a quarterly basis, with the option to PREPA of updating more frequently if deemed necessary. PREPA's proposed Fuel Adjustor, as an example, provides as follows concerning the frequency of rate changes:

> Quarterly Filing
>
> PREPA shall make a filing for a proposed FCA factor before the end of the second week of the third month of each quarter with the PREC which will be proposed to go into effect with the first billing cycle of the first month of the following quarter. If a revised FCA factor is not approved the previous months' FCA factor shall remain in effect until a new factor is approved.
>
> Accelerated Adjustment
>
> Each month after final Fuel Expense and KWH sales are available to PREPA the company shall prepare a re-estimate comparing the re-estimated recovery of fuel expense for the quarterly period. If the re-estimated fuel expense deviated from the estimated fuel expenses by more than ten (10) percent PREPA shall re-estimate the Fuel Cost Adjustment factor to provide an expected value of zero for the quarterly time period.

As historically applied, PREPA's Fuel Adjustor and Purchased Power Adjustor have adjusted on a monthly basis.

Historically, PREPA's fuel costs have been both large and volatile, as demonstrated in the following table (which was compiled from PREPA's monthly reports):

Table 49: Historical Fluctuation of PREPA's Fuel Expense

Puerto Rico Electric Power Authority
Fluctuations in Monthly Fuel Expense
June 2012 through August 2016
(Millions of Dollars)

		Fuel Expense					Fuel Expense (Continued)		
Line No.	Month	Amount	Change from Prior Month $	Change from Prior Month %	Line No.	Month	Amount	Change from Prior Month $	Change from Prior Month %
		(A)	(B)	(C)			(A)	(B)	(C)
1	June 2012	$263.1			25	June 2014	$196.0		
2	July 2012	$239.9	($23.2)	-8.82%	26	July 2014	$201.2	$5.2	2.65%
3	Aug 2012	$253.9	$14.0	5.84%	27	Aug 2014	$217.7	$16.5	8.20%
4	Sept 2012	$250.4	($3.5)	-1.38%	28	Sept 2014	$201.0	($16.7)	-7.67%
5	Oct 2012	$240.6	($9.8)	-3.91%	29	Oct 2014	$215.1	$14.1	7.01%
6	Nov 2012	$211.3	($29.3)	-12.18%	30	Nov 2014	$155.9	($59.2)	-27.52%
7	Dec 2012	$196.9	($14.4)	-6.81%	31	Dec 2014	$143.6	($12.3)	-7.89%
8	Jan 2013	$182.8	($14.1)	-7.16%	32	Jan 2015	$117.9	($25.7)	-17.90%
9	Feb 2013	$237.6	$54.8	29.98%	33	Feb 2015	$115.9	($2.0)	-1.70%
10	Mar 2013	$210.3	($27.3)	-11.49%	34	Mar 2015	$132.2	$16.3	14.06%
11	Apr 2013	$199.2	($11.1)	-5.28%	35	Apr 2015	$134.1	$1.9	1.44%
12	May 2013	$195.1	($4.1)	-2.06%	36	May 2015	$133.3	($0.8)	-0.60%
13	June 2013	$186.3	($8.8)	-4.51%	37	June 2015	$126.0	($7.3)	-5.48%
14	July 2013	$204.7	$18.4	9.88%	38	July 2015	$127.3	$1.3	1.03%
15	Aug 2013	$220.0	$15.3	7.47%	39	Aug 2015	$126.3	($1.0)	-0.79%
16	Sept 2013	$204.4	($15.6)	-7.09%	40	Sept 2015	$132.6	$6.3	4.99%
17	Oct 2013	$225.5	$21.1	10.32%	41	Oct 2015	$140.6	$8.0	6.03%
18	Nov 2013	$186.5	($39.0)	-17.29%	42	Nov 2015	$110.0	($30.6)	-21.76%
19	Dec 2013	$165.0	($21.5)	-11.53%	43	Dec 2015	$101.3	($8.7)	-7.91%
20	Jan 2014	$165.9	$0.9	0.55%	44	Jan 2016	$71.3	($30.0)	-29.62%
21	Feb 2014	$184.7	$18.8	11.33%	45	Feb 2016	$66.7	($4.6)	-6.45%
22	Mar 2014	$213.8	$29.1	15.76%	46	Mar 2016	$71.0	$4.3	6.45%
23	Apr 2014	$189.7	($24.1)	-11.27%	47	Apr 2016	$73.3	$2.3	3.24%
24	May 2014	$188.8	($0.9)	-0.47%	48	May 2016	$91.8	$18.5	25.24%
25	June 2014	$196.0	$7.2	3.81%	49	June 2016	$98.4	$6.6	7.19%
					50	July 2016	$113.2	$14.8	15.04%
					51	Aug 2016	$110.6	($2.6)	-2.30%

Source: Colums A and D: PREPA's monthly reports
Other amounts are calculated

Month-to-month variances of $10 million or more in PREPA's Fuel Expense have been relatively frequent from June 2012 through August 2016. PREPA's Fuel Expense is a large and volatile component of PREPA's cost of providing electric service.

Table 50: Historical Fluctuation of PREPA's Purchased Power Expense

Puerto Rico Electric Power Authority									
Fluctuations in Monthly Purchased Power Expense									
June 2012 through August 2016									
(Millions of Dollars)									
		Purchased Power Expense					Purchased Power Expense (Continued)		
Line No.	Month	Amount	Change from Prior Month $	Change from Prior Month %	Line No.	Month	Amount	Change from Prior Month $	Change from Prior Month %
		(A)	(B)	(C)			(A)	(B)	(C)
1	June 2012	$54.6			25	June 2014	$77.7		
2	July 2012	$60.8	$6.2	11.36%	26	July 2014	$75.9	($1.8)	-2.32%
3	Aug 2012	$61.6	$0.8	1.32%	27	Aug 2014	$73.5	($2.4)	-3.16%
4	Sept 2012	$62.3	$0.7	1.14%	28	Sept 2014	$68.7	($4.8)	-6.53%
5	Oct 2012	$61.5	($0.8)	-1.28%	29	Oct 2014	$66.7	($2.0)	-2.91%
6	Nov 2012	$61.8	$0.3	0.49%	30	Nov 2014	$70.6	$3.9	5.85%
7	Dec 2012	$63.4	$1.6	2.59%	31	Dec 2014	$64.9	($5.7)	-8.07%
8	Jan 2013	$66.2	$2.8	4.42%	32	Jan 2015	$65.5	$0.6	0.92%
9	Feb 2013	$50.6	($15.6)	-23.56%	33	Feb 2015	$60.3	($5.2)	-7.94%
10	Mar 2013	$60.0	$9.4	18.58%	34	Mar 2015	$59.4	($0.9)	-1.49%
11	Apr 2013	$69.1	$9.1	15.17%	35	Apr 2015	$54.4	($5.0)	-8.42%
12	May 2013	$69.5	$0.4	0.58%	36	May 2015	$63.1	$8.7	15.99%
13	June 2013	$69.0	($0.5)	-0.72%	37	June 2015	$66.2	$3.1	4.91%
14	July 2013	$64.2	($4.8)	-6.96%	38	July 2015	$65.1	($1.1)	-1.66%
15	Aug 2013	$67.2	$3.0	4.67%	39	Aug 2015	$60.0	($5.1)	-7.83%
16	Sept 2013	$68.3	$1.1	1.64%	40	Sept 2015	$58.2	($1.8)	-3.00%
17	Oct 2013	$60.6	($7.7)	-11.27%	41	Oct 2015	$50.0	($8.2)	-14.09%
18	Nov 2013	$62.0	$1.4	2.31%	42	Nov 2015	$50.9	$0.9	1.80%
19	Dec 2013	$67.7	$5.7	9.19%	43	Dec 2015	$57.1	$6.2	12.18%
20	Jan 2014	$64.4	($3.3)	-4.87%	44	Jan 2016	$53.8	($3.3)	-5.78%
21	Feb 2014	$62.1	($2.3)	-3.57%	45	Feb 2016	$54.0	$0.2	0.37%
22	Mar 2014	$65.3	$3.2	5.15%	46	Mar 2016	$58.3	$4.3	7.96%
23	Apr 2014	$71.7	$6.4	9.80%	47	Apr 2016	$58.3	$0.0	0.00%
24	May 2014	$77.1	$5.4	7.53%	48	May 2016	$56.9	($1.4)	-2.40%
25					49	June 2016	$59.5	$2.6	4.57%
					50	July 2016	$59.0	($0.5)	-0.84%
					51	Aug 2016	$60.2	$1.2	2.03%
Source: Colums A and D: PREPA's monthly reports									
Other amounts are calculated									

Historically and currently, PREPA's fuel and purchased power adjustor rates have been adjusted monthly. The quarterly updating provides customers with a three-month period of rate stability. However, less frequent updating also could require PREPA to finance the difference between Adjustor Revenue and the Fuel and Purchase Power costs that have been incurred by PREPA. As noted earlier in our Report, PREPA continues to be in a financial emergency and does not have access to capital markets. As such, PREPA's ability to finance fuel costs via debt financing is doubtful. Under PREPA's current financial predicament, having less frequent updates of the fuel and purchased power adjustor rates could place additional financial strain on PREPA and could entail a need to provide for higher fuel and purchased power adjustor rates, in order to accommodate an additional adjustor component for working capital.

Recommendation: We recommend that PREPA's fuel and purchased power adjustors continue to be updated monthly. This will avoid having a build-up of deferred balances between adjustor revisions that PREPA would need to finance and would avoid having an additional charge component for Working Capital be imposed on customers. Additionally, continuing the monthly adjustment of the fuel and purchased power rates provides customers with more current signals about the real cost of electricity they are incurring.

D. Fuel and Purchased Power Expense in Base Rates

PREPA has proposed amounts for Fuel Expense and Purchased Power Expense in base rates of $0.3799/kWh and $0.04748/kWh, respectively.[94] PREPA Ex. 24.0 at page 18 acknowledges that PREPA's projection of fuel cost has changed since the original filing.

