PREPA Ex. 7.0

COMMONWEALTH OF PUERTO RICO

PUERTO RICO ENERGY COMMISSION

IN RE: REVIEW OF RATES OF THE PUERTO RICO ELECTRIC POWER AUTHORITY, Petitioner.	No.: CEPR-AP-2015-0001 SUBJECT: TESTIMONY IN SUPPORT OF PETITION

Testimony of

ROSS C. HEMPHILL, PH.D.

Senior Advisor

Navigant Consulting, Inc.

On behalf of the

Puerto Rico Electric Power Authority

May 27, 2016

TABLE OF CONTENTS

I. INTRODUCTION

A. Witness Identification

Q. **Please state your name, title, employer, and business address.**

A. My name is Ross C. Hemphill. I am a Senior Advisor to Navigant Consulting, Inc., 30 South Wacker Drive, Suite 3100, Chicago, Illinois 60606.

B. Summary of Testimony and Attachments

Q. **What subjects does your testimony address?**

A. My testimony addresses three topics. First, I discuss the advantages of formula ratemaking versus the traditional rate case approach. I next discuss the Puerto Rico Electric Power Authority's ("PREPA") proposal for a Formula Rate Mechanism ("FRM") and explain how it would operate and describe the annual filings PREPA would make as part of the proposed process. Finally, my testimony discusses why a formula approach is particularly suited to PREPA's current situation.

Q. **What exhibits are attached to your testimony?**

A. My testimony includes four exhibits:

- PREPA Exhibit ("Ex.") 7.01: My current *curriculum vitae*.
- PREPA Ex. 7.02: Table and map provided in the Edison Electric Institute report "Alternative Regulation for Evolving Utility Challenges: An Update Survey" (January 2013);
- PREPA Ex. 7.03: FRM template for updating the rates during the interim years; and

- PREPA Ex. 7.04: Example of the billing determinant schedule that would be filed during interim years.

I also sponsor the portion of Schedule N-1 in PREPA's filing requirements compliance materials relating to the FRM.

C. Professional Background & Education

Q. **Please describe your professional experience.**

A. My entire 37-year career has been devoted to utility economics, energy policy and regulatory policy with a primary focus on ratemaking theory and practice, in positions with industry, government, and non-profit regulatory support organizations. Early in my career, I was on the regulatory staff of the Illinois Commerce Commission. I also worked for a regulatory think tank while in graduate school. Most recently, I served as Vice President, Regulatory Policy & Strategy for Commonwealth Edison Company ("ComEd"), an electric distribution company serving 4 million customers in northern Illinois including the Chicago metropolitan area. In that capacity, I was responsible for revenue policy including the development of annual revenue requirements; retail rates including the development and implementation of ComEd's pricing policy; analysis of strategic policy options for ComEd's distribution business; and the monitoring of regulatory compliance throughout the company. I was promoted into the Vice President position after serving as ComEd's Director of Rates & Regulatory Strategies for a little over a year.

From 2008 until joining ComEd in 2009, I was a Director at Black & Veatch Corporation, which is an engineering, consulting, and construction company that specializes in infrastructure development in energy, water, telecommunications,

management consulting and environmental markets, as well as support to federal agencies. At Black & Veatch, I was responsible for developing and managing projects that provided a broad range of regulatory services to utility clients.

From 2007 to 2008, I was a Principal Consultant at Freeman, Sullivan & Co., a research and consulting firm that provides expert testimony, statistical analysis, economic modeling, field studies, and data collection that can serve as the basis for public policy programs and for business and litigation strategy. At Freeman, Sullivan & Co., I was responsible for projects that included the design and assessment of the benefits of energy efficiency, demand response, and alternative pricing programs.

From 2005 until 2007, I was a Vice President at NERA Economic Consulting ("NERA"). At NERA, I provided a broad range of rate related and regulatory services to utility clients. Prior to joining NERA, I served as an officer, manager, or economist for Laurits R. Christensen Associates, AXS Marketing LLC, the Argonne National Laboratory, the National Regulatory Research Institute, American Electric Power Service Corporation, and the Illinois Commerce Commission. As noted above, a copy of my curriculum vitae is attached as PREPA Ex. 7.01.

Q. **Please describe your educational background.**

A. I hold a doctorate in resource economics from The Ohio State University, a master's degree in economics from Indiana State University, and a bachelor's degree in economics from Lewis University.

