

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

IN RE:

PUERTO RICO ELECTRIC POWER  
AUTHORITY REVITALIZATION  
CORPORATION,

Petitioner.

NO. CEPR-AP-2016-0001

**SUBJECT:** *Motion Submitting  
Supplemental Rebuttal Testimonies, in  
compliance with Act 4-2016 and the  
Resolution and Order issued by the  
Energy Commission on April 22, 2016*

**THE PREPA REVITALIZATION CORPORATION'S  
MOTION SUBMITTING SUPPLEMENTAL REBUTTAL TESTIMONIES**

Comes now the Petitioner, Puerto Rico Electric Power Authority Revitalization Corporation (the "Corporation"), through the undersigned counsel, and respectfully states, alleges, and prays as follows:

1. The Corporation herewith submits to this honorable Commission its Supplemental Rebuttal Testimonies and exhibits thereto, with confirming Affidavits, in support of its Verified Petition for a Restructuring Order ("Verified Petition")

2. These materials are submitted pursuant to Article 6.25A of Act 57-2014, as amended; the procedures established by Resolution No. CEPR-MI-2015-0001, Administrative Order on Adjudicative Procedures, Deficiency Notices, Rate Review, and Investigations before the Puerto Rico Energy Commission, issued by this honorable Commission on April 22, 2016.

3. The Corporation herewith submits to the Commission the revised Direct Testimony of Ralph Zarumba, Corporation Exhibit 6.0, as shown on the attached "redline." In sum, the revisions to Mr. Zarumba's testimony (Corporation Exhibit 6.0REV) are as follows:

- In header, add "REV" after "Corporation Ex. 6.00"
- On cover page, add "Revised" before the word "Testimony"

- On cover page, change “April 7” to “May 20”
- In the illustrative example between lines 205 and 206:
  - Change “Estimated” to “Actual”
  - Change “12 Months Ending 3/31/16” to “FY 2015”
  - Change “Distribution” to “Allocation”
  - Within “Residential” - change “6,354,141,574” to “6,249,541,676”
  - Within “Residential” - change “38%” to “37.83%”
  - Within “Non-Residential” - change 10,174,334,514 to “10,270,239,212
  - Within “Non-Residential” - change “62%” to “62.17%”
  - Within “Total” - change 16,528,476,088” to “16,519,780,888”
- At lines 207-208, change “the previous 12-month period (ending with the end of the most recently completed calendar quarter for which data is available)” to “FY 2015”
- At line 208, change “16,528,476,088” to “16,519,780,888”
- At line 210, change “6,354,141,574” to “6,249,541,676”
- At line 210, change “38%” to “37.83%”

4. For the benefit of the Commission and intervening parties, the Corporation is refiling only the testimony as Corporation Exhibit 6.00REV, without refiling any exhibits thereto.

**WHEREFORE**, the Puerto Rico Electric Power Authority Revitalization Corporation respectfully requests that the honorable Commission deem the Corporation in compliance with the legal disposition previously cited.

**WE HEREBY CERTIFY** that the foregoing was sent via email to: José Pérez-Velez, Esq., (jperez@oipc.pr.gov); Coral M. Odio-Rivera, Esq., (codiot@oipc.pr.gov); Marc G. Roumain Prieto, Esq., (mgrprcorp@gmail.com); Fernando Agrait, Esq., (agraitfe@agraitlawpr.com); Edwin J. Quiñones Porrata, Esq., (edwin.quinones@aee.pr.gov); José G. Maeso Gonzalez, Esq. (jose.maeso@aee.pr.gov); Victor Luis Gonzalez, Esq., (victorluisgonzalez@yahoo.com); and Dr. Guillermo M. Riera, PE (guillermo.m.riera@gmail.com).

RESPECTFULLY SUBMITTED,

IN SAN JUAN, PUERTO RICO, THIS 20<sup>th</sup> DAY OF MAY, 2016

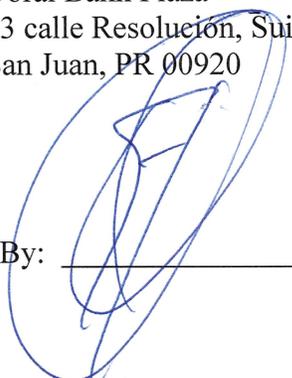
**PUERTO RICO ELECTRIC POWER  
AUTHORITY REVITALIZATION CORPORATION**

Edwin Quiñones  
Víctor D. Candelario-Vega  
Giselle M. Martínez-Velázquez  
Richard Hemphill Cabrera  
**QUIÑONES & ARBONA, PSC**  
Doral Bank Plaza  
33 calle Resolución, Suite 701-A  
San Juan, PR 00920

E. Glenn Rippie\*  
Michael Guerra\*\*  
Mario E. Dominguez\*  
**ROONEY RIPPIE & RATNASWAMY LLP**  
Kingsbury Center, Suite 600  
350 West Hubbard Street  
Chicago, Illinois 60654

\* Pursuant to Admisión por Cortesía  
\*\* Pursuant to Moción Suplementaria de Solicitud de Admisión por Cortesía (pending)

By: \_\_\_\_\_



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

IN RE:

PUERTO RICO ELECTRIC POWER  
AUTHORITY REVITALIZATION  
CORPORATION,

Petitioner.

NO.

**SUBJECT: TESTIMONY  
SUPPORTING PETITION FOR  
RESTRUCTURING ORDER**

Revised Testimony of

**RALPH ZARUMBA**

Director, Navigant Consulting, Inc.