PREPA's response to request no. 9 from the October 31, 2016 conference call, for example, shows an updated PREPA fuel forecast for FY2017 of approximately $1.223 billion for Fuel Expense and $819.5 million for Purchased Power Expense. The PREPA updated forecast for Fuel Expense (before performance savings) is comparable with the FY2017 Fuel Expense recommendation (before performance savings) recommended by Commission Advisors Horowitz and Fisher of $1.225 billion.[95]

The amount of Fuel Expense and Purchased Power Expense in base rates are used in the Fuel Adjustor and Purchased Power Adjustor. Fuel and Purchased Power Expense amounts over (or under) the levels reflected in base rates are recovered by PREPA through those rate Adjustor mechanisms. Consequently, it is important that the levels of Fuel and Purchased Power Expense being recovered in base rates be stated with as reasonable accuracy as practicable when setting base rates.

As noted in Section IV-C-1 of our Report, we have updated the Fuel Expense to reflect the recommended amount we received from Commission Advisors Horowitz and Fisher of $1.117 billion ($1.225 billion before performance savings) less the $107.7 million of performance savings). On Smith and Dady Ex. 5, page 5 of 8, we show the calculation of the fuel expense in base rates of $0.06470 per kWh. We recommend that this amount be used rather than the amount proposed by PREPA.

On Smith and Dady Ex. 5, page 5 of 8, we also show the calculation of the purchased power expense in base rates of $0.04748 per kWh, which is the same amount proposed by PREPA. We recommend that this amount be used.

[94] *See, e.g.*, PREPA Ex. 4.0. *Also see*, PREPA Ex. 24.0, page 18, lines 363-366.

[95] It is noted that no adjustment to PREPA's original amount of Purchased Power Expense for FY2017 is being recommended by PREPA or the Commission Advisors.

IX. SUMMARY OF FINDINGS AND RECOMMENDATIONS

Chapter II - PREPA'S CONTINUING FINANCIAL CRISIS

Findings

4. PREPA is in a state of financial emergency that is likely to continue until PREPA's access to external financing on reasonable terms is restored.
5. PREPA reached a Restructuring Support Agreement ("RSA") with key creditors and a new special purpose entity, PREPA Revitalization Corporation ("PREPARC") that has been created for the purpose of issuing new securitization bonds.
6. The Commission granted PREPA a provisional rate increase on June 24, 2016 allowing PREPA to collect an additional $222 million annually above the revenue being collected through the then-current rates.
7. As a result of the RSA and additional work by PREPA with its lenders, and the Commission's authorization of a provisional rate increase, PREPA was able to make it through its July 1, 2016 liquidity crisis, but PREPA's financial position remains precarious.
8. PREPA's bond ratings are poor and PREPA is viewed by the investment community as very risky. As such, PREPA remains generally unable to access external financial markets at reasonable terms on its own.
9. PREPA's bond ratings have deteriorated to below investment grade whereby all three of the major bond rating agencies have given PREPA a credit rating of "near default" or "default," , which means in their view that the Company is unable to or very likely to be unable to meet its financial obligations to its creditors, without a major financial restructuring.
10. PREPA is currently working with a majority of its creditors to restructure its debt in order to lower costs for the portion of its debt held by those lenders.
11. PREPA's November 9, 2016 Formula Rate Mechanism Update/Responses to Questions indicates (at page 3) that one of PREPA's special circumstances is that PREPA has no practical access to capital markets.
12. PREPA's Net Position, as defined by the Governmental Accounting Standards Board, is the residual of all other elements presented in PREPA's statement of financial position.
13. In June 2008, PREPA's Net Position reflected a positive balance of approximately $143 million.
14. PREPA's Net Position began deteriorating markedly in 2009 and such deterioration has continued through fiscal year 2016 and beyond. By June 2016, PREPA had a Net Position deficit approaching $2 billion.

15. The deterioration of PREPA's Net Position by over $2 billion from June 2008 through June 2016 is one indication that PREPA's rates for electric service during this period have been insufficient to recover PREPA's cost of providing electric service.
16. Being unable to access bond markets and having a Net Position deficit of approximately $2 billion are indications of the severe financial difficulties that PREPA has been experiencing.
17. At Exhibit I-2 of its application, PREPA has provided audited financial statements for the fiscal year ended June 30, 2014, which it used as the starting point in its revenue requirement filing. However, virtually every line item in PREPA's results of operations for FY2014 was significantly adjusted and/or replaced by PREPA to reflect PREPA's FY2017 projected results. In other words, other than PREPA using the FY2014 data to set up its revenue requirement insofar as reflecting the various categories in its calculation (e.g., Labor and Non-labor Operating Expenses, Bad Debt Expense, Debt Service, Capex, etc.), the audited FY2014 data bears little resemblance to what PREPA is requesting in its filing for FY2017. In essence, PREPA has substituted its budgets and projections for FY2017 for the audited FY2014 results of operations and is using is FY2017 projections as the basis for its proposed revenue requirement.
18. PREPA's fiscal year is comprised of the 12-month period ending June 30.
19. PREPA's audited financial statements for FY2014 (the 12-month period ending June 30, 2014) are the most current audited financial statements that are available for PREPA. However, since more than two full fiscal years have passed since June 30, 2014, the FY2014 information is stale and is unrepresentative of PREPA's going-forward operations.
20. PREPA's FY2014 audited financial statements indicate that PREPA is using the accounting rules prescribed by Governmental Accounting Standards Board and the Uniform System of Accounts prescribed by the Federal Energy Regulatory Commission as the basis for its accounting.
21. In the notes to PREPA's audited FY2014 financial statements, the Company's independent auditor, Ernst & Young, highlighted the dire financial condition of PREPA and some of the significant challenges PREPA is facing, including whether PREPA has the ability to continue as a going concern.
22. PREPA has not provided audited financial statements for the fiscal year ended June 30, 2015. PREPA's response to CEPR-RS-01-02 indicated that PREPA's audited FY2015 financial statements would be made available by November 2016. However, PREPA's more recent response to request No. 11 from the October 31, 2016 conference call stated that Ernest & Young has indicated that the FY2015 financial statements will be ready in January 2017.
23. PREPA's updated FRM proposal indicates that the "FRM processes will kick off upon receipt of audited financials or other acceptable reports (October) every year." PREPA's proposed timeline for the FRM indicates that an initial step is to: "Obtain financial statements from previous FY (preferably audited)." Therefore, delays in

PREPA providing its audited financial statements could thus interfere with the optimal functioning of any procedure to update PREPA's revenue requirement and the contemplated reconciliations. In addition, the absence of audited financial statements for PREPA for FY2015 or for subsequent fiscal years on a timely basis could present concerns for creditors.

24. PREPA's operating results for the 12 months ended June 30, 2016 are presented on PREPA's Monthly Report to the Governing Board for June 2016, which is the most recent complete fiscal year information available, although these results have not been audited. We have used the results for FY2016 as one frame of reference for reviewing the reasonableness and accuracy of certain components of PREPA's requested revenue requirement, which, as noted above, is largely based on PREPA's projections for FY2017.
25. PREPA's approved budget for FY2017 along with the related PREPA/AlixPartners Business Plan, are the two primary sources of PREPA's estimated FY2017 based revenue requirement. The PREPA/AlixPartners' Business Plan was included with PREPA's rate application as PREPA Exhibit I-4.
26. PREPA's business plan and those additional materials from the Chief Restructuring Officer contain information concerning how PREPA is anticipating achieving cost savings and making operational improvements in various areas.

Recommendations

1. PREPA continues to be an emergency financial crisis because it cannot access external debt markets at reasonable costs. Therefore, one of the primary and most important objectives of this rate case is to continue to facilitate PREPA's path towards re-attaining financial viability.
2. PREPA should be required to address why it cannot produce audited financial statements on a timely basis going-forward. Going forward, PREPA should take necessary steps to assure that its audited financial statements can be completed and made available on a timely basis.

Chapter III - REVENUE REQUIREMENT METHODOLOGIES FOR PREPA'S BASE RATES

Findings

1. The PREPA revenue requirements panel (Pampush, Porter, and Stathos) discuss three different types of revenue requirement models that could be used to determine PREPA's base rates revenue requirement in this proceeding, including: (1) the modified cash basis; (2) cash basis; and (3) accrual basis.
2. PREPA will collect a certain portion of its full revenue requirement through a Transition Charge ("TC"). In a separate proceeding, the Commission approved the methodology under which PREPA, through the TC, will collect costs related to the new securitization debt to be issued by PREPARC and for uncollectibles related to the TC revenue requirement. The Transition Charge portion of PREPA's total

revenue requirement is dependent on PREPA's negotiations with bondholders. It is not an issue in this proceeding.

3. The TC rates are based on the recovery of the debt service costs for the restructured debt to be issued and administered by PREPARC, which is a new separate corporation created for that purpose. Once the debt restructuring is completed, the Transition Charge rates will be determined by PREPARC, checked for mathematical accuracy by the Commission and collected from ratepayers in a separate Transition Charge on their bills, which will be updated quarterly.
4. PREPA's proposed total revenue requirement of $3.5 billion consists of a $2.775 billion of base rate revenue requirement and a Transition Charge revenue requirement of $503 million. The TC revenue requirement is based on estimates of $394 million for PREPARC Securitization Debt Service and $109 million for the Transition Charge Gross-Up for the Collections Lag and Uncollectible Revenue. As such, the purpose of this PREPA base rate case is to determine the revenue requirement that PREPA will have relating to its provision of electric utility service, exclusive of the Transition Charges, i.e., to determine the appropriate amount of PREPA's base rates revenue requirement.
5. The rate base/rate of return ratemaking model is one that is widely used in the U.S. to set rates for investor-owned utilities. The PREPA advisors refer to this methodology in their revenue requirement testimony as the "Accrual Basis" Approach. The rate base/rate of return model is not well-suited for PREPA for a number of reasons, including that PREPA has no equity capital (as noted above, PREPA's Net Position has a negative (deficit) balance of approximately $2 billion). Attempting to determine and apply a cost of equity for PREPA would amount to speculation.
6. The debt service coverage ratio (DSCR) methodology is commonly used for rate setting in the public power industry (i.e., government-owned utilities), as well as for public utilities that are organized as member cooperatives. The PREPA advisors term this the "Cash Basis approach" to ratemaking. In this method, the revenue requirement is comprised of all the utility's operating expenses, plus the expected debt service costs multiplied by the DSCR.
7. The PREPA revenue requirement panel also offered a ratemaking model which they deem a "modified cash basis approach." This revenue requirement model is designed to cover all of the Company's cash requirements—operating expenses (plus subsidies such as CILT) plus debt service plus capital expenditures. Under this approach, PREPA proposes to recover capital expenditures from PREPA ratepayers annually on a dollar-for-dollar basis. The "Modified Cash Basis" approach proposed by the PREPA advisors is an unusual ratemaking model that is quite favorable to the utility as it requires ratepayers to pay directly on a dollar-for-dollar basis in the current period for the all of the utility's capital expenditures; whereas the normal treatment of capital expenditures is for the utility to recover them over either the useful life of the assets that are being used to provide utility service (this is a component of the rate base/rate of return approach) or the life of the bonds that are

used to finance the utility assets (the debt service and coverage on such bonds are a component of the DSCR approach).