Q. **Do you have any prior experience with formula rate making?**

A. Yes. In my role as Vice President of Regulatory at ComEd, I was intimately involved in the design of the FRM in Illinois. In this role, I was part of the technical team that

developed the FRM and negotiated the proposal with the Illinois legislature and other stakeholders when the law was enacted. I also was the policy witness for case where the FRM was implemented.

Q. **Do you have any experience with non-investor owned utilities?**

A. Yes. Over the years I have consulted with many non-investor owned utilities including the Tennessee Valley Authority, Western Area Power Administration, Orlando Utilities Commission (Florida), Nebraska Public Power District, Pasadena Water and Power (CA) and Riverside Public Utilities (CA) in the United States. I have also consulted with BC Hydro, Ontario Power and Nova Scotia Power in Canada.

II. PURPOSE OF TESTIMONY

Q. **Please summarize the purpose and conclusions of your testimony.**

A. My testimony discusses 1) the benefits of formula ratemaking generally; 2) why it is the best approach for PREPA; and 3) the mechanics of PREPA's FRM proposal in this case. My testimony concludes that an FRM is the best approach to ratemaking for PREPA, the Puerto Rico Energy Commission (the "Commission"), and PREPA customers. The most compelling reason for this position is that PREPA is in a rebuilding phase, and this approach best ensures that PREPA will stay on track to become a financially viable utility that provides quality service.

The direct testimony of Javier Quintana Mendez, Executive Director of PREPA, PREPA Ex. 1.0, and the panel direct testimony of Sonia Miranda Vega, Director, Planning and Environmental, PREPA, and Antonio Perez Sales, and Virgilio Sosa, Managing Directors, AlixPartners, LLP, PREPA Ex. 3.0, demonstrates that PREPA has made progress in cutting its operating costs at the time of the filing of this case as well as

achieving a proposed debt restructuring. As they discuss, this was achieved through a Business Plan that methodically addresses chronic operational issues in conjunction with debt restructuring with substantial creditor concessions. PREPA currently is seeking a rate increase to close the remaining gap and fund investments that are focused on a new level of operational efficiencies and customer service. I have reviewed the testimony and believe the Business Plan specifically lays out necessary investments with a solid prospect of further customer benefits. Given the progress and success thus far with this Business Plan, I believe that an FRM gives PREPA, the Commission, and customers the best approach to ensure that the plan will be adhered to and these additional benefits will come to fruition.

I reach this conclusion because PREPA's financial situation is precarious, and it has no real reserve or reasonable ability to borrow or access equity markets, as discussed by the direct testimony of Lisa J. Donahue, Managing Director, AlixPartners, LLP, and Chief Restructuring Officer, PREPA, PREPA Ex. 2.0. Thus, it cannot absorb any regulatory lag – or unforeseen cost - without the real possibility that it must defer essential investment or go off-track in its Business Plan. As other witnesses testify in this case, cost cutting and new efficiencies are not enough to fund these investments. If the primary goals of the Commission are to oversee and ensure the transformation of PREPA for the benefit of its customers along with the development of just and reasonable rates – then an FRM is the best approach to accomplish this. The only other option would be a substantial reserve fund that allows PREPA to absorb some level of change in costs and revenues – and I believe this may be too expensive an option for PREPA and its customers at this time.

I strongly believe that an FRM is the best approach for PREPA, the Commission, and the residents of Puerto Rico to keep PREPA on track to rebuild itself.

III. FUNDAMENTALS AND HISTORY OF FORMULA RATEMAKING

Q. **What is an FRM in the context of utility regulation?**

A. Formula ratemaking is an approach used by public utility commissions to set the appropriate level of revenue recovery for a utility on an annual (or other time period) basis using a streamlined regulatory process. This approach works to benefit utilities, customers, regulators, and other stakeholders, as explained later in my testimony.

Q. **How is an FRM different from how regulators traditionally set public utility rates for investor owned utilities?**

A. There is no difference from the traditional approach in terms of the components used to calculate the revenue requirement, or the calculation itself. Both approaches build a revenue requirement based on cost of capital plus overhead and all operating costs. There is no difference in how interclass cost allocation and rate design are determined. For this reason, I disagree with those who categorize an FRM as an alternative form of regulation (also referred to as "alt reg"). The form is the same; the calculations are the same. The difference is only in the process used and the timing of the changes. The traditional approach to public utility ratemaking sets rates periodically using data from a test year (either historical or forecasted). The timing of the periodic filing and the choice of the test year is almost always the prerogative of the utility. An FRM, like the one being proposed by PREPA in this case, employs a methodical process (or cycle) with annually updated cost data to track costs and accurately reflect these costs in the rates being paid by customers.