On behalf of the

Puerto Rico Electric Power Authority Revitalization Corporation

May 20, 2016

**TABLE OF CONTENTS**

I.	INTRODUCTION .....	1
A.	Witness Identification .....	1
B.	Summary of Direct Testimony and Attachments.....	1
C.	Qualifications and Professional Background.....	4
II.	CALCULATION METHODOLOGY .....	5
A.	The Revenue Requirement and Its Distribution to Customer Classes .....	5
B.	Calculation and Adjustment of Transition Charges.....	11
C.	Treatment of Delinquencies .....	21
D.	Net Metering and Behind the Meter Generation.....	23
E.	Other Calculation Issues .....	29
F.	Practicable to Administer and Ensures Full and Timely Payment .....	30
III.	INDEPENDENT FINANCIAL CONSULTANT’S REPORT.....	32
IV.	OTHER TRANSITION CHARGE ISSUES .....	33
V.	CONCLUSION.....	35

1 **I. INTRODUCTION**

2 **A. Witness Identification**

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

4 A. My name is Ralph Zarumba. I am a Director in the Energy Practice at Navigant  
5 Consulting, Inc. (“Navigant”). My business address is 30 S. Wacker Drive, Suite 3100,  
6 Chicago, Illinois 60606.

7 **Q. On whose behalf are you testifying?**

8 A. I am testifying as a witness on behalf of the Puerto Rico Electric Power Authority  
9 Revitalization Corporation (the “Corporation”).

10 **B. Summary of Direct Testimony and Attachments**

11 **Q. What does your testimony focus upon?**

12 A. The primary purpose of my testimony is to explain and support how the Calculation  
13 Methodology for the Transition Charges<sup>1</sup> and Adjustment Mechanism (collectively, the  
14 “Calculation Methodology”) operate to distribute Financing Costs<sup>2</sup> and derive and adjust  
15 specific Transition Charges in a manner that ensures the full and timely payment of the  
16 Restructuring Bonds issued under the Restructuring Resolution (the “Bonds”) and other  
17 Ongoing Financing Costs. My testimony supports and explains: (1) the determination of  
18 Customer classes among which Ongoing Financing Costs are distributed and the  
19 mechanics of how those allocations are made; (2) the calculation of Transition Charges

---

<sup>1</sup> Where I use capitalized terms that are defined in the Petition or the Attachments thereto, I intend the same meaning.

<sup>2</sup> “Financing Costs” are defined in PRA, Art. 31, para. 13. They include Upfront Financing Costs and Ongoing Financing Costs.

20 for Non-Residential Customers based upon historic energy usage (kWh) data; (3) the  
21 calculation of Transition Charges for Residential Customers on a per service agreement  
22 basis and the reasoning behind the Corporation's determination to calculate them in that  
23 manner; and (4) the calculation of estimated load including load served by net metering  
24 or distributed generation ("behind the meter") for the purposes of calculating Transition  
25 Charges, and the reasoning behind the Corporation's determination to propose that load  
26 be calculated in that manner ("Net Metering Determination"). I verify that the  
27 Calculation Methodology is practicable to administer and, based on its design and  
28 operation, and Customers' practical inability to bypass it without disconnecting from the  
29 system, ensures the full and timely payment of the Bonds.

30 **Q. How is your testimony organized?**

31 **A.** My testimony is organized in the following sections:

32 I. Introduction

33 II. Calculation Methodology

34 A. The Revenue Requirement and Its Distribution to Customer Classes

35 B. Calculation and Adjustment of Transition Charges

36 C. Treatment of Delinquencies

37 D. Net Metering and Behind the Meter Generation

38 E. Other Calculation Issues

39 F. Practicable to Administer and Ensures Full and Timely Payment

40 III. Independent Financial Consultant's Report

41 IV. Other Transition Charge Issues

42 V. Conclusion

43 Q. **Are there any exhibits to your testimony?**

44 A. Yes. My testimony includes the following exhibits:

- 45 • Exhibit 6.01: My resume;
- 46 • Exhibit 6.02: Puerto Rico Electric Power Authority's ("PREPA") current  
47 tariff classes and a mapping to the "Residential" or "Non-Residential"  
48 Customer classes; and
- 49 • Exhibit 6.03: Calculation of the Transition Charge. This Exhibit details the  
50 calculations supporting the Transition Charge and periodic adjustments  
51 thereto and includes the information that would be included in future  
52 quarterly reconciliation filings to the Commission. It allows the  
53 Commission to replicate the Transition Charge calculations in my testimony  
54 and Exhibit thereto.

55 In addition, while I discuss several Attachments<sup>3</sup>, I specifically support the  
56 following Attachments to the Petition:

- 57 • Attachment 3.02: Identifies and estimates Transition Charges by class and  
58 compares estimates of the Transition Charges to estimates of total charges to  
59 Customers over the life of the Transition Charge; and
- 60 • Attachment 6.00: Independent Financial Consultant's Report provided  
61 pursuant to Article 6.25A(e)(3).

---

<sup>3</sup> To avoid confusion in the designation of documents, attachments to the Petition are designated as "Attachments" and testimony, and documents attached thereto, are designated as "Exhibits."

62 **C. Qualifications and Professional Background**

63 **Q. What are your duties and responsibilities at Navigant?**

64 A. I lead Navigant's efforts in Retail Regulatory matters. Retail Regulatory matters include  
65 pricing, cost of service, determination of revenue requirements for state and local review  
66 of utility pricing, and cost of service reviews. The group I lead also advises clients on  
67 regulatory policy matters associated with state, territorial, provincial, and local regulatory  
68 oversight.

69 **Q. Prior to your current position, what was your professional background?**

70 A. For the past 20 years, I have worked in the Energy Practices of a number of consulting  
71 firms. From 1985 through 1995, I was employed by a number of regulated electric and  
72 combination electric and natural gas Investor-Owned Utilities ("IOU") in the United  
73 States which included Illinois Power Company, Eastern Utility Associates, Wisconsin  
74 Electric Power Company, and San Diego Gas and Electric Company.

75 **Q. What is your educational background?**

76 A. I graduated from Illinois State University, Normal, Illinois, with a Bachelor of Science  
77 degree in economics. I received my Master of Arts degree in economics from DePaul  
78 University, Chicago, Illinois.