8. The "modified cash basis" approach is a form of ratemaking that may be appropriate in limited circumstances, such as where the utility has experienced a financial emergency and has no access to capital other than its ratepayers from which to fund capital expenditures. The "modified cash basis" approach should not be considered as a permanent ratemaking model for PREPA. Rather, it should be viewed as a temporary means of deriving an "emergency" component of the revenue requirement for PREPA as part of the overall process of restoring PREPA's financial health.
9. One aspect of the "modified cash basis" revenue requirement model that would be beneficial to PREPA in its current financial predicament is including the Company's near-term capital expenditures in the revenue requirement to be funded currently by ratepayers. While that aspect is something that should be avoided in any permanent rate making mechanism, and should not continue once PREPA's access to financial markets has been restored, having current ratepayer funding of necessary current capital expenditures deserves consideration in this proceeding given PREPA's dismal financial condition and its inability to access capital markets to issue new financing at all or on reasonable terms.
10. The Commission Advisors are presenting a fourth revenue requirement model for consideration in the current PREPA rate case. This "Modified DSCR" method combines the best features of the DSCR approach that is commonly used for government owned utilities, along with recognition that PREPA requires a current source of financing for its capital expenditures. Ratepayers will need to be that source until PREPA's ability to access financial markets is re-established. Under this "Modified DSCR" method, PREPA's revenue requirement is the sum of all operating expenses and debt service costs (including debt service coverage margin) plus an amount to provide for ratepayer funding of PREPA's reasonable and necessary capital expenditures in the current year that are in excess of the debt service coverage margin. This method recognizes that the cash flows available to the utility from the debt service coverage margin will be available to fund expected capital expenditures. If the Company's capital expenditure needs exceed the cash flows available from debt service coverage margin, then an additional increment termed "Additional CapEx" is added to the revenue requirement to provide for the additional monies necessary to meet the utility's prudent and reasonable construction needs.

Recommendations

1. We recommend that the rate base/rate of return ratemaking model not be used for PREPA in this proceeding for the reasons described in this report.
2. Once PREPA is able to regain access to the capital markets, i.e., once PREPA emerges beyond the current financial emergency situation and can issue new bonds based on

its own credit rating (i.e., not through another entity such as PREPARC), a DSCR-based ratemaking methodology should be employed to determine rates that will be supportive for PREPA's operations and financial position and that will not require PREPA's ratepayers to fund capital expenditures on a dollar-for-dollar basis in the rate year as part of PREPA's revenue requirement.

3. Until PREPA's financial position improves to the point where it can successfully issue reasonable-cost debt, including a provision for ratepayer funding of necessary capital expenditures in the rate year revenue requirement would be a functional short to immediate-term solution to address PREPA's financial condition of not having access to financial markets.
4. Since PREPA is in a state of financial emergency and cannot obtain external financing based on reasonable terms, ratepayers become the only available source for financing PREPA's needed capital expenditures. PREPA must make reasonable and necessary capital expenditures to be able to continue to provide reliable electric service and currently has no other reliable options for obtaining those monies other than from its ratepayers. Therefore, it is reasonable in this unusual circumstance to modify the standard DSCR ratemaking model to account for ratepayer funding of PREPA's necessary capital expenditures during this emergency period when PREPA has not other sources of financing. Therefore, we recommend that the Commission utilize the Modified DSCR ratemaking model for purposes of determining PREPA's base rate revenue requirement in the current rate case.
5. PREPA's capital budget for this case, as well as any future budget undertaken during the period in which PREPA is unable to access investor-supplied capital, should be *only the minimum necessary* to provide safe and reliable service to its customers, in order to minimize the impact of the financial emergency aspect of this ratemaking policy modification on ratepayers. Large capital projects that would be costly or projects of marginal benefit, should not be undertaken, until the funds necessary to finance those projects over longer periods that are closer to the useful life of those utility assets are available from investors. PREPA also should not be incurring capital expenditures on projects which are inconsistent with the Modified Integrated Resource Plan that the Commission has approved. The Modified DSCR ratemaking model should thus be viewed as a temporary solution to the unique financial problems currently faced by PREPA and its customers.

Chapter IV - PREPA'S REVENUE REQUIREMENT

<u>Findings</u>

<u>Revenue Requirement Claimed by PREPA in its Application</u>

1. PREPA's requested revenue requirement of $3.462 billion is shown on PREPA Schedule A-1 REV and is based on PREPA's projections for FY2017.
2. PREPA shows a base rate revenue requirement of $2.959 billion and a PREPARC revenue requirement of $503 million, which includes $394 million of debt service

for securitization and $109 million for gross-up for the collections lag and uncollectible revenue. Only the base rate revenue requirement for PREPA is being addressed in this rate case.

PREPA Updates and Corrections

3. PREPA has submitted a number of corrections to its original filing that affect the revenue requirement. Specifically, on June 24, 2016, PREPA filed a revision to Schedule A-1, which shows the components for PREPA's cost of service that were considered by the Company in deriving its claimed base rate revenue deficiency of approximately $222 million, as well as the separate components of the initial Transition Charge revenue requirement which total approximately $503 million. The sum of PREPA's claimed base rate revenue deficiency and the Transition Charge revenue requirement is approximately $725 million.
4. PREPA rebuttal testimony filed on November 16-17, 2016 made certain revisions to its requested revenue deficiency, which reduce its previously requested amount of $222 million by $44 million to its revised amount of $178 million.
5. The revisions contained in PREPA's rebuttal testimony that affected the revenue requirement deficiency involved the following three items: (1) Removal of a subsidy double-count of approximately $37 million that was an error in PREPA's previous calculations of its revenue deficiency; (2) Making equal and offsetting adjustments to Fuel and Purchased Power Expense and Fuel and Purchased Power Adjustor Revenue of $182.4 million for "removal of 11% gross up" and (3) Reducing its estimate of FY2017 Bad Debt Expense by approximately $6.5 million based on the reduced amount of revenue requirement.

Fuel Expense

6. PREPA's revenue requirement on Schedule A-1 REV reflects $656 million of Fuel Expense, which is based on PREPA's forecasts for FY2017 as well as PREPA's assumptions about fuel savings. Specifically, PREPA's filing reflects projected FY2017 fuel expense of $763.7 million, which the Company then reduced by $107.7 million to reflect projected fuel performance savings for FY2017.
7. PREPA has provided information showing that its projected fuel improvement performance is being achieved. Therefore, no adjustment is being recommended to the $107.7 million of fuel performance improvements that is currently offsetting PREPA's projected fuel expense.
8. PREPA's projected Fuel Expense of $656 million for FY2017 is affected by fuel oil prices from a forecast that was prepared several months ago. PREPA's estimated FY2017 Fuel Expense is substantially lower than the amounts for FY2014 of $2.345 billion, and for projected FY2015 and FY2016 of $1.901 billion and $1.015 billion, respectively as shown in PREPA's Rate Case Financial Model.
9. We reviewed PREPA's actual accounting information from its trial balances concerning Fuel Expense and noted that for fiscal years ended 2014, 2015, and

2016, PREPA incurred Fuel Expense totaling $2.345 billion, $1.894 billion and $1.211 billion, respectively.

10. Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's budgeted Fuel Expense for prudence and concluded that PREPA under-budgeted Fuel Expense for FY2017 by $461.3 million. Drs. Fisher and Horowitz show that a reasonable budget for FY2017 Fuel Expense (before the performance improvements) would be approximately $1.225 billion. The Fisher/Horowitz amount of FY2017 Fuel Expense (before performance improvements) of $1.225 billion is comparable to PREPA's own more recent fuel forecast, which shows that PREPA expects FY2017 Fuel Expense to be approximately $1.223 billion (before performance improvements).
11. PREPA did not update its FY2017 Fuel Expense in its November 15, 2016 rebuttal filings.

<u>Purchased Power Expense</u>

12. PREPA's revenue requirement on Schedule A-1 REV reflects $819.9 million of Purchased Power Expense, which number is based on PREPA's forecasts for FY2017 as well as PREPA's assumptions about purchased power cost savings. Specifically, PREPA based its forecasted Purchased Power Expense on (1) forecasted purchased power expense of $828.4 million per the Company's approved annual budget for FY2017; and (2) and purchased power performance improvements which PREPA's expects to generate savings totaling $8.5 million.
13. The $8.5 million of savings relates to the optimization of generation dispatch and is related to $13.2 million of fuel performance savings that are included in the aforementioned $107.7 million of Fuel Expense performance improvement savings. The $8.5 million of performance savings is incorporated in PREPA's overall performance improvement adjustment of $116.2 million as reflected on Company Schedule A-2.
14. PREPA's projected Purchased Power Expense of $819.9 million for FY2017 compares with the amounts for FY2014 of $807.6 million, and with the PREPA estimated amounts for FY2015 and FY2016 of $783.9 million and $759.1 million, respectively, as shown in PREPA's Rate Case Financial model.
15. We reviewed PREPA's actual accounting information from its trial balances concerning Purchased Power Expense. For the fiscal years ended 2014, 2015, and 2016, PREPA recorded Purchased Power Expense totaling $807.6 million, $789.7 million and $682.2 million, respectively.
16. Commission Advisors Fisher and Horowitz of Synapse reviewed PREPA's budgeted Purchased Power Expense for prudence and reasonableness. They are not recommending any specific adjustments to PREPA's projected FY2017 Purchased Power Expense.
17. We have used PREPA's projected FY2017 Purchased Power Expense amount for deriving the Company's base rate revenue requirement.