Q. **What should be the goals of a utility ratemaking?**

A. There have been numerous goals espoused over the years to guide utility ratemaking and its regulation. However, there are two that come to the forefront with respect to PREPA: rates must reflect costs and the ratemaking approach must enable or encourage investment that maintains the system and provides quality service to customers.

Q. **How does traditional ratemaking meet these goals?**

A. Traditional ratemaking meets these goals by setting rates that are an approximation of expected revenues and costs during the period that the rates will be in effect. This approach is intended to provide a stable amount of revenues to the utility that can be planned around in circumstances where load is growing and investment levels are stable. In particular, under this approach, it is understood that a utility does not need to file a rate case every year because it can benefit from this approach through expected growth in revenues and cost cutting. This so called "regulatory lag" is thought of by some to be an incentive for the utility to live within a certain means. The periodic rate changes and the utility cost cutting that keeps the utility out of a rate case is thought to be beneficial to consumers. However, a problem with traditional ratemaking is that it is full of stops and starts and not conducive to long range capital planning because of the uncertain future revenue stream.

Q. **What are the advantages to an FRM over the traditional approach?**

A. There are four primary advantages to formula ratemaking that benefit all stakeholders in the process. First, an FRM provides a better assurance that rates more closely approximate the actual costs of providing electric service. The FRM proposed by PREPA utilizes a tracking mechanism that maintains alignment of rates with costs. This

is important for both customers and the utility. For customers, the lag between the adjustments of rates often results in utility revenues that do not appropriately reflect costs. For example, an abnormally hot year will lead to revenues that are higher than costs because in a traditional rate case, an estimate of overall usage is made for the test year – and, literally by nature, the estimate is always wrong. Similarly, for utilities, an abnormally cool year can result in costs that exceed revenues. This phenomenon is due to the rates being designed as highly volumetric (based mostly on kWh), and consequently, the revenues collected are highly sensitive to weather in any given year. As I discuss below, the FRM adjusts billing determinants (in particular, usage data) yearly in order to more closely follow cost and weather trends.

Second, the methodical annual filing of updated cost data by the utility provides a constant flow of information to the regulator and other stakeholders that assists them in understanding the operations of the utility, which ultimately leads to more productive dialogue and better policy decisions. One of the difficulties in public utility regulation (or any regulation for that matter) is what is called "asymmetry of information," where the petitioner (or regulated entity) has a significant advantage over any party trying to review the proposal because it knows so much more about its operations, financial situation and the industry in general. The constant flow of information provided by the FRM process helps remedy this situation.

Third, the FRM cycle proposed by PREPA provides for a re-examination of the baseline every three years with a streamlined updating process during the interim years, which reduces the administrative burden for the regulator, utility and all other stakeholders. As a result, the limited resources of the Commission and all involved

stakeholders that normally get tied up in a rate case process can be utilized more productively for the benefit of all to address other important regulatory issues.

Finally, the formula process provides more stability and predictability in cost recovery for the utility, which works to benefit customers as well as the utility. Stable cost recovery provides more confidence for the utility to make investments that ultimately improve reliability and service quality for customers. It is difficult for a utility to embark on large projects that benefit customers without an understanding of future revenues. In my opinion, this is the most compelling customer benefit associated with an FRM.

Overall, an FRM meets the goals through a more accurate approximation of costs and revenues so that there is no winner or loser – ratepayers pay no more or less than the costs that should be attributed to them. An FRM is more suitable in utility situations where there is a need to incentivize a multi-year investment or a plan exists and there is no utility benefit of load growth that would normally allow a utility to defer the filing of a rate case soon thereafter.

Q. **Has formula ratemaking been applied in other jurisdictions?**

A. Yes. There are a number of examples where formula ratemaking has been employed. Formula rates have been used by the Federal Energy Regulatory Commission ("FERC") and its predecessor (the Federal Power Commission) to regulate interstate services of natural gas and electricity rates dating back to the 1950s. The FERC has used formula rates extensively in recent years to regulate transmission rates. There are a number of precedents for the use of formula ratemaking at the retail energy level as shown in PREPA Ex. 7.02, which is a table and map provided in the Edison Electric Institute report

"Alternative Regulation for Evolving Utility Challenges: An Update Survey" (January 2013). This concept was applied in Alabama during the 1980s with "Rate Stabilization and Equalization" plans for Alabama Power and Alabama Gas.