79 **Q. Have you prepared a resume presenting your background and experience in greater  
80 detail?**

81 A. Yes. My resume is attached as Exhibit 6.01.

82 **Q. Have you appeared as a witness in other regulatory or legal proceedings?**

83 A. Yes, I appeared as an expert witness in a number of regulatory and legal proceedings  
84 addressing electric generation, transmission and distribution issues, unregulated  
85 operations of utility holding companies, asset valuation, and regulatory treatment of  
86 Smart Grid investments. I provided testimony before the Federal Energy Regulatory  
87 Commission (“FERC”), the Nova Scotia Utility and Review Board, the Massachusetts  
88 Department of Public Utilities, the Rhode Island Public Utilities Commission, the Illinois  
89 Commerce Commission, the Wisconsin Public Service Commission, the Ontario Energy  
90 Board, the New York Public Service Commission, the New Mexico Public Regulation  
91 Commission, the Kansas Corporation Commission and the Texas Public Service  
92 Commission, as well as a number of other venues.

93 **II. CALCULATION METHODOLOGY**

94 **A. The Revenue Requirement and Its Distribution to Customer Classes**

95 **Q. What costs will be recovered in the Transition Charge mechanism?**

96 A. Ultimately, the Approved Restructuring Costs, including those paid from the proceeds of  
97 the Bonds, are recovered over time through the Transition Charge. As provided in  
98 Finding of Fact 4 of the Restructuring Resolution (Attachment 1.00):

99 The Approved Restructuring Costs to be paid through the issuance of the  
100 Bonds and recovered through Transition Charges shall include the costs of  
101 (a) retiring the PREPA Bonds in exchange for the Exchange Offer Bonds  
102 or the 2016 PREPA Bonds in exchange for Post-Closing Date Bonds;  
103 (b) legally or economically defeasing Insured PREPA Bonds and 2016  
104 PREPA Bonds through the issuance of Mirror Bonds and the payment of  
105 such Mirror Bonds; (c) restructuring, refunding, redeeming, defeasing  
106 (legally or economically through the issuance of additional Mirror Bonds  
107 or otherwise), or purchasing PREPA Bonds through the issuance of  
108 Syncora Bonds; (d) the retirement of the obligations due and owing by  
109 PREPA under the Credit Agreements through the issuance of the Lender  
110 Bonds; (e) funding or replenishing any debt service reserve fund or

111 account or any other restricted accounts or subaccounts required to be  
112 established by the Trust Agreement, and to the extent permitted in the  
113 Trust Agreement, any Ancillary Agreement, including an additional  
114 reserve fund, to its required level, as provided in the Trust Agreement and,  
115 to the extent permitted in the Trust Agreement, any Ancillary Agreement  
116 (as the case may be), to secure payment of all or a portion of the Bonds;  
117 (f) funding any payment to the Internal Revenue Service (the “IRS”) in  
118 accordance with any PREPA agreement with the IRS under the voluntary  
119 closing agreement or similar program; (g) funding a deposit to the self-  
120 insurance fund (the “PREPA Self Insurance Fund”), established pursuant  
121 to the trust agreement, dated as of January 1, 1974, as amended, by and  
122 between PREPA and U.S. Bank National Association, as successor  
123 trustee, in an amount not to exceed \$50 million; (h) paying Financing  
124 Costs, including the Upfront Financing Costs, in connection with any  
125 issuance of Bonds and approved for recovery in the Restructuring  
126 Resolution; and (i) refunding, redeeming or purchasing Uninsured PREPA  
127 Bonds.

128 Because some of those costs are paid or financed by the Bonds themselves, the  
129 Calculation Methodology recovers those costs over time by establishing Transition  
130 Charges that recover “the sum of (a) principal of (in accordance with the scheduled  
131 maturity date or dates (including scheduled mandatory sinking fund redemption dates)  
132 and interest on the Bonds when due and as accruing through and including the First Bond  
133 Payment Date, (b) any amount necessary or expected to be necessary to fund or replenish  
134 any debt service reserve fund or account, or any other restricted accounts or subaccounts  
135 required to be established by the Trust Agreement or any Ancillary Agreement as an  
136 additional reserve fund, to their required level, as and to the extent such funding or  
137 replenishment is required by the Trust Agreement or any Ancillary Agreement (as the  
138 case may be) on or prior to the First Bond Payment Date, and (c) all other Ongoing  
139 Financing Costs required to be paid or deposited on or prior to the First Bond Payment  
140 Date.” *Id.*

141 Q. **Please describe how the Corporation determined the Customer classes among which**  
142 **Ongoing Financing Costs are distributed.**

143 A. The Revitalization Act specifies that the Transition Charges are to be distributed to  
144 Residential and Non-Residential Customer classes.<sup>4</sup> Beyond those broad categories, the  
145 determination of Customer classes among which Ongoing Financing Costs are distributed  
146 and the distribution of Ongoing Financing Costs among Customer classes is addressed by  
147 the Restructuring Resolution and the Calculation Methodology and Adjustment  
148 Mechanism to Establish and Adjust the Transition Charge (the “Calculation  
149 Methodology”) (Attachment 1.00, and Appendix 2 thereto). Exhibit 6.02 to my  
150 testimony lists each of PREPA’s current tariff classes and maps them to the “Residential”  
151 or “Non-Residential” Customer classes for the purposes of the Calculation Methodology.  
152 If and when those PREPA rate classes evolve, the effective division will be preserved for  
153 Transition Charge calculation purposes.