PREPA Projections for Labor and Non-Labor O&M Expenses for FY2017

18. PREPA's Rate Case Financial Model reflects projected O&M labor expense totaling $434.9, which consists of Salaries totaling $280.4 million and Pension & Benefits totaling $154.6 million.
19. PREPA's Rate Case Financial Model reflects projected O&M non-labor expense totaling $227.6 million.
20. PREPA's Rate Case Financial Model reflects projected non-fuel performance savings totaling $102.8 million, which consists of three components including Customer Service, Procurement and Other (Net) and which total $23.8 million, $55 million and $24 million, respectively.
21. To calculate its projected O&M expenses for FY2017, PREPA began by using its recorded FY2014 O&M Expenses as a starting point. Specifically, PREPA derived its proposed FY2017 O&M expenses by calculating the sum of the (1) projected total O&M labor expense, (2) projected non-labor O&M expense and (3) projected non-fuel performance improvements. PREPA multiplied that sum by the ratio of each individual category to its total recorded FY2014 O&M expense.
22. In its requested revenue requirement, PREPA has reflected (1) Generation Expenses of $122.4 million; (2) Transmission Expenses of $34.2 million; (3) Distribution Expenses of $169.3 million; (4) Customer Billing Expenses of $84.9 million; and (5) Administrative and General Expenses of $148.9 million . The Company's projected expenses for each of these categories were calculated by adding PREPA's (1) projected total O&M labor budget, (2) projected total non-labor O&M budget, and (3) projected total non-fuel performance improvements. PREPA multiplied that sum by FY2014-based allocation ratios.
23. Commission consultants Horowitz and Fisher have determined that PREPA's proposed labor and non-labor expense budgets for FY2017 are inadequate to provide for the safe and reliable operation of the electric system. As discussed in the Recommendations section for this chapter, we have reflected in our proposed revenue requirement the impact of their recommended adjustments to PREPA's FY2017 budgeted amounts for Generation Expense, Transmission Expense, Distribution Expense, Administrative and General Expense, and Capital Expenditures.

Generation Expenses

24. PREPA has reflected Generation Expenses of $122.4 million in its requested revenue requirement. The Company's projected Generation Expenses were calculated by incorporating PREPA's (1) projected total O&M labor budget, (2) projected total non-labor O&M budget, and (3) projected total non-fuel performance improvements. Specifically, PREPA derived the proposed FY2017 Generation Expense of $122.4 million by multiplying the sum of its projected total O&M labor budget, projected non-labor O&M expense, and projected non-fuel performance

improvement by the percentage of FY2014 O&M expenses that related to Generation Expenses.

25. PREPA's FY2017 amount for Generation Expenses of $122.4 million compares with the following amounts from FY2014, and PREPA's estimates for FY2015, and FY2016: $160.5 million, $145.4 million and $126.3 million, respectively, as shown in PREPA's Rate Case Model.
26. We reviewed PREPA's actual accounting information from its trial balances concerning Generation Expense. For fiscal years ended 2014, 2015, and 2016, PREPA recorded Generation Expense totaling $160.5 million, $141.2 million and $134.7 million, respectively.

<u>Transmission Expenses</u>

27. PREPA has reflected Transmission Expenses of $34.2 million in its requested revenue requirement. The Company's projected Transmission Expenses were calculated by incorporating PREPA's (1) projected total O&M labor budget, (2) projected total non-labor O&M budget, and (3) projected total non-fuel performance improvements. Specifically, PREPA derived the proposed FY2017 Transmission Expense of $34.2 million by multiplying the sum of its projected total O&M labor budget, projected non-labor O&M expense, and projected non-fuel performance improvement by the percentage of FY2014 O&M expenses that related to Transmission Expenses.
28. PREPA's FY2017 amount for Transmission Expenses of $34.2 million compares with the following amounts from FY2014, and PREPA's estimates for FY2015, and FY2016: $44.9 million, $40.7 million and $35.3 million, respectively, as shown in PREPA's Rate Case Financial Model.
29. We reviewed PREPA's actual accounting information from its trial balances concerning Transmission Expense and noted that for fiscal years ended 2014, 2015, and 2016, PREPA recorded Transmission Expense totaling $44.9 million, $36.5 million and $34.1 million, respectively.

<u>Distribution Expenses</u>

30. PREPA has reflected Distribution Expenses of $169.3 million in its requested revenue requirement. The Company's projected Distribution Expenses were calculated by incorporating PREPA's (1) projected total O&M labor budget, (2) projected total non-labor O&M budget, and (3) projected total non-fuel performance improvements. Specifically, PREPA derived the proposed FY2017 Distribution Expenses of $169.3 million by multiplying the sum of its projected total O&M labor budget, projected non-labor O&M expense, and projected non-fuel performance improvement by the percentage of FY2014 O&M expenses that related to Distribution Expenses.
31. PREPA's FY2017 amount for Distribution Expenses of $169.3 million compares with the following amounts from FY2014, and PREPA's estimates for FY2015, and

FY2016: $222.0 million, $201.1 million and $174.6 million, respectively, as shown in PREPA's Rate Case Model.

32. We reviewed PREPA's actual accounting information from its trial balances concerning Distribution Expense and noted that for fiscal years ended 2014, 2015, and 2016, PREPA recorded Distribution Expense totaling $222.0 million, $197.4 million and $193.3 million, respectively.

Customer Billing Expenses

33. PREPA has reflected Customer Billing Expenses of $84.9 million in its requested revenue requirement. The Company calculated its projected Customer Billing Expenses by incorporating the (1) projected total O&M labor budget, (2) total non-labor O&M budget, and (3) total non-fuel performance improvements. Specifically, PREPA derived the proposed FY2017 Customer Billing Expense of $84.9 million by multiplying the sum of its projected total O&M labor budget, projected non-labor O&M expense, and projected non-fuel performance improvements by the percentage of FY2014 O&M expenses that related to Customer Billing Expenses.
34. PREPA's FY2017 amount for Customer Billing Expenses of $84.9 million compares with the following amounts from FY2014, and PREPA's estimates for FY2015, and FY2016: $111.4 million, $100.9 million and $87.6 million, respectively, as shown in PREPA's Rate Case Model.
35. We reviewed PREPA's actual accounting information from its trial balances concerning Customer Billing Expense and noted that for fiscal years ended 2014, 2015, and 2016, PREPA recorded Customer Billing Expense totaling $111.4 million, $101.7 million and $93.3 million, respectively.

Administrative and General Expenses

36. PREPA has reflected Administration and General Expenses of $148.9 million in its requested revenue requirement. The Company's projected Administration and General Expenses were calculated by incorporating PREPA's (1) projected total O&M labor budget, (2) projected total non-labor O&M budget, and (3) projected total non-fuel performance improvements. Specifically, PREPA derived the proposed FY2017 Administration and General Expense of $148.9 million by multiplying the sum of its projected total O&M labor budget, projected non-labor O&M expense, and projected non-fuel performance improvement by the percentage of FY2014 O&M expenses that related to Administration and General Expenses.
37. PREPA's FY2017 amount for Distribution Expenses compares with the following amounts from FY2014, FY2015, and FY2016: $195.3 million, $176.9 million and $153.6 million, respectively, as shown in PREPA's Rate Case Model.
38. We reviewed PREPA's actual accounting information from its trial balances concerning Administrative and General Expense and noted that for fiscal years ended 2014, 2015, and 2016, PREPA recorded Administrative and General Expense totaling $195.3 million, $210.9 million and $206.6 million, respectively.

39. We noted that there are large discrepancies in the FY2015 and FY2016 amounts of Administrative and General Expense from PREPA's trial balances compared to the FY2015 and FY2016 amounts that are contained in PREPA's Rate Case Financial Model. Prior to approving an amount for A&G Expense for inclusion in the FY2017-based revenue requirement, the Commission should obtain explanations from PREPA of those FY2015 and FY2016 differences.

<u>Bad Debt Expense</u>

40. PREPA reflected Bad Debt Expense of $85.4 million in its requested base rate revenue requirement, which is based on an uncollectibles rate of 2.97%. As discussed in the Company's updated business plan, PREPA incurred a Gross Bad Debt expense of 2.97% in FY2016 and this assumption was used to determine bad expense calculations on a going forward basis.
41. PREPA's proposed Bad Debt Expense was calculated by multiplying the 2.97% uncollectibles rate by PREPA's proposed amounts for these components of the cost of providing electric service: (1) fuel and purchased power expense; (2) non-fuel O&M expense; (3) non-fuel performance improvements; (4) CILT subsidy recovery (rate base component); (5) Energy Administration Assessment; (6) proposed capital expenditures; (7) Debt Service; and (8) Other Income.
42. A review of PREPA's recorded Bad Debt Expense in its trial balances for the fiscal years ended 2014, 2015 and 2016 revealed that PREPA's Bad Debt Expense was substantially less in FY2015 and FY2016 versus FY2014.
43. We noted that there are large discrepancies in the FY2015 and FY2016 amounts of Bad Debt Expense from PREPA's trial balances compared to the FY2015 and FY2016 Bad Debt Expense amounts that are contained in PREPA's Rate Case Financial Model. Prior to approving an amount for Bad Debt Expense for inclusion in the FY2017-based revenue requirement, the Commission should obtain explanations from PREPA of those FY2015 and FY2016 differences.

<u>Energy Administration Assessment</u>

44. PREPA's revenue requirement request includes $5.8 million for the Energy Administration Assessment, which is the regulatory fee that PREPA pays each year to the Commission as established by Article 6.16(c) of Act 57-2014. This amount was verified to the two invoices sent by the Commission to PREPA.

<u>Total Subsidy Recovery in Base Rates</u>

45. Historically for ratemaking purposes PREPA has reflected recovery of the Contribution In Lieu of Taxes (CILT) by incorporating a 0.89 factor in the denominator of its Fuel and Purchased Power Adjustors. For FY2017, PREPA has reflected CILT of $51.784 million. Act 57 requires that the CILT be removed from those Adjustors.