Most recently, the approach was codified into public utility law in Illinois as I described in a Public Utilities Fortnightly article (co-authored with my colleague Val Jensen in the June 2016 edition). The Illinois law, which was enacted in 2011, created a process where the legislature authorized a number of investments (including smart meters, cable replacement, and poles) and required an annual process to determine the distribution utility's revenue requirement. The formula requires the electric utility to file a revenue requirement in May for setting rates starting January 1 of the following year (i.e., a May 2016 filing would set rates for calendar year 2017). The FRM implementation in Illinois is significant because it was deployed on a large scale (about 4 million customers at ComEd alone) and is considered by most observers as a "win-win" for both consumers and the utility. It enabled better long term planning and investment that improved customer service markedly -- while keeping rates fairly stable.

The process put into place in Illinois is the most recent application and the most similar to the process proposed by PREPA. The Illinois example is especially applicable because prior to the FRM, ComEd was not able to adequately plan long term investment because it did not know what its revenues would be from one year to the next. The inability to take on significant long term projects and programs put it in a repair versus replace mode and ultimately hurt reliability and customer service. There are many parallels here to the Illinois FRM – primarily with respect to the ability to modernize with important long-term investment.

Q. **What has been the outcome thus far in Illinois?**

A. Illinois is in its fifth year of the formula process for electric distribution and the results have been impressive. Illinois, which previously lagged behind other states in distribution system investment, is now one of the top five states in the country in terms of grid modernization. Customer satisfaction is at its highest levels since they began measuring it. This is likely due to an aggressive investment program that is ahead of schedule resulting in historically high levels of customer reliability. Storm hardening and resiliency of the system along with response to outages that do occur has improved. The process of determining the utility's revenue requirement is very much like an annual budget approval process, with an assessment of whether the previous budget was appropriate. Rates have remained rather flat and, in fact, the utility requested and received a rate decrease two of the five years the FRM has been in place.

Q. **Why is an FRM the best approach for PREPA going forward?**

A. In addition to the FRM advantages that I discuss above, I believe there are six main reasons that an FRM is especially appropriate for PREPA.

First, PREPA's financial situation is extremely challenging. As discussed by Ms. Donahue, PREPA currently has approximately $450 million in cash, of which approximately $146 million is deposited in Government Development Bank ("GDB") accounts subject to a moratorium. On July 1, 2016, PREPA owes approximately $1.1 billion in principal and interest under its existing revolving credit lines and power revenue bonds. PREPA simply does not have the resources or reserves to ride through the fluctuations in operating costs that inevitably occur in the normal operation of a utility, in part because unlike an investor-owned utility, which may sometimes rely on its

shareholders to satisfy funding shortfalls, PREPA lacks such shareholders. Thus, delays in meeting revenue needs will inevitably affect PREPA's ability to deliver the consistent, quality, reliable service that its customers deserve.

Second, PREPA has no load growth and it already is in an aggressive cost cutting program. Any benefit of traditional rate case regulatory lag is non-existent here and would likely harm PREPA's ability to stay on track on its business plan. PREPA's only option would be to file repeated rate cases and stay in rate case mode through its recovery – an expensive and inefficient proposal for all stakeholders. Given its successful implementation of the Business Plan thus far, the FRM provides a stronger assurance that it will stay on track.

Third, the FRM allows some rate stability for customers with annual, but smaller and more manageable, changes over time. Smaller adjustments over time will be easier for customers to plan around. Conversely, fewer, but larger, rate adjustments can cause more customer confusion and discontent.

Fourth, with the proposed FRM approach, the rate structure will provide transparency into the main components of PREPA's cost structure, will simplify the fuel and purchased power charges and will eliminate the mark-up on those charges.

Fifth, the FRM puts PREPA in a better position to make new investments in new infrastructure that will improve service quality, efficiency and reliability of the system and ultimately reduce costs for customers. By being government owned, PREPA does not have access to capital markets. By creating a more stable rate environment that covers reasonable costs over multiple years, PREPA will have a more stable revenue base that will make possible and encourage investment by PREPA. These new investments

will reduce inefficiencies in PREPA's infrastructure that would otherwise result in additional costs borne by PREPA's customers.