154 Q. **Please describe what Customer groups are captured in the “Residential” and “Non-**  
155 **Residential” categories.**

---

<sup>4</sup> “Customer” means “any Person that is connected to or takes or receives electric service within the Commonwealth by means of the electric generation, transmission or distribution facilities constituting part of Electric System Assets, whether or not those electric generation, transmission, or distribution facilities are owned by PREPA. PREPA shall not be a Customer. Each municipality in the Commonwealth shall be a Customer to the extent that the dollar value of its usage of electric service (including in determining such dollar value of Transition Charges which would otherwise be imposed on such municipality and PREPA charges) in any fiscal year exceeds the dollar value owed by PREPA to such municipality as a contribution in lieu of taxes for such fiscal year.” PRA, Article 31, para. 7. For the avoidance of doubt, previous Customers that completely disconnect from Electric System Asset and have no service agreement with PREPA, including for backup, standby, or other service, are no longer considered to be “Customers” for all purposes under the Act and the Restructuring Resolution unless and until said customers reconnect.

156 A. Residential Customers are those Customers that use electricity for domestic use. For  
157 purposes of calculating the Transition Charges, all other Customers, including  
158 Governmental Customers, are considered Non-Residential Customers. PREPA generally  
159 follows the FERC system of accounts which defines Residential and Non-Residential  
160 Customers in this manner.

161 Q. **How does the Calculation Methodology distribute Ongoing Financing Costs between**  
162 **the Residential and Non-Residential Classes?**

163 A. The Calculation Methodology established in Appendix 2 to the Restructuring Resolution  
164 (Attachment 1.00) distributes the Revenue Requirement to determine specific Residential  
165 and Non-Residential Revenue Requirements for the Residential Customer Class and Non-  
166 Residential Customer Class (including Government Customers). In particular, the  
167 division is made based upon the share of the total actual historical kWh billed to  
168 Residential and Non-Residential (including Government) Customers, respectively, in the  
169 previous 12-month period ending with the last day of the most recently completed  
170 calendar quarter for which data is available.

171 The historical energy (kWh) usage data for Residential Customers, Non-  
172 Residential Customers, and Governmental Customers<sup>5</sup> that is used in the calculation of  
173 Transition Charges, by the Adjustment Mechanism, and in the distributions described in  
174 Article 6.25A(e)(1)(ii), (iii), (iv), and (vi) is provided in Attachment 5.00, along with  
175 prior historical data for reference and information purposes. This data includes, in most

---

<sup>5</sup> For purposes of calculating the Transition Charges, Governmental Customers are a subset of Non-Residential Customers and are provided in Attachment 5.00 for informational purposes.

176 cases, usage that is directly measured (*e.g.*, with a meter), but also includes usage that is  
177 calculated (*e.g.*, for a light fixture), or estimated (*e.g.*, where a meter fails or cannot be  
178 read). This data is the basis of the distributions of the Revenue Requirements between  
179 Customer classes and of the kWh calculations underlying the estimated and exemplar  
180 Transition Charges discussed in the Corporation's filing. Of course, actual Transition  
181 Charges over time will be based on updated data.

182 **Q. Why are the various existing PREPA rate classes consolidated into two Customer**  
183 **classes (Residential and Non-Residential) for purposes of distributing the Ongoing**  
184 **Financing Costs?**

185 A. The Calculation Methodology will not change over the life of the Bonds and, thus, it  
186 would undoubtedly become obsolete if it tracked PREPA's current rate classes. Nor is  
187 there any need for a more granular allocation of the Transition Charges in the Calculation  
188 Methodology. Maintaining two broad Customer classes in the Calculation Methodology  
189 gives the Commission and PREPA more flexibility to adjust rate classes down the road.  
190 For example, if the Commission at some point in the future seeks to approve a different  
191 rate design that eliminates a particular Customer class, it would be difficult to implement  
192 the change if that class was hard-wired in the Calculation Methodology.

193 Cost allocations shift over time between classes depending on a multitude of  
194 factors including energy use, economic issues, technology, expansion/contraction of the  
195 grid and other factors that we have no way of knowing far in advance. The Commission  
196 has broad discretion over the allocation of PREPA costs in rate cases. Simply stated, the  
197 allocation of PREPA's costs will be addressed in the Embedded Cost of Service analysis

198 filed in the upcoming and future PREPA rate cases. Moreover, because the Commission  
199 retains jurisdiction over PREPA’s rates, it can effectively allocate the total cost paid by  
200 Customers without altering, or being able to alter, in any way the Transition Charges or  
201 their distribution among Customer Classes.

202 **Q. Please provide an example of how the Calculation Methodology distributes Revenue**  
203 **Requirement between the Residential and Non-Residential Customer classes.**

204 **A.** The following is an illustrative projected example of the calculation used as part of the  
205 development of Attachment 6.03, the Transition Charge calculation:

---

	<b>Actual</b>	
	KWH (No CILT) Billed	
	FY 2015	Customer Allocation
Residential	6,249,541,676	37.83%
Non-Residential	10,270,239,212	62.17%
Total	16,519,780,888	100%

206 In this example, for Residential Customers, the total actual historical kWh billed  
207 in FY 2015 or 16,519,780,888 kWh is divided into the actual historical kWh billed to  
208 Residential Customers, or 6,249,541,676, resulting in a 37.83% distribution of the  
209 Revenue Requirement to Residential Customers.

210

211 **B. Calculation and Adjustment of Transition Charges**

212 Q. **Please describe the Calculation Methodology including the Adjustment Mechanism**  
213 **and the manner of calculation of Transition Charges.**

214 A. For both Residential and Non-Residential Customers, the Calculation Methodology  
215 distributes Financing Costs and determines class-specific Revenue Requirements.  
216 Mathematically, the Calculation Methodology established in Appendix 2 of the  
217 Restructuring Resolution (Attachment 1.00) provides:

218 (a) **Step 1: Calculate Customer Class Revenue Requirement Shares.** As I discuss  
219 above, the Calculation Methodology distributes Financing Costs to determine a  
220 Residential Net Revenue Requirement and a Non-Residential Net Revenue  
221 Requirement based on the Residential Customer Allocation and the Non-  
222 Residential Customer Allocation, respectively. To do this, it specifies shares,  
223 which sum to 100%, of the total Revenue Requirement:

224 (1) Divide the Aggregated Actual kWh Billed for the previous 12-month  
225 period ending with the end of the most recently completed calendar  
226 quarter for which data are available into the Actual kWh Billed to  
227 Residential Customers during that same 12-month period. The resultant  
228 percentage is the “Residential Customer Allocation.”