46. On a going-forward basis, CILT will no longer be collected by PREPA via the 0.89 factor that had been in the denominator of its Fuel and Purchased Power Adjustors. Rather, CILT will be included in PREPA's base rate revenue requirement. We have reflected the $51.784 million proposed by PREPA for the Contribution to Municipalities as the amount to be included in base rates.
47. We have reflected the Public Lighting subsidy amount of $93.242 million in determining PREPA's revenue requirement.
48. Commission Advisor Chernick has identified the following double counts in his detailed review of PREPA's proposed Special Customer Subsidies and PREPA's revenue at existing rates: (1) $524,933 for the General Agricultural Service Tariff; (2) $16.4 million for Low-Income Consumer Subsidies; and (3) $20.1 million for the Fixed Public Housing Rate. The total amount of these double-counted items is $37.040 million. This double-count needs to be removed from the derivation of PREPA's base rate revenue requirement deficiency.

Other Income

49. PREPA has included the estimated amount of $38.925 million in its filing as Other Income. Because PREPA recovers some of its cost of proving electric service in the form of Other Income PREPA has subtracted this amount on its Schedule A-1 REV in deriving its claimed base rate revenue deficiency.
50. For purposes of comparing the FY2017 amount used by PREPA to prior years and performing a reasonableness test, we reviewed PREPA's actual accounting information from its trial balances in an attempt to reconcile the amounts related to Other Income to the Other Income amounts reflected on the Company's monthly reports to the Governing Board. However, we were unable to tie the amounts shown as Other Income on the monthly reports to the trial balances. Prior to determining the amount of Other Income to reflect in setting PREPA's base rate revenue requirement, some additional explanations, including information on prior year amounts, should be obtained from PREPA.

Debt Service Principal and Interest for Legacy Debt

51. PREPA's revenue requirement makes certain assumptions about the financial restructuring and securitization. Specifically, under PREPA's assumptions, some legacy debt would remain at PREPA, i.e., would not be retired, replaced with newly issue debt, or recovered through the Transition Charge. We call this amount "legacy debt" or "retained legacy debt."
52. PREPA's Schedule A-1 REV reflects approximately $314 million of debt service on that assumed retained legacy debt. The $314 million consists of approximately $172 million of principal payments and $143 million of interest. We have not proposed any adjustments to this debt service amount. These amounts will likely be different once PREPA's financial restructuring is completed. At present, actual information on the legacy debt to be retained at PREPA is not known with certainty.

Debt Service Coverage for Legacy Debt

53. PREPA's calculation of its revenue requirement was not based on applying a debt service coverage ratio (DSCR) to the principal and interest payments associated with legacy debt that was presumed to be retained at PREPA. Rather, PREPA included its projected FY2017 capital expenditures in its requested revenue requirement on a dollar-for-dollar basis.
54. We have determined FY2017 debt service coverage to be included in PREPA's revenue requirement by multiplying the $314 million of FY2017 principal and interest by the 1.40 DSCR recommended by Commission Advisor Hill. We have thus specifically included Debt Service Coverage Allowance of $126 million in the determination of PREPA's base rate revenue requirement. This provides for a coverage margin of 0.4 times the amount of anticipated debt service, as recommended by Commission Advisor Hill.

Capital Expenditures

55. PREPA's requested revenue requirement includes a request for ratepayer funding of $336.6 million of projected FY2017 capital expenditures (Capex) on a dollar-for-dollar basis. The $336.6 million is comprised of $232.1 million for maintenance capital, $56.3 million for the Aguirre Offshore Gas Port ("AOGP") and $48.2 million for transmission and distribution projects.
56. We noted that the level of Capex projected by PREPA for FY2017 of $336.6 million is comparable to PREPA's Capex in FY2013 and FY2014 but is substantially higher than PREPA's actual Capex in FY2015 or FY2016, which was $201.1 million and $140.4 million, respectively.
57. PREPA’s substantially reduced capital spending in FY2015 and FY2016 may have had a detrimental impact upon the reliability of the electric system. Commission Advisors Fisher and Horowitz of Synapse discuss concerns regarding the safe and reliable provision of electric service by PREPA.
58. As discussed in the recommendations below, Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's proposed FY2017 Capex and are recommended specific adjustments to PREPA's proposed Capex for FY2017, which we have reflected in determining PREPA's base rate revenue requirement.

Revenue at Current Rates

59. PREPA's Schedule A-1 REV shows $1.658 billion of fuel and purchased power revenue and $1.078 billion of base rate revenue at current rates, for a total of $2.737 billion.
60. PREPA's projected revenues at current rates are also affected by PREPA's load and sales forecast. Dr. Fisher and Dr. Horowitz of Synapse reviewed PREPA's load forecasts for FY2017, as did Commission Advisor Chernick. While they have

identified some concerns with PREPA's forecasting, they are not recommending specific adjustments to PREPA's revenue at current rates.

61. The amount of revenue at current rates is affected by fuel and purchased power price fluctuations. Historically, PREPA's fuel and purchased power costs have been recovered in adjustor mechanism, which have adjusted the fuel and purchased power components of PREPA's rates monthly.
62. As discussed in the Recommendations below, we have increased PREPA's estimated amounts of fuel and purchased power revenue at current rates of $2.737 billion by the $461.3 million adjustment for Fuel Adjustor Revenue that is related to the recommendation of Commission Advisors Fisher and Horowitz that PREPA's FY2017 Fuel Expense be increased by $461.3 million.

Labor Costs and Workforce Levels

63. PREPA's labor headcount has declined by approximately 1,100 full time employees since 2014 through attrition, and PREPA has stated that it expects an additional decline of approximately 600 full time employees by 2019.
64. PREPA's FY 2017 approved budget reflects a projected work force of 6,694 employees as of June 30, 2017. This is the level of work force that PREPA reflected in deriving its proposed FY2017-based revenue requirement.
65. PREPA's total labor costs include labor costs charged to operating expenses and labor costs that are charged to capital projects.
66. In comparison with the total labor costs of $487.895 million for FY2015 and $469.633 million for FY2016, PREPA's projection for FY2017 has total labor costs of $525.140 million.
67. PREPA's Rate Case Financial Model shows labor expense charged to O&M Expenses. The amounts estimated by PREPA for FY2015, FY2016 and FY2017 are notably lower than PREPA's actual labor costs in FY2012, FY2013 and FY2014.
68. PREPA's projection for FY2017 (that is the basis for PREPA's base rate revenue request) for Labor Costs charged to operating expenses is $434.937 million.
69. PREPA charges some of its Labor Costs to capital projects. (The other portion is charged to operating expenses.) We refer to the portion of PREPA's Labor Costs that is charged to capital projects as "capitalized labor costs." PREPA's capitalized labor costs in FY2015 and FY2016 are lower than the amounts in FY2012, FY2013 and FY2014. PREPA's projection for FY2017 capitalized labor costs is $90.203 million, which is more than double the FY2016 amount.
70. Commission Advisors Fisher and Horowitz are recommending adjustments to PREPA's projected FY2017 labor costs charged to operating expenses. They have concluded that PREPA's proposed FY2017 amount of labor costs for operating expenses is inadequate for the safe and reliable operation of the electric system. Their recommendations reflect net increases to assure that PREPA is safely and reliable maintaining and operating the electric system.

PREPA Fines and Penalties

71. PREPA has been incurring fines and penalties for environmental non-compliance. PREPA's FY2014 audited financial statements discusses environmental matters at pages 82-101 and notes that PREPA has paid fines under a Consent Decree.
72. PREPA has been recording such fines and penalties in accounts 92316 and 93000. However, the Uniform System of Accounts for Electric Utilities instruction 21-G provides that fines and penalties are to be recorded in account 426.3.
73. The amount of fines and penalties included in PREPA's FY2017-based revenue requirement request is $624,446. PREPA's response to CEPR-RS-05-31 indicates that its proposed FY2017 revenue requirement reflects that: "PREPA budgeted a total of $624,446 under account No. 01-4019-92316-556-630 to make payments claimed for the concept of stipulated penalties and fines that may occur for non-compliance with federal and state environmental laws and regulations."
74. PREPA's FY2017 budget is based on a "concept" of penalties and fines that "may occur" but for which PREPA has not received any notifications. As discussed in the Recommendations, since PREPA has not received any notifications from the Environmental Protection Agency or any other US departments or agencies that PREPA will be subject to fines or penalties in FY2017 related to environmental compliance deviations or other matters, we recommend that the FY2017 amount budgeted by PREPA for fines and penalties be removed from PREPA's requested revenue requirement.

PREPA AlixPartners and Other Advisor Fees

75. PREPA's proposed revenue requirement for FY2017 includes the $28 million amount, which relates to AlixPartners and other advisor fees, which PREPA proposes be collected from ratepayers on a dollar-for-dollar basis. Because of PREPA's financial predicament, PREPA does not have the ability to finance these costs over a multi-year time period. Consequently, PREPA is asking its ratepayers to pay for these costs on a dollar-for-dollar basis in its requested revenue requirement. For purposes of deriving PREPA's base rate revenue requirement, we have not adjusted the amounts of AlixPartners and other PREPA Restructuring advisor costs. We take no position on their reasonableness.
76. After PREPA's financial restructuring has been completed, the substantial amounts of costs being incurred by PREPA for AlixPartners and some of PREPA's other Restructuring advisors, would presumably cease or decrease substantially.

Allowance for Working Capital

77. PREPA has not included an allowance for Working Capital in its base rate revenue requirement request. PREPA proposes to apply a 1/8th factor for fuel and purchased power expense in its proposed fuel and purchased power adjustment mechanisms. During conference call discussions with PREPA, its advisors have indicated that continuing to adjust for fuel and purchased power costs on a monthly basis as PREPA has done historically (rather than on a quarterly basis, which PREPA

has proposed) would eliminate a need to have a special Working Capital provision be included in the fuel and purchase power adjustors.