Finally, the FRM is more efficient for both PREPA and the Commission. As I discuss below, without an FRM, PREPA will be before the Commission in constant rate case mode. This is not the best use of resources for PREPA, the Commission, or consumers given the major energy policy issues facing the industry and Puerto Rico.

Q. **How important is PREPA's Business Plan in the Commission's decision to either grant or deny the FRM?**

A. I believe the Business Plan adds a very important dimension to this case. As discussed in the panel testimony of PREPA witness Sonia Miranda Vega and others, the results of the Business Plan thus far are impressive. PREPA's restructuring has mitigated this rate increase to a significant degree. This is a very strong incentive to keep PREPA on track to meet very objective Business Plan Goals.

IV. APPLICATION OF FORMULA RATE MECHANISM FOR PREPA

A. Consistency of the FRM with the Act and Commission Rules

Q. **What are the parameters for approval of an FRM for PREPA?**

A. It is my understanding that the Act[1] provides the Commission and PREPA with flexibility as to FRM design. The Act does not set forth any specific parameters for an FRM beyond the standards that must be met for rate cases in general which, among other things, in Article 6A(a) requires that the rate review process "...shall ensure that all rates

[1] I am referring to Article 6A ("Article 6A") of Act 83-1941 as amended by Article 9 of the PREPA Revitalization Act, Act 4-2016. Where I use capitalized terms that are defined in PREPA's rate Petition, I intend the same meaning.

are just and reasonable and consistent with sound fiscal and operational practices that provide an adequate, reliable service, at the lowest reasonable cost."

It also is my understanding that both the Act and the Commission's rules permit an FRM filing. Article 6A(c) of the Act provides, among other things, that "[t]he Commission shall approve a rate that … remains in effect during cycles of at least three (3) years, except with respect to those periodic adjustments approved by the Commission as part of the approved rate and unless the Commission determines to conduct a review." Section 2.16 of the Commission's rate case filing rules (Regulation No. 8720) also contemplates a formula providing in part that: "PREPA may include with its rate case filing a proposal for a formula rate plan, subject to a requirement that these proposals be accompanied by the alternatives and additional information specified herein." Consistent with the Act and the Commission's rule, PREPA's proposed FRM would make "periodic adjustments" and call for full rate cases every three years and the filing contains a complete rate case as an alternative to the FRM proposal.

Q. **Are there any other requirements set forth in the Act for the FRM?**

A. I understand that Article 9 of the Act at 6A(c)(ii) provides that, among other things, that "[t]he Commission shall approve a rate that … complies with the terms and provisions of the agreements entered into with or in benefit of buyers or holders of any bonds or other financial obligations of PREPA." I am informed that the Restructuring Support Agreement ("RSA") executed by major creditors contemplates an FRM as part of PREPA's recovery plan, which is the foundation of the Act. RSA Annex D, Sched. VI, § 1.3.2 (adopting a "Formula Ratemaking Mechanism ('FRM') for setting PREPA's rates").

Q. **Does PREPA's proposed FRM meet the requirements of the Act and the RSA?**

A. Yes, the approach that I describe is consistent with the RSA and the requirements set forth in the Act. In particular, PREPA's proposed FRM: 1) meets the Act's requirements of allowing rate adjustments between full rate cases every three years; and 2) ensures that all rates are just and reasonable and consistent with sound fiscal and operational practices that provide an adequate, reliable service, at the lowest reasonable cost; and 3) is consistent with the FRM parameters set forth in in Schedule VI to Annex D of the RSA.

Q. **Does the proposed FRM meet the filing requirements of the Commission's rules?**

A. Yes, Consistent with Section 2.16 of the Commission's rate case filing rules, PREPA is presenting the FRM rate structure on Schedule N-1. Also consistent with this rule, PREPA is filing a full rate case in compliance with the rule's requirement for "an alternative rate structure that is more typical of utility rate filings; specifically, one that does not envision either annual rate increases occurring outside of a base rate case, or "true-ups" for cost elements other than fuel and purchased power." Consistent with the requirements of this rule, my testimony also discusses the advantages and disadvantages of both approaches.

B. <u>Proposed PREPA Formula Ratemaking Process</u>

Q. **Are there any special characteristics of government-owned utilities that are relevant to the Commission's consideration of an FRM for PREPA?**

A. Given my experience with government-owned utilities, I believe these entities have three characteristics that make an FRM a good approach for ratemaking. First, these utilities do not have owners' equity. Thus they are considerably more sensitive to the fluctuations that are business as usual for any utility or business for that matter. A swing in expenses

outside its control can wreak havoc on the utility's business plan. For PREPA, this means real delays in rebuilding and implementing investment that ultimately makes them a more efficient utility.