229 (2) Divide the Aggregated Actual kWh Billed for the previous 12-month  
230 period ending with the end of the most recently completed calendar  
231 quarter for which data are available into the Actual kWh Billed for all  
232 Non-Residential Customers and Government Customers during the same  
233 12-month period. The resultant percentage is the “Non-Residential and  
234 Government Customer Allocation.”

235 This process meets the requirements of Article 6.25A(d)(ii)(1). As  
236 provided by Article 6.25A(e)(1)(vi), for net metering Customers and Customers  
237 with “behind the meter” generation, the Corporation has determined that it should

238 include their gross usage for purposes of calculating Transition Charges. This  
239 subject is discussed below in Section II.D of my testimony. Exhibit 6.03  
240 demonstrates these distribution calculations.

241 (b) **Step 2: Compare the Projected Transition Charge Revenues to the Required**  
242 **Revenues.** The Calculation Methodology provides for a direct mathematical  
243 comparison between the costs that must be recovered and the expected Transition  
244 Charge Revenues. The Adjustment Mechanism (Appendix 2 to Attachment 1.00)  
245 describes the steps as follows:

246 (3) Project the Transition Charge Revenues expected to be held by the Trustee  
247 on the proposed True-Up Adjustment Date after payment of Ongoing  
248 Financing Costs due on or prior to such date (but excluding amounts held  
249 or to be held on such date by the Trustee in any debt service reserve fund  
250 or account, or in any other restricted accounts or subaccounts required to  
251 be established by the Trust Agreement or any Ancillary Agreement as an  
252 additional reserve fund), and add to that amount the Transition Charge  
253 Revenues expected to be received by the Trustee after the True-Up  
254 Adjustment Date and during the First Collection Period from bills  
255 rendered prior to the True-Up Adjustment Date based on the Transition  
256 Charges then or previously in effect.

257 (4) Calculate the sum of (a) principal of (in accordance with the scheduled  
258 maturity date or dates (including scheduled mandatory sinking fund  
259 redemption dates)) and interest on the Bonds when due and as accruing  
260 through and including the First Bond Payment Date, (b) any amount  
261 necessary or expected to be necessary to fund or replenish any debt service  
262 reserve fund or account, or any other restricted accounts or sub accounts  
263 required to be established by the Trust Agreement or any Ancillary  
264 Agreement as a an additional reserve fund, to their required level, as and  
265 to the extent such funding or replenishment is required by the Trust  
266 Agreement or any Ancillary Agreement (as the case may be) on or prior to  
267 the First Bond Payment Date, and (c) all other Ongoing Financing Costs  
268 required to be paid or deposited on or prior to the First Bond Payment  
269 Date.

270 (5) Subtract the amount in clause (3) from the amount in clause (4) to  
271 determine the “Net Revenue Requirement” for the First Collection Period.

272                   This is a mathematically sound and accurate way of determining over time  
273                   the quantity of Transition Charge Revenues that are required to cover the  
274                   Financing Costs. It complies with the requirements of Article 6.25A(d)(1) by  
275                   providing for “the full and timely payment of the Restructuring Bonds in  
276                   accordance with their terms and other Ongoing Financing Costs... .” Exhibit 6.03  
277                   demonstrates how the calculations in Step 2 are calculated.

278                   (c)   **Step 3: Calculate the Gross Billing Requirements required to collect**  
279                   **necessary Transition Charge Revenues for each Customer class and period.**

280                   In order to calculate a correct Transition Charge, the required revenues must be  
281                   adjusted or “grossed up” to take into account the fact that not all Customers pay  
282                   and all Customers who do pay over time, pay at varying rates. To accomplish  
283                   this, the Adjustment Mechanism calculates a Gross Billing Requirement for both  
284                   the Residential and Non-Residential Classes for each relevant period. Those  
285                   Gross Billing Requirements adjust (or gross up) the Net Revenue Requirement to  
286                   account for historical billing data, the Composite Collection Curve – which I will  
287                   discuss further below – and the write-off assumption, so that the Transition  
288                   Charge Revenues expected to be remitted to the Trustee meet the calculated  
289                   Revenue Requirements. The Adjustment Mechanism (Appendix 2 to Attachment  
290                   1.00) describes this step as follows:

291                   (6)   Adjust (or gross up) the Net Revenue Requirement [to give effect to the  
292                   number of billing cycles, the Composite Collection Curve and the write-  
293                   off assumption,] to ensure that the Transition Charge Revenues expected  
294                   to be remitted to the Trustee during the First Collection Period will satisfy  
295                   the Net Revenue Requirement for the First Collection Period on a timely  
296                   basis and will result in the Excess Funds Account held under the Trust

297 Agreement to be zero by the First Bond Payment Date. The result will be  
298 the “Gross Billing Requirement” for the First Collection Period.

299 Functionally, as I explain below, this results in the proper allocation of  
300 delinquencies – Transition Charges that are not collected from Customers – as I  
301 discuss in Section II.C, below, and it takes into account lag in the payment of  
302 Transition Charges. Exhibit 6.03 demonstrates how the Step 3 calculations will  
303 be performed.