Property Not Needed to Provide Utility Service

78. PREPA has unused properties which are not needed for the provision of utility service. These properties have been recorded on PREPA's books at the cost of acquisition. PREPA is in the process of hiring a third party real estate management firm to develop a strategy for its unused real estate. In addition to appraising the value of PREPA's unused properties, the third party firm will work with PREPA to develop a plan to maximize the value of these properties through their sale, lease or other use.

Adjusted Revenue Requirement and Base Rate Deficiency

79. As shown on Smith & Dady Ex. 3, line 25, we show an adjusted base rate revenue requirement for PREPA of $3.407 billion. Compared with the sum of other income and revenue at current rates of $3.237 billion (shown on line 31), this indicates a revenue deficiency of $169.7 million (as shown on line 33). The revenue deficiency of $169.7 million is approximately $52.6 million less than PREPA's claimed revenue deficiency of $222 million.

Reconciliation of Permanent and Provisional Rates

80. On June 24, 2016, the Commission put into effect a provisional rate increase of $1.299¢/kWh. There is a requirement under the Commission's Rate Case Filing Rules and under Act 57-2017 that a reconciliation of the Commission approved permanent and provisional rates occur. If the Commission determines that PREPA's base rate revenue requirement for permanent rates is lower than the $222 million granted as provisional rates, PREPA will likely need to retroactively reconcile differences of provisional rate and permanent rates back to the date when it commenced charging the provisional rates.
81. The provisional rates were put into effect on a cents/kWh basis. The permanent rates may also be impacted by rate design recommendations being made by PREPA and by Commission Advisor Chernick.

Recommendations

Recommendations Relating to PREPA Updates and Corrections

1. Based on our preliminary assessment of the three PREPA rebuttal filing revenue requirement revisions, as discussed in Section IV-C-11-c of our Report, there was a $37 million double-count error in PREPA's filing for "subsidies" related to discounted rates. PREPA appears to agree that the $37 million double-count needs to be removed from the calculation of PREPA's base rate revenue deficiency that was originally submitted by PREPA. The $37 million impact was double counted by

PREPA in its filing by including it both (1) in a "subsidy" amount of expenses that it included in its cost of service and (2) in revenue at current rates which PREPA priced out using the discounted rates. Our calculation of this is presented in Section IV-C-11-c of our Report and is shown on Smith and Dady Ex. 5, page 4.

2. The PREPA Rebuttal Adjustments for reductions to Fuel and Purchased Power Expense and Fuel and Purchased Power Adjustor Revenue in equal amounts of $182.4 million are unnecessary. In addition, they are counter to evidence that shows that the PREPA assumed amount of FY2017 Fuel Expense is substantially understated in comparison to forecasts of estimated fuel costs conducted by Commission Advisors Horowitz and Fisher. Specifically, Commission Advisors Horowitz and Fisher's analysis shows that PREPA expects FY2017 Fuel Expense to be approximately $1.225 billion (before performance savings of $107.7 million and $1.117 billion after those performance savings) and by PREPA's own more recent fuel forecast which shows that PREPA expects FY2017 Fuel Expense to be approximately 1.223 billion. Accordingly, we recommend that the Commission reject PREPA's new proposed adjustments to Fuel and Purchased Power Expense and Fuel and Purchased Power Adjustor Revenue.
3. PREPA's adjustment for Bad Debt Expense in their rebuttal filing is a derivative adjustment that results from multiplying the estimated uncollectibles rate of 2.97% by the other PREPA rebuttal adjustments to FY2017 revenue and expenses. PREPA proposes to decrease Bad Debt Expense in its adjustment; however, a decrease in this expense is contrary to the expectations of much higher Fuel Expense for PREPA for FY2017 than was reflected in PREPA's filing. While we believe the methodology used by PREPA for adjusting Bad Debt Expense (i.e., applying the 2.97% uncollectibles rate to the other changes) is reasonable, we find that the result (a decrease in Bad Debt Expense) given the expectations of higher Fuel Expense is not reasonable. We therefore recommend that the Commission reject this component of PREPA's rebuttal revisions and instead use the calculation shown on Smith and Dady Ex. 5, page 8, for the adjustment to FY2017 Bad Debt Expense. That calculation applies the 2.97% uncollectibles rate to the net amount of Commission Advisor adjustments, to derive an increase to Bad Debt Expense of $11.8 million.

<u>Recommendations Relating to Fuel Expenses</u>

4. As noted in the Findings above, Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's budgeted Fuel Expense for reasonableness. We also reviewed PREPA's accounting records and budgets for Fuel Expense and compared the FY2017 amount proposed by PREPA with actual Fuel Expense from prior years. Commission Advisors Fisher and Horowitz have recommended an adjustment to increase PREPA's projected FY2017 Fuel Expense by $461.3 million based upon their conclusion that PREPA significantly under-budgeted Fuel Expense for FY2017. As shown on Smith and Dady Exhibits 3, 4 and 5, the $461.3 million increase to FY2017 Fuel Expense has been reflected in the development of the FY2017-based revenue requirement for PREPA.

Recommendations Relating to Purchased Power Expense

5. As noted in the Findings above, Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's budgeted Purchased Power Expense for reasonableness. We also reviewed PREPA's accounting records and budgets for Purchased Power Expense and compared the FY2017 amount proposed by PREPA with actual Purchased Power Expense from prior years. No adjustments to PREPA's projected FY2017 Purchased Power Expense are recommended.

Recommendations Relating to PREPA Projections of Labor and Non-Labor O&M Expenses for FY2017

6. As noted in the Findings above, Commission consultants Horowitz and Fisher have determined that PREPA's labor and non-labor budgets for FY2017 were inadequate for the safe and reliable operation of the electric system. Based on their recommendations, as shown on Smith and Dady Ex. 5 (page 6 of 8) and discussed in subsequent recommendations below, we have reflected the impact of their recommended adjustments to PREPA's FY2017 budgeted amounts for Generation Expense, Transmission Expense, Distribution Expense, Administrative and General Expense, and Capital Expenditures.

Recommendations Relating to Generation Expenses

7. Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's budgeted Generation Expense for reasonableness. Larkin also reviewed PREPA's accounting records and budgets for Generation Expense and compared the FY2017 amount proposed by PREPA with actual Generation Expense from prior years. Commission Advisors Fisher and Horowitz have concluded that PREPA has not maintained its generation facilities in FY2015 or FY2016 to provide safe and reliable electric utility service. As a result, Drs. Fisher and Horowitz have determined that PREPA's FY2017 budget amount for Generation Expense is inadequate for the safe and reliable provision of electric service. Therefore, they have recommended adjustments to both the Company's labor and non-labor budget amounts for Generation Expense. Specifically, they have recommended increases to PREPA's FY2017 Generation Expense of $9.680 million for Labor and $4.495 million for non-Labor, for a total FY2017 Generation Expense increase of $14.175 million. As shown on Smith and Dady Ex. 5 (page 6 of 8), this recommended increase to FY2017 Generation Expense of $14.175 million has been reflected by us in the calculation of PREPA's base rate revenue requirement.
8. As discussed in conjunction with PREPA's forecast FY Capital Expenditures, Commission Advisors Fisher and Horowitz have recommended that $16 million for certain maintenance contracts be reclassified from Capital Expenditures to Generation Expense. As shown on Smith and Dady Ex. 5 (page 3 of 8), this $16 million cost reclassification adjustment has also been reflected in the calculation of

PREPA's base rate revenue requirement as an increase to Generation Maintenance Expense, and on Smith and Dady Ex. 5 (page 2 of 8) as a decrease to FY2017 CapEx.

Recommendations Relating to Transmission Expenses

9. Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's budgeted Transmission Expense for reasonableness. Larkin also reviewed PREPA's accounting records and budgets for Transmission Expense and compared the FY2017 amount proposed by PREPA with actual Transmission Expense from prior years Drs. Fisher and Horowitz have concluded that PREPA has not properly maintained its transmission and distribution facilities properly in FY2015 or FY2016 in order to provide safe and reliable electric utility service. As a result, Drs. Fisher and Horowitz have recommended adjustments to both the Company's FY2017 labor budget and non-labor budget amounts. Specifically, Drs. Fisher and Horowitz have recommended increases to PREPA's FY2017 Transmission Expense of $3.330 million for Labor and $479,000 for non-Labor, for a total FY2017 Transmission Expense increase of $3.809 million. As shown on Smith and Dady Ex. 5 (page 6 of 8), this recommended increase to FY2017 Transmission Expense has been reflected in the calculation of PREPA's base rate revenue requirement.

Recommendations Relating to Distribution Expenses

10. Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's budgeted Distribution Expense for reasonableness. Larkin also reviewed PREPA's accounting records and budgets for Distribution Expense and compared the FY2017 amount proposed by PREPA with actual Distribution Expense from prior years. Drs. Fisher and Horowitz have concluded that PREPA has not properly maintained its transmission and distribution facilities properly in FY2015 or FY2016 in order to provide safe and reliable electric utility service and that the FY2017 amount budgeted by PREPA for Distribution Expense is inadequate for the safe and reliable operation of the electric system. As a result, Drs. Fisher and Horowitz have recommended adjustments to both the Company's labor budget and non-labor budget amounts. Drs. Advisors Fisher and Horowitz have recommended increases to PREPA's FY2017 Distribution Expense of $16.115 million for Labor and $2.372 million for non-Labor, for a total FY2017 Distribution Expense increase of $18.487 million. As shown on Smith and Dady Ex. 5 (page 6 of 8), this recommended increase to FY2017 Distribution Expense has been reflected in the calculation of PREPA's base rate revenue requirement.

Recommendations Relating to Customer Billing Expenses

11. Larkin reviewed PREPA's accounting records and budgets for Customer Billing Expenses concerning the reasonableness of the components used by PREPA in calculating its projected O&M expense and compared the FY2017 amount proposed by PREPA with actual Customer Billing Expenses from prior years. No adjustment is being recommended to PREPA's proposed FY2017 Customer Billing Expenses.