Second, government-owned utilities are not-for-profit entities. This is significant because a large focus in adopting a FRM is regulating profits to a reasonable level – neither too high nor too low – in conjunction with ensuring rigor around costs. For a government-owned utility, with the profit issue nonexistent, the focus is primarily on costs.

Third, PREPA is a government agency that is regulated by another public agency. With the pressures that governmental agencies face everywhere, not just in Puerto Rico, there is an added incentive to make the process as streamlined and efficient as possible.

Q. **Please describe PREPA's proposed FRM.**

A. The FRM proposed in this case is best described as a cycle where rates are revised every year to reflect updated cost and usage information with an in-depth examination of the cost components, allocation studies, interclass revenue allocation adjustments and rate design occurring every three years. Thus, in Year 1 PREPA files the base case which is the equivalent of a standard case with all of the costs, rate base and financial data required to establish a revenue requirement. PREPA also files a fully allocated cost-of-service study, interclass revenue allocation and individual class rate designs. Using the regulatory review process established in the Act, the Commission examines the PREPA filing and rules on the appropriateness of the proposal, which includes the cost categories included, the level of the costs included, allocations of the costs and the final rates. This

becomes a template for updating the rates during the interim – years 2 and 3 – using updated costs.

I have attached a sample of this template as PREPA Ex. 7.03 to my testimony. The revenue requirement is calculated in the same manner as it was for the base year (Year 1) utilizing the same components with updated inputs. The rate structure for each class remains the same with no change to the interclass revenue allocation during the interim years. However, the rate components are recalculated using updated billing determinants in each interim filing. In Year 4, the entire process repeats with the re-establishment of the baseline through a rate case like what is described for Year 1.

Q. **Please describe in general terms the composition of the revenue requirement used in the formula.**

A. Consistent with the PREPA Ex. 7.03 template, revenue requirements are composed of the same operating costs as in a traditional rate case filing including fuel, purchased power, operations and maintenance expenses, revenue funded capital expenditures, Contributions In Lieu of Taxes ("CILT"), subsidies, taxes paid, debt service and any other costs expected to be incurred (assuming a restructuring in accordance with the Recovery Plan). Debt service includes principal, interest, debt service reserves, and/or debt service coverage ratio ("DSCR") on PREPA's debt that is not restructured pursuant to the securitization. It, however, excludes the costs of servicing any debt issued by the Corporation, which is a distinct entity from PREPA, and the costs of which is recovered through the Transition Charge. The treatment of Transition Charges for revenue requirement and rate design purposes is discussed, respectively, in the testimony of PREPA witnesses Francis X. Pampush, Director, Navigant Economics, Inc.; Lucas

Porter, Managing Consultant, Navigant; Dan T. Stathos, Associate Director, Navigant, PREPA Ex. 5.0; and Ralph Zarumba, Director, Navigant Consulting, Inc., and Eugene Granovsky, Managing Consultant, Navigant, PREPA Ex. 4.0.

Q. **How do you determine the need for a rate adjustment?**

A. FRM filings will be made every second and third year resulting in either a rate increase or decrease. The revenue requirement is calculated with updated billing determinants and is compared against revenues calculated using existing rates for the specified rate year to determine whether rates are sufficient to cover the full costs of providing services. The trigger for determining the need for a rate adjustment is the DSCR.

Q. **What is the DSCR and how does it trigger the rate adjustments?**

A. DSCR is computed as a ratio of the available cash flow from the utility's operations relative to the total current year principal and interest payments on its debt. If the existing rates are equal to the operating expenses and debt service, the ratio would be equal to one and no rate increase would occur. If expenses and debt service are greater than the existing rates, the ratio would be less than one and a rate increase would be triggered in order to bring the DSCR to one. Conversely if the DSCR is positive, a rate decrease would be triggered.