304 **(d) Step 4: Calculate Transition Charge.** For Non-Residential Customers (which  
305 includes all Customers of PREPA other than Residential Customers), the  
306 Transition Charge is based on kWh consumption of each Customer by applying a  
307 rate derived from the Non-Residential Net Revenue Requirement and the total  
308 historical kWh usage of Non-Residential Customers, as specified above. For  
309 Residential Customers, the Transition Charge is a flat charge based on the  
310 Residential Net Revenue Requirement and the Residential Service Agreement  
311 Count, defined as the average number of Residential Service Agreements used for  
312 billing purposes during the previous 12-month period ending with the end of the  
313 most recently completed calendar quarter for which data is available as of the date  
314 of any calculation. The Adjustment Mechanism (Appendix 2 to Attachment 1.00)  
315 describes these steps as follows:

316 (7) Multiply the Gross Billing Requirement for the First Collection Period by  
317 the Residential Customer Allocation. The result will be the “Residential  
318 Gross Billing Requirement” for the First Collection Period.

319 (8) Multiply the Gross Billing Requirement for the First Collection Period by  
320 the Non-Residential and Government Customer Allocation. The result

321 will be the “Non-Residential and Government Gross Billing Requirement”  
322 for the First Collection Period.

323 (9) Divide the Residential Gross Billing Requirement for the First Collection  
324 Period by the Residential Service Agreement Aggregate Count for First  
325 Collection Period to produce a \$/per service agreement Transition Charge.  
326 The result will be the first possible Transition Charge for each Residential  
327 Customer to be effective on the True-Up Adjustment Date.

328 (10) Divide the Non-Residential and Government Gross Billing Requirement  
329 for the First Collection Period by the Actual kWh Billed for Non-  
330 Residential Customers and Government Customers during the comparable  
331 period to the First Collection Period in the prior 12-month period for  
332 which data are available (i.e., the calendar dates one year prior to the  
333 calendar dates in the First Collection Period, to produce an estimated  
334 volumetric (per kWh) Transition Charge. Subject to clause (12), the result  
335 will be the first possible Transition Charge (per kWh) for all Non-  
336 Residential and Government Customers to be effective on the True-Up  
337 Adjustment Date.

338 (11) Repeat the calculations described in clauses (3) through (10), inclusive, to  
339 determine the Transition Charges necessary to satisfy the revenue  
340 requirement for each consecutive Collection Period which ends during the  
341 Annual Calculation Period, replacing “First Bond Payment Date” with  
342 “Second Bond Payment Date” and “First Collection Period” with “Second  
343 Collection Period,” etc. through the Third and Fourth Collection Periods  
344 (if any) respectively.

345 (12) Compare the revenues produced by each set of Transition Charges  
346 resulting from the calculations above (i.e., one set for each Collection  
347 Period). The set of Transition Charges which is expected to produce the  
348 greatest revenue by the end of the First Collection Period will be the set of  
349 Transition Charges to be effective on the True-Up Adjustment Date.

350 These steps assure that the Transition Charges that go into effect assure a  
351 level of charges sufficient to pay the Bonds and related costs on each payment  
352 date. Exhibit 6.03 demonstrates how the calculations in Step 4 would be  
353 performed.

354 (e) **Step 5: True-Up and prospectively adjust the Transition Charge quarterly or**  
355 **more frequently, if required.** Transition Charges are initially established and  
356 are thereafter trued-up and prospectively adjusted, at least quarterly, through the  
357 formulaic Adjustment Mechanism. This mechanism accounts, over time, both for  
358 changes in the Revenue Requirement and for variations and changes in other  
359 parameters influencing the calculation of the Transition Charges and their  
360 collection. The Restructuring Resolution and the Calculation Methodology  
361 provide that PREPA, as the Servicer will recalculate the Transition Charge,  
362 subject to review by the Calculation Agent. For the purpose of assuring the  
363 mathematical accuracy of the calculations, true-ups will be conducted: (a)  
364 quarterly, beginning no more than three months from issuance of the Bonds and  
365 continuing until the Bonds and all other Ongoing Financing Costs are paid in full,  
366 and (b) at any other time if the Corporation, the Commission, the Calculation  
367 Agent, or any party to an Ancillary Agreement or the requisite bondholders  
368 determine that such adjustment is required to assure the timely payment of the  
369 Bonds and other Ongoing Financing Costs. The Adjustment Mechanism  
370 (Appendix 2 to Attachment 1.00) states:

371 The Corporation will adjust the Transition Charges for each Class as  
372 requested in each True-Up Letter, and such Transition Charges will be  
373 effective on the date specified in the True-Up Letter, so long as such  
374 effective date is at least 30 days after the filing with the Commission of  
375 such True-Up Letter, subject only to the correction of any mathematical  
376 errors by the Commission as set forth in the next sentence. Any  
377 adjustment to correct the mathematical inaccuracy, if ordered by the  
378 Commission, shall be made by the Servicer no later than the next  
379 succeeding True-Up Adjustment on which such adjustment can practically  
380 be made without delaying the effective date set forth in the True-Up  
381 Letter.

382                   Those periodic adjustments will (i) correct for any over-collections or  
383                   under-collections of Transition Charges by adjusting the revenues required going  
384                   forward, and (ii) to ensure that expected Transition Charge remittances to the  
385                   Trustee, after taking into account assumed charge-offs and payment delays, are  
386                   adequate (a) to pay timely principal of (in accordance with the expected  
387                   amortization schedule) and interest on the Bonds in the next 12-month period, (b)  
388                   to replenish the debt service reserve fund or account (or in any other restricted  
389                   accounts or subaccounts required to be established by the Trust Agreement or any  
390                   Ancillary Agreement as a rate stabilization or additional reserve fund) to its  
391                   required level no later than the date specified in the Trust Agreement and other  
392                   operative documents, and (c) to make timely payment of all other Ongoing  
393                   Financing Costs.