Recommendations Relating to Bad Debt Expense

12. To derive the adjusted Bad Debt Expense for FY2017 to use in computing the revenue requirement, we have applied the 2.97% uncollectibles factor to the adjustments to the net revenue requirement. As shown on Smith and Dady Ex. 5 (page 8 of 8), this results in an increase to Bad Debt Expense of approximately $11.8 million.
13. As noted in the Findings, there are significant variances in the historic information and discrepancies have been noted between the FY2015 and FY2016 amounts for Bad Debt Expense between PREPA's trial balances and its Rate Case Financial Model, which casts doubt on the reliability of the 2.97% uncollectibles factor that PREPA has used for FY2017. We recommend that additional explanations be obtained by the Commission from PREPA prior to accepting the use of this uncollectibles factor.

Recommendations Relating to Administrative and General Expenses

14. Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's budgeted FY2017 Administration and General Expenses for reasonableness. Larkin also reviewed PREPA's accounting records and budgets for Administrative and General Expenses and compared the FY2017 amount proposed by PREPA with actual Administrative and General Expenses from prior years. Drs. Fisher and Horowitz have concluded that PREPA has not properly maintained its transmission and distribution facilities properly in FY2015 or FY2016 to provide safe and reliable electric utility service and as a result, a portion of PREPA's projected Administration and General Expenses should be re-allocated to Transmission and Distribution Expenses for FY2017. Drs. Fisher and Horowitz have recommended adjustments to the Company's labor cost budget amounts for FY2017. The recommended adjustments for FY2017 labor costs include increases to FY2017 generation, transmission and distribution expense, and a decrease to A&G expense. As shown on Smith and Dady Ex. 5 (page 6 of 8), the Synapse recommended decrease of $17.057 million for A&G labor expense has been reflected in the development of PREPA's revenue requirement.

Recommendations Relating to Energy Administration Assessment

15. We are not recommending any adjustments to the Energy Administration Assessment of $5.8 million relating to the Commission's budget for purposes of computing PREPA's revenue requirement. Our decision to not recommend an adjustment should not be interpreted as a professional opinion regarding the sufficiency of this budget. Rather, it is our understanding that this budget is determined by the Legislature and is not subject to the discretion of PREPA or the Commission. The $5.8 million amount was verified as described above.

Recommendations Relating to Subsidy Recovery in Base Rates

16. To compute PREPA's base rate revenue requirement, we have reflected the $51.784 million of Contribution to Municipalities as the amount to be included in base rates. On a going-forward basis, CILT will no longer be collected by PREPA via the 0.89 factor that had been in the denominator of its Fuel and Purchased Power Adjustors. Rather, CILT will be included in PREPA's base rate revenue requirement.
17. We have reflected PREPA's proposed subsidy amount for Public Lighting amount of $93.241 million. Commission advisor Chernick reviewed that component of PREPA's proposed subsidies and has not identified any adjustment.
18. Based on the recommendation of Commission advisor Chernick, we have reduced the PREPA identified amount for Special Customer Subsidies of $75.071 million by $37.040 million to remove the impact of a double count from the derivation of PREPA's base rate revenue deficiency. As shown on Smith and Dady Ex. 5 (page 4 of 8), this adjustment to remove PREPA's double count of these subsidies reduces PREPA's requested FY2017-based revenue requirement by $37.040 million.

Recommendations Relating to Other Income

19. Determining whether the amount reflected by PREPA for Other Income is reasonable should be addressed by the Commission prior to approving a final revenue requirement in this case. If not provided in response to the current information requirements, the Commission should require PREPA to provide details concerning the components of Other Income for each year, in a manner so the amounts for FY2014, FY2015 and FY2016 can be traced to PREPA's trial balances. PREPA should also be required to clearly indicate exactly what components are included in its estimated amount of Other Revenue for FY2017. Pending such explanations, we have currently reflected the same FY2017 amount used by PREPA of $38.925 million, as shown on Smith and Dady Ex. 3, line 28.

Recommendations Relating to Debt Service Coverage for Legacy Debt

20. For purposes of computing PREPA's base rate revenue requirement we have used the $314 million proposed by PREPA for debt service principal and interest with no adjustments.
21. For purposes of computing PREPA's revenue requirement, a debt service coverage margin of approximately $126 million has been reflected as shown on Smith and Dady Ex. 5 (page 1 of 8).
22. To reflect that PREPA's FY2017 Capex above the level of the Debt Service Coverage Allowance are being financed on a dollar-for-dollar basis by PREPA's ratepayers, we recommend that PREPA be required to account for the ratepayer funding of PREPA's Capex as a contribution in aid of construction. This accounting would reflect that the source of the financing of PREPA's Capex during FY2017 and continuing through the period of PREPA's financial emergency is being provided by PREPA's ratepayers and not by investors.

Recommendations Relating to Capital Expenditures

23. Commission Advisors Fisher and Horowitz of Synapse have reviewed PREPA's proposed FY2017 Capex and have recommended adjustments for (1) limiting the FY2017 amount for the AOGP to $15 million as authorized in the Commission's IRP Order; (2) ceasing the purchasing of AMI meters which reduces FY2017 Capex by $4.8 million; and (3) reflecting certain plant maintenance costs as O&M expense rather than as Capex, which shifts $16 million from FY2017 Capex to O&M expense. These three adjustments are reflected on Smith and Dady Ex. 5 (page 2 of 8).
24. After reflecting the Capex related adjustments recommended by Dr. Fisher and Dr. Horowitz, we have included an amount of $148.7 million of ratepayer-funded Capex in PREPA's revenue requirement. As shown on Smith and Dady Ex. 3 and on Smith and Dady Ex. 5 (page 2 of 8), this is a reduction of approximately $187.9 million from PREPA's request of $336.6 million.
25. To reflect the reclassification of certain plant maintenance costs from Capex to O&M Expenses, as noted above, we have also increased PREPA's Generation Expense by $16 million.

Recommendations Relating to Revenue at Current Rates

26. As shown on Smith and Dady Ex.3, we have reflected PREPA's estimated amounts of revenue at current rates of $2.737 billion (plus Other Income of $38.9 million) increased by the $461.3 million adjustment for Fuel Adjustor Revenue that is related to the recommendation of Commission Advisors Fisher and Horowitz that PREPA's FY2017 Fuel Expense be increased by $461.3 million.

Recommendations Relating to Labor Costs and Workforce Levels

27. The revenue requirement authorized by the Commission for PREPA should not include Labor Costs for positions that PREPA does not expect to have, but should include adequate Labor Costs for PREPA to maintain and operate its electric system safely and reliably. Based on the information provided by PREPA to date, it appears that the FY2017 assumptions made by PREPA includes a work force that is higher than what PREPA actually had at June 30, 2016 and reflects higher Labor Costs, primarily for Capex, than what PREPA has recorded in recent years. If the Commission determines that PREPA's work force and Labor Cost for FY2017 is overstated and reflects positions that PREPA does not currently have and are not reasonably expected during FY2017, or includes Labor Costs that PREPA will not be incurring, an adjustment should be made to the FY2017 revenue requirement.
28. Based on the findings and recommendations of Commission Advisors Fisher and Horowitz, during FY2015 and FY2016, PREPA did not adequately maintain its electric system to produce electricity in a safe and reliable manner. For FY2017 Commission Advisors Fisher and Horowitz have concluded that PREPA's operating expense labor and non-labor budgets are understated for generation, transmission and distribution and are overstated for administrative and general. Based on their

recommendations, as shown on Smith and Dady Ex. 5 (page 6 of 8), we have adjusted PREPA's projected FY2017 labor costs upward by $12.068 million, including (1) a $9.680 million increase to Generation Expense; (2) an $19.445 million increase to Transmission and Distribution Expense; and (3) a $17.057 million decrease to Administrative and General Expense.

Recommendations Relating to PREPA Fines and Penalties

29. PREPA should be put on notice that it will be expected to comply with laws and environmental regulations, and will be expected to achieve compliance, rather than continue to incur fines and penalties. PREPA should be required to present the Commission with plans for avoiding fines and penalties to the fullest extent practicable in the future.
30. PREPA should be required to account for fines and penalties in the proper account in accordance with the guidance provided in the USOA described above, which indicates that such fines and penalties should be recorded in FERC account 426.3. Historically, as noted above, PREPA has recorded fines and penalties in accounts 923 and 930, which does not appear to be consistent with the instructions provided in the USOA.
31. As shown on Smith and Dady Ex. 5 (page 7 of 8), the FY2017 budgeted amount for fines and penalties of $624,446 is being removed from PREPA's requested revenue requirement since PREPA has stated that it budgeted those fines and penalties on the basis that the "may occur" but as stated in PREPA's response to CEPR-RS-05-32, PREPA not received any notifications that PREPA will be subject to fines or penalties in FY2017 related to environmental deviations or other matters.
32. Should any non-compliance events occur during FY2017, we recommend that PREPA continue its policy of paying the stipulated penalty per the Consent Decree in advance in order to benefit from a 50% discount of the applicable stipulated penalty. If PREPA incurs fines and penalties for FY2017 or future years, it should be required to explain the nature of these costs and present a plan to the Commission for avoiding them prospectively by achieving compliance.

Recommendations Relating to PREPA AlixPartners and Other Advisory Fees

33. For purposes of deriving PREPA's base rate revenue requirement, we have not adjusted the amounts of AlixPartners and other PREPA Restructuring advisor costs at the $28 million amount budgeted by PREPA for FY2017.

Recommendations Relating to Property Not Needed to Provide Utility Service

34. We recommend that PREPA provide the Commission with updates concerning the appraised value of PREPA's unused property that is not needed for the provision of utility service, as well as PREPA's plans for maximizing the value of such properties.

Adjusted Revenue Requirement and Base Rate Deficiency

35. Based on the information we have been provided, as shown on Smith & Dady Ex. 3, line 25, we recommend that the Commission adopt an adjusted base rate revenue requirement for PREPA of $3.407 billion. This amount includes the recommendations of the other Commission advisors as discussed in our report. Compared with the sum of other income and revenue at current rates of $3.237 billion (shown on line 31), this indicates a revenue deficiency of $169.7 million (as shown on line 33). The revenue deficiency of $169.7 million is approximately $52.6 million less than PREPA's claimed revenue deficiency of $222 million. PREPA's base rates that have been implemented in the form of provisional rates should therefore be reduced by $52.6 million.