Q. **What is included in the determination of the base year revenue requirement?**

A. The initial base year revenue requirement is determined in the rate case filing made in conjunction with the proposed FRM. As detailed in the testimony of Navigant witnesses Dr. Pampush, Lucas Porter, and Dan Stathos, base year revenue requirements will include all revenues (excluding Transition Charge revenues, which are not the property of

PREPA) and all operating expenses, including maintenance and capital expenditure expenses for all functions of the utility including transmission, distribution, generation, customer service as well as working capital, calculated by the method described in their testimony. It will also include the debt service including principal, interest, funding of debt service reserves and/or DSCR and administrative costs, including those costs associated with PREPA's restructuring. CILT and subsidies are part of the base-year revenue requirement; however, changes in these costs will be passed through annually on an actual cost basis. A base level of fuel and purchased power costs are included in the base-year revenue requirement, which will be updated in resetting the base every three years. During the interim period, there will be a fuel adjustment that changes quarterly to reflect variations. This adjustment mechanism is described in the testimony of PREPA witnesses Ralph Zarumba and Eugene Granvosky, PREPA Ex. 4.0.

Q. **Does the base case include allocated cost studies or other analyses that will be used to evaluate rate design?**

A. Yes. Each base case in the formula process will include a fully-allocated embedded cost-of-service study and a marginal cost study. Using these analyses, PREPA will assign or allocate each relevant cost component on an appropriate basis to determine the relative costs to serve various customer classes. In addition, PREPA will use these and other analyses to propose adjustments to the rate design.

Q. **What is the timing and duration of the base case filings?**

A. The Act calls for a Commission review process that shall not exceed one hundred eighty (180) days.

Q. **How are rate adjustments made during the interim (non-base) years?**

A. Adjustments will be made to the rates if rate year revenues are not sufficient to maintain the DSCR. After the end of each period, PREPA will file with the Commission indicating the under / over-recovery of FRM components during the previous period represented by the difference between revenues collected and total costs incurred plus debt service requirements such as debt service reserve and/or DSCR adjusted for total cost of capital. If warranted, PREPA will propose making the periodic filings within 45 days of the end of the applicable period and will provide year-to-date results. To the extent practicable, the periodic informational filings will be based off the most recent audited financials.

Q. **Does a rate adjustment made during an interim (non-base) year reconcile revenues and costs to actual?**

A. Yes. The actual revenue collected is compared to the previous revenue requirement to determine an adjustment going forward. The same analysis occurs with costs. In essence, the revenue requirement from the previous year is recalculated to determine if there was an over or under collection. This over or under collection is added or subtracted for the revenue requirement calculated in the interim years.

Q. **Can a rate adjustment made during an interim (non-base) year result in a rate decrease?**

A. Yes. As I state earlier, ratemaking is an educated guess of what the future holds with respect to a multitude of factors that affect revenues and costs. In traditional ratemaking, the wrong guess is part of the process that results in, more often than not, an upward bias

to the rates because of load growth and cost cutting. With an FRM, the process is overall much more precise and rate decreases in interim years are possible.

Q. **Can you describe the filing and information that would be provided in an FRM rate adjustment proceeding?**

A. PREPA's proposed FRM provides that the filing would include an updated schedule of costs consistent with the PREPA Ex. 7.03 template along with associated work papers allowing the Commission to understand the components of each cost change. This filing also would be accompanied by witness testimony explaining the filing and changes proposed. This witness would be subject to cross examination by the Commission and parties in a hearing.

Q. **What is the Commission review and approval process with respect to interim filings?**

A. This process will be discussed and determined during a technical conference with the Commission staff following a decision in this proceeding.

Q. **Does the Commission have less oversight over PREPA's rates and its business if formula ratemaking is adopted?**

A. No. Consistent with my answer above, the annual filing requirements during the interim years, and the additional information about PREPA's operations, costs and financial situation afforded by such filings, the Commission's oversight has arguably been increased substantially. Under the FRM, the Commission has a steady line of sight to PREPA's costs and can readily address negative trends that appear in the annual filing. The FRM allows the Commission to inquire, issue discovery and question issues that

arise in the interim filings. The introduction of metrics would provide even more optimal regulatory oversight of PREPA.

Q. **How are interclass revenue allocation and rate design performed with rate adjustments during the interim years?**

A. The revenue requirement adjustments during the interim years will be apportioned to customer classes using the interclass revenue allocation approved by the Commission in the last base case. Rate design will be treated in a similar manner – the relative structure of the rate components will remain consistent with the decisions made in the last base case.