394   **Q.    Why, as reflected in Step 4, has the Corporation determined that Transition**  
395   **Charges applicable to Residential Customers should be a flat charge calculated on a**  
396   **per service agreement basis?**

397   **A.**    The per service agreement determination is administratively simple and will be able to be  
398           administered in a consistent manner over the life of the Transition Charges. Moreover,  
399           the per service agreement determination is reasonable because low income users tend to  
400           have a higher kWh usage due to PREPA's legacy flat charge rate design and generally  
401           inefficient electric use among these Customers. A Transition Charge based on kWh  
402           usage would place a significantly higher burden on these Customers than the per service  
403           agreement basis.

404 Q. **How are Transition Charges calculated at each Adjustment date for a Collection**  
405 **Period?**

406 A. The Transition Charge is calculated to meet all payments due during the Collection  
407 Period in the 12-months following the rate effective date. The rate must be calculated to  
408 collect sufficient funds to meet scheduled payments of Ongoing Financing Costs  
409 (including debt service on the Bonds) as they become due.

410 Q. **Please describe the process where PREPA as the Servicer will monitor the level of**  
411 **collections and determine if an adjustment is required to assure the timely payment**  
412 **of the principal and interest on the Bonds.**

413 A. After month-end data is available, PREPA as the Servicer will prepare monthly reports  
414 which will compare the actual collection of revenues for the Transition Charge to that  
415 which was estimated for that month. The Calculation Methodology describes the steps as  
416 follows:

417 To initiate any True-Up Adjustment, the Servicer will make a preliminary  
418 calculation of the True-Up Adjustment and will prepare and submit to the  
419 Calculation Agent a draft request for adjustment (a “True-Up Letter”).  
420 The Calculation Agent will review the draft True-Up Letter, including the  
421 mathematical calculations related to the proposed True-Up Adjustment,  
422 and forward any corrections or modifications to the Servicer. The  
423 Servicer will then file the True-Up Letter, reflecting any such corrections  
424 or modifications, with the Corporation, the Commission and the Trustee,  
425 not later than 30 days prior to the proposed effective date of the  
426 adjustment set forth in the True-Up Letter (such effective date being  
427 referred to as the “True-Up Adjustment Date”).

428 Each True-Up Adjustment will be designed (i) to correct for any over-  
429 collections or under-collections of Transition Charges through the  
430 proposed True-Up Adjustment Date and (ii) to ensure that expected  
431 Transition Charge Revenues remitted or to be remitted to the Trustee, after  
432 taking into account assumed charge-offs and payment delays, are adequate  
433 (A) to pay timely principal of (in accordance with the scheduled maturity

434 date or dates (including scheduled mandatory sinking fund redemption  
435 dates)) and interest on the Bonds on each of the Payment Dates that occurs  
436 during the related Annual Calculation Period (defined below), (B) to fund  
437 or replenish any debt service reserve fund or account or any other  
438 restricted accounts or subaccounts required to be established by the Trust  
439 Agreement or any Ancillary Agreement as an additional reserve fund) to  
440 its required level, as provided in the Trust Agreement or the Ancillary  
441 Agreement (as the case may be), and (C) to make timely payment of all  
442 other Ongoing Financing Costs during the related Annual Calculation  
443 Period.

444 **Q. Explain how the filing provides information sufficient to allow the Commission to**  
445 **replicate the Transition Charges for Non-Residential and Residential Customers.**

446 A. For any level of Revenue Requirement, the data provided with the filing would allow the  
447 Commission to replicate the calculation of the Transition Charges that I have performed.  
448 Attachment 3.02 estimates the Transition Charges by class and compares the estimates to  
449 the total charges to Customers over the life of the Transition Charges. Exhibit 6.03  
450 details all of the calculations supporting the Transition Charge calculation and contains  
451 the information that would be provided in future quarterly reconciliation filings to the  
452 Commission. The calculations in this Exhibit are straightforward and allow the  
453 Commission to replicate each step of the process to understand precisely how the  
454 Transition Charge was calculated.

455 **Q. Does the distribution of responsibility for Transition Charges among Customer**  
456 **classes and Customers limit the discretion of the Commission in addressing the**  
457 **allocation of responsibility for the PREPA revenue requirement in any PREPA rate**  
458 **case?**

459 A. No. In PREPA’s general rate proceedings, the cost of service analysis will reflect all of  
460 the components of PREPA’s revenue requirement, as well as debt service on the  
461 Restructuring Bonds and related costs. This approach would be utilized whether or not a  
462 debt restructuring occurs. Thus, for rate design purposes, PREPA will include the debt  
463 service of the Restructuring Bonds in the cost of service analysis while including the  
464 revenues from the Transition Charge as a revenue credit. In future PREPA rate cases, the  
465 Commission will approve a design for PREPA rates that allocates all total costs billed to  
466 Customers (including debt service and other costs associated with the Bonds). While the  
467 decisions in those cases cannot affect the Transition Charges themselves, they can adjust  
468 how PREPA costs are allocated among Customers, preserving the full discretion of the  
469 Commission over how the Transition Charges impact Customers.

470 Q. **Please describe how costs are allocated to rate classes in the PREPA rate case.**

471 A. The Embedded Cost of Service Study (“ECOSS”) will be performed without regard to  
472 the existence of the Transition Charges, and will allocate total costs using a methodology  
473 generally accepted in the industry. After the overall responsibility for revenue  
474 requirements has been determined for each rate class under an ECOSS methodology, the  
475 revenues from the Transition Charge will be deducted and the remaining PREPA revenue  
476 requirement will be recovered from base rates and other rate design components. (In the  
477 event that the Commission elects to rely on a Marginal Cost of Service Study, the same  
478 principles will apply and the overall allocation of charges will simply be driven by  
479 marginal as opposed to embedded costs.) Transition Charges will be calculated and  
480 collected as established by the Restructuring Resolution and the Revitalization Act and

481 remain unaffected by PREPA rate cases, while the Commission retains jurisdiction over  
482 the overall costs assessed to, and price signals sent to, particular rate classes.