Recommendations Relating to Reconciliation of Permanent and Provisional Rates

36. If there are viable alternatives to a per-customer approach to the provisional versus permanent rate impact tracking that would produce a reasonable result, be fair to customers and help alleviate the cost to PREPA of compliance (which, as indicated above, could be substantial if a per-customer reconciliation were to be required), those alternatives should be considered. The cost to PREPA of accomplishing the refunds/credits would be one significant consideration for how that reconciliation should be accomplished.
37. We recommend that the Commission use an alternative for the reconciliation of provisional and permanent rates that will not require PREPA to incur substantial additional costs, such as the $130,000 per month that PREPA has estimated would be required for a per-customer reconciliation and re-billing approach.
38. The Commission will need to decide the form and timing of the reconciliation. Commission consultant Tim Woolf will address the implications in his report of incorporating the reconciliation in a compliance filing by PREPA and/or in an annual FRM proceeding.

Chapter V: REVIEW OF CERTAIN SUBSIDIES

Findings

Irrigation District

1. For FY2017 PREPA projected a subsidy of $4.152 million for the Irrigation District, which compares with a budgeted FY2015 amount of $4.152 million and an estimated FY2015 amount of $4.502 million.
2. PREPA explained that the Irrigation District was historically a part of PREPA, going back to PREPA's origins. The subsidy is essentially the difference between the revenue that PREPA collects from the rates charged to three areas where PREPA owns assets and provides electricity for irrigation, i.e., to the Irrigation District, and the costs that PREPA incurs related to that service.

3. If the Irrigation District subsidy is being reimbursed to PREPA by the Commonwealth Government, then PREPA would not have to collect that subsidy amount from its other customers.

AAA Preferential Rate

4. PREPA provides electric service to the Puerto Rico Aqueduct and Sewer Authority ("PRASA") at various locations under various rates. In FY2014, the AAA Preferential Rate amounted to 22 cents per kWh. Act 50-2013 ordered PREPA to establish a Preferential Rate of 22 cents per kWh to all of PRSASA's accounts.
5. The PREPA cost estimates for FY2017 through FY2020 are based on an AAA Preferential Rate of 16 cents/kWh. The FY2015 and FY2016 costs appear to be based on the AAA Preferential Rate of 22 cents/kWh that had been in effect prior to its cancellation by PREPA. PREPA has cancelled the AAA Preferential Rate for FY2017. Accordingly, PREPA's proposed revenue requirement reflects a zero amount for FY2017 for any shortfall in recovering PREPA's cost of providing service to PRASA under the Preferential Rate.
6. PRASA has filed testimony requesting that the AAA Preferential Rate be restored. Reasons cited by PRASA include predictability which would help PRASA budget. Also, PRASA indicates that if it has to pay PREPA higher rates for electric service, that would leave less funding available to PRASA for infrastructure spending and maintenance.

CILT

7. As described above, the 0.89 factor currently in the denominator of PREPA's Fuel and Purchased Power Adjustor mechanisms must be removed and the Contribution in Lieu of Taxes must be stated separately as a subsidy. PREPA's filing proposes to do that.

Recommendations

1. If permissible by law, we recommend that the Commission treat PREPA's updated Irrigation District subsidy amount of $4.156 million as one of the components of the subsidies for purposes of determining PREPA's revenue requirement deficiency.
2. Restoring an AAA Preferential Rate as requested by PRASA and opposed by PREPA appears to be a legal and policy judgment for the Commission. We are not making a recommendation one way of the other as to whether the AAA Preferential Rate should be restored or, if it is restored, what the Preferential Rate per kWh should be. We do recommend that if the Commission determines that an AAA Preferential Rate arrangement be restored, the impact on PREPA and PREPA's other customers should be considered. In evaluating the impact of restoring the Preferential Rate at various per-kWh levels, the Commission should have PREPA provide updated calculations that take into consideration more current PREPA forecasts of FY2017 fuel and purchased power cost.
3. We recommend that the Commission eliminate the collection of CILT from the Fuel and Purchase Power Adjustors. Such elimination of the 0.89 from the Fuel and Purchase Power Adjustors prospectively has been reflected by PREPA. As noted

above, such elimination appears to be required by law. We recommend that the CILT Subsidy be reflected as a specific line item in determining PREPA's base rate revenue requirement. For purposes of determining PREPA's base rate revenue requirement, we have currently reflected the amount of $51.783 million for FY2017. This treatment is also how PREPA's filing reflects the CILT.

4. We recommend that PREPA clarify exactly how and where the billings of approximately $2 million per month for consumption of electricity by for-profit ventures have been reflected in its revenue requirement.

Chapter VII - IMPROVED REPORTING REQUIREMENTS

Findings

1. PREPA files monthly reports with its governing board which are available publicly and are posted on PREPA's web site.
2. We believe that PREPA's monthly reports provide an array of information that is useful in both the regulatory monitoring of PREPA's operations for use by PREPA's governing board and officers in managing PREPA.

Recommendations

1. We recommend that the following enhancements be considered for PREPA's Monthly Reports to the Governing Board: (1) including short narrative explanations for significant variances between (i) budgeted and actual data, and (ii) for significant variances between current and prior year data; (2) information on Labor Costs, including how current month and year-to-date payroll, pensions, OPEBs and other employee benefits costs being incurred compare with prior year amounts and current year budgets; (3) information on PREPA's debt service coverage ratio; and (4) until PREPA's financial restructuring is completed, information on the status of the financial restructuring, including significant events that have occurred during the reporting month.
2. We recommend that PREPA keep the Commission updated on its progress with participants to the RSA and other lenders concerning the financial restructuring, including efforts to obtain an investment grade credit rating for the new debt to be issued by PREPARC and meetings with members of the PROMESA board. PREPA should provide the Commission with copies of any formal presentations that it (or PREPARC) make to credit rating agencies or to the PROMESA board, and should provide a concise monthly narrative report to the Commission regarding the status of PREPA's financial restructuring.

Chapter VIII - FUEL AND PURCHASED POWER ADJUSTORS

Findings

1. On Schedule A-6, PREPA proposed to include the following types of costs in the Fuel Adjustor: (1) Fuel Expense; (2) Cost of Fuel Transportation (40 ¢ per barrel); (3) Inspection; (4) Laboratories; (5) Storage; (6) Handling; (7) Delays; (8) Taxes; and (9) Fuel Hedging.
2. PREPA does not forecast or budget fuel costs in this same level of detail by types of expenses. PREPA's budgets for fuel costs are for the total cost of each type of fuel. For budget purposes PREPA excludes the 0.40¢ per barrel related to the handling cost, because it is included in the Production O&M expense.
3. PREPA's response to CEPR-RS-05-08(c) indicated that there have been no hedges initiated since the beginning of FY2014 and PREPA did not realize a gain or loss on the commodity swap at the end of FY2014.
4. On Schedule A-6, PREPA proposes to include the following costs in the Purchased Power Adjustor: (1) Energy purchases to co-generators AES and EcoEléctrica; and (2) Energy Purchase to Renewable Energy Projects.
5. Currently PREPA's Fuel and Purchased Power Adjustors are adjusted monthly, primarily to reflect changes in fuel oil prices. PREPA's current tariff provision for the Fuel Adjustor provides for monthly adjustment based on fuel costs applicable to the billing period.
6. PREPA's Fuel Expense is a large and volatile component of PREPA's cost of providing electric service.
7. Month-to-month variances of $10 million or more in PREPA's Fuel Expense have been relatively frequent from June 2012 through August 2016.
8. PREPA proposes to have the Fuel and Purchase Power Adjustors updated on a quarterly basis, with the option to PREPA of updating more frequently if deemed necessary. Historically and currently, PREPA's fuel and purchased power adjustor rates have been adjusted monthly. The quarterly updating provides customers with a three-month period of rate stability. However, less frequent updating also could require PREPA to finance the difference between Adjustor Revenue and the Fuel and Purchase Power costs that have been incurred by PREPA.
9. Under PREPA's current financial predicament, having less frequent updates of the fuel and purchased power adjustor rates could place additional financial strain on PREPA and could entail a need to provide for higher fuel and purchased power adjustor rates, in order to accommodate an additional adjustor component for working capital.

Recommendations

1. PREPA has not incurred Fuel Expense for Additives in the last three fiscal years through FY2016, and has not incurred expense for Delays or Fuel Hedging in the last two fiscal years (FY2015 and FY2016). We recommend that such costs, if incurred by PREPA, **not** automatically be included in PREPA's Fuel Adjustor, but rather, if PREPA is budgeting for such costs or actually incurs costs for Additives, Delays or Fuel Hedging, that PREPA first petition the Commission, explaining its need and reasons for incurring such costs, and await a Commission ruling prior to including such costs in its Fuel Adjustor.
2. We recommend that the other categories of Fuel Expense proposed by PREPA be included in PREPA's Fuel Adjustor.
3. We recommend that PREPA's fuel procurement be subject to a management performance audit to assure that PREPA is using best practices and that its purchases of fuel are prudent and reasonable, and that the costs included in PREPA's Fuel Adjustor be subject to periodic regulatory financial audits to assure that such costs have been properly accounted for and are reasonable.
4. We recommend that the categories proposed by PREPA for Purchased Power and Renewables be included in PREPA's Purchased Power Adjustor.
5. We recommend that PREPA's procurement of purchased power and renewables be subject to a management performance audit to assure that PREPA is using best practices and that its purchases are prudent and reasonable, and that the costs included in PREPA's Purchase Power Adjustor be subject to periodic regulatory financial audits to assure that such costs have been properly accounted for and are reasonable. The audits of PREPA's Fuel and Purchased Power can be combined.
6. We recommend that PREPA's fuel and purchased power adjustor rates continue to be updated monthly. This will avoid having a build-up of deferred balances between adjustor revisions that PREPA would need to finance and would avoid having an additional charge component for Working Capital be imposed on customers via those adjustor rates.

X. CERTIFICATION

By filing this report, we certified that the information, facts, schedules, exhibits and analysis provided here is our direct testimony and, to the best of our knowledge, true and correct.

Dated: November 21, 2016 at Livonia, Michigan.

Ralph C. Smith

Ralph C. Smith
Senior Regulatory Consultant
Larkin & Associates PLLC

Mark S. Dady
Regulatory Consultant
Larkin & Associates PLLC