Q. **Will cost allocation studies be updated as part of the interim cases?**

A. No. These studies will be part of base cases only.

Q. **Will the customer billing determinants be updated for the interim cases?**

A. Yes. Billing determinants will be updated each year using the most recently available data on demand, usage and customer counts. These updated billing determinants will be provided in a separate schedule including work papers so that they can receive scrutiny as the Commission deems appropriate. An example of the billing determinant schedule that would be filed is attached to my testimony as PREPA Ex. 7.04. The contents of this exhibit are based on the information submitted for the current rate case filing

Q. **What is the timing of the interim case filings?**

A. The interim filings would be made annually in the two interim years between full rate cases.

Q. **How are unusual events, such as major storms, treated in the formula ratemaking process?**

A. The FRM and rate case process should be able to address usual weather events that occur from time to time. It is my understanding that in the event of an emergency, including natural disasters, environmental emergencies and other unforeseen events resulting in higher cash costs, PREPA may temporarily (for no more than 180 days) seek an emergency rate adjustment, as contemplated under Act 21-1985. The emergency rates will be presented to the Commission and would become effective immediately upon such filing. If such emergency rates need to become permanent, PREPA shall present a rate case before the Commission and begin any process for such revision before the expiration of the 180 days.

Q. **How long does the formula ratemaking process stay in effect?**

A. It is proposed that the formula ratemaking process stay in effect for a period which is the greater of nine years or until the date on which PREPA restores investment grade metrics. This allows PREPA and financial markets certainty regarding the direction of the utility and assurance that PREPA will be allowed the opportunity to make necessary investments in the system and eventually re-attain access to financial markets. At that time, the Commission can assess whether to continue the formula process that is in place, make modifications, or end it for another ratemaking approach.

Q. **What incentive does PREPA have to control costs if the Commission approves an FRM?**

A. The constant level of oversight and amount of information before the Commission in the interim filings affords the Commission the ability to scrutinize expenses in the same

manner as in traditional rate cases, but on a continuous basis. Just like in a normal rate case, the Commission can question increases in cost components, new expenses, etc.

Q. **Will formula ratemaking affect PREPA's ability to act as servicer for the securitized debt?**

A. While formula ratemaking generally improves PREPA's ability to act as servicer of the securitized debt, it does not affect securitized debt issued as part of PREPA's restructuring. The Restructuring Bonds are separate from PREPA debt as they are issued by the PREPA Revitalization Corporation and are serviced through the Transition Charges.

Q. **Is there a disadvantage to formula ratemaking for PREPA customers?**

A. No. The FRM will benefit customers by providing stability and transparency to the rate structure and helping PREPA stay on course in its rebuilding process, which over time will bring significant improvements to current processes and customer service, as well as overall increased system reliability and ultimately lower costs for the ratepayers. The ability to annually adjust rates allows this to happen without high rate impacts that frequently result from the traditional approach with periodic rates cases. I believe these benefits outweigh any burden associated with allowing revenues to closely follow expenses.

Q. **Does this conclude your testimony?**

A. Yes, it does.

ATTESTATION

STATE OF ILLINOIS)
)
COUNTY OF KANE)

Affiant, Ross C. Hemphill, being first duly sworn, states the following:

The prepared pre-filed Direct Testimony and the Exhibits/Schedules attached thereto and the Schedule I am co-sponsoring constitute the direct testimony of Affiant in the above-styled case. Affiant states that he would give the answers set forth in the pre-filed Direct Testimony if asked the questions propounded therein at the time of the filing. Affiant further states that, to the best of his knowledge, his statements made are true and correct.

Ross C. Hemphill

Affidavit No.____

Acknowledged and subscribed before me by Ross C. Hemphill, of the personal circumstances above mentioned, in his capacity as a Senior Advisor at Navigant Consulting, who is personally known to me or whom I have identified by means of his driver's license number H514 7235 4355, in St. Charles, Illinois, this 25th day of May 2016.

Notary Public

OFFICIAL SEAL
DENISE A BERAN
Notary Public - State of Illinois
My Commission Expires Jul 5, 2016

NOTARY PUBLIC SEARCH

Active Notary

Name	BERAN, DENISE A
Address	ST CHARLES IL , 60175 KANE
Employer	
Commission Number	769364
Commission Dates	
Current	07-05-2012
Original	07-05-2012
Transaction Number	0
Last Issued	07-05-2012
Term	4
Previous Key	769364
Surety	MERCHANTS BONDING CO (MUTUAL)
Bond Number	40975181N

History

Commission First Surety

Commission First Surety

Commission First Surety

Return to Search