483 **Q. Please explain what would occur in a rate case if the Transition Charges imposed on**  
484 **a particular Customer class collect more than the share of debt service costs**  
485 **attributed to that class in a cost study.**

486 A. If the Transition Charges impute more than a particular class' debt service share (as  
487 determined by the cost of service study), the overall cost allocation (including debt  
488 service and other costs), with all else being equal, will be adjusted downward so that the  
489 allocation of total costs and determination of rates for that class is equitable.<sup>6</sup> Again, that  
490 does not change the Transition Charges themselves, but it preserves the Commission's  
491 authority of the design of the rates that govern the total liability of Customers for electric  
492 service, including the PREPA rates.

493 **C. Treatment of Delinquencies**

494 **Q. Will Customer delinquencies in any period be added to the revenue requirement of**  
495 **the next period and allocated among all Customer classes consistent with the**  
496 **methodology described above?**

497 A. Yes. The Restructuring Resolution includes a provision that delinquencies of any class of  
498 Customers will be distributed among all Customer classes as previously described and  
499 included in the Adjustment Mechanism (Appendix 2 to Attachment 1.00). Consistent

---

<sup>6</sup> By way of illustration only, and using entirely hypothetical numbers for ease of explanation, if the Commission desired to reduce the economic effect of a fixed \$2.00 Transition Charge on a group of Customers, it could reduce the allocation of PREPA charges to that group of Customers by \$1.00. While the Transition Charge would remain payable by those Customers without change, the effective change in those Customer's total bill due to the imposition of the Charge would have been modulated.

500 with Article 6.25A(d)(3) of the Revitalization Act, the calculation of the Gross Billing  
501 Requirement in the Adjustment Mechanism allocates delinquencies among all Customer  
502 classes consistently with how other Financing Costs are allocated.

503 **Q. What is a Composite Collection curve and how is it used in the Calculation**  
504 **Methodology?**

505 A. A Composite Collection Curve is used to determine the appropriate gross-up factor for  
506 the collections lag. Using historical data, the Composite Collection Curve calculates the  
507 estimated time it takes all Customers to pay their bills. This estimated time is then used  
508 to determine the amount of collections relative to when debt service payments are due.  
509 Following is a description of the Composite Collection Curve in the Adjustment  
510 Mechanism (Appendix 2 to Attachment 1.00):

511 In estimating the expected receipts of Transition Charges for any period  
512 the Servicer will apply a “collection curve” reflecting the most recent 12-  
513 month history of collections for which data are available. In connection  
514 with each True-Up Adjustment filing, the Servicer will develop one  
515 collection curve reflecting payment history for all Customers (the  
516 “Composite Collection Curve”). A collection curve is data reflecting the  
517 timing of payments of outstanding bills during a 12-month period,  
518 adjusted to assume that any Transition Charges which are not collected  
519 within 120 days of billing are written off. Each month’s billings are  
520 divided into aging buckets based on the number of days for which such  
521 billings have been outstanding (e.g., 0 to 29 days, 30 to 59 days, 60 to 89  
522 days, and 90 to 119 days outstanding). The aging buckets are then used to  
523 estimate the dollar amount of each month’s billings collected within 30,  
524 60, 90 and 120 days, as well as the dollar amount not collected within 120  
525 days (amount written off) for the 12-month period. For such 12-month  
526 period, the collection curve is calculated by dividing each of the total  
527 dollar amount of billings collected within 30, 60, 90, and 120 days by the  
528 total dollar amount of billings collected within 120 days. The Composite  
529 Collection Curve will also be used to calculate the Days Sales Outstanding  
530 referred to in Annex 3 to the Servicing Agreement

531 Q. **Is the use of a Composite Collection Curve in the Calculation Methodology an**  
532 **appropriate tool to forecast receipts of Transition Charge revenues?**

533 A. Yes. The Composite Collection Curve utilizes past collection experience to forecast the  
534 amount of revenue that is expected to be received from the Transition Charges. A  
535 Composite Collection Curve represents the amount and timing by which outstanding bills  
536 have been paid during a collection period<sup>7</sup> adjusted to assume that any Transition  
537 Charges which are not collected within 120 days of billing are written off. A description  
538 of the Composite Collection Curve in the Adjustment Mechanism (Appendix 2 to  
539 Attachment 1.00) is provided in the answer to the immediately preceding question.

540 Q. **How frequently will the Composite Collection Curve be updated?**

541 A. The Composite Collection Curve will be updated with each reconciliation adjustment is  
542 filed with the Commission.

543 **D. Net Metering and Behind the Meter Generation**

544 Q. **Does the Calculation Methodology include the estimated load served by net**  
545 **metering or distributed generation (“behind the meter”)?**

546 A. The Corporation has made a determination, as I recommend, that Transition Charges will  
547 be calculated based on total gross load of Customers, including total behind the meter  
548 consumption, as it becomes practicable to measure or estimate that load reliably. The Net  
549 Metering Determination is reflected in the Calculation Methodology (Appendix 2 to  
550 Attachment 1.00) which defines “Actual kWh Billed,” for this purpose, “without regard

---

<sup>7</sup> “Collection Period” means, for the purposes of any True-Up Adjustment, the period which commences on a True-Up Adjustment Date and which ends five (5) Business Days prior to a designated Bond Payment Date. Adjustment Mechanism (Appendix 2 to Attachment 1.00).

551 to any offset for net-metering and adjusted for estimated distributed generation usage.”  
552 Initially, the Corporation proposes that Customers be charged the total kWh measured by  
553 the billing meter, with no offset for exported – or “net metered” – kWh. As it becomes  
554 practicable over time, and as meter data measuring the output of the distributed  
555 generation itself becomes available, the load of such Customers for these purposes will  
556 include the gross output of the distributed generation plus the net deliveries from  
557 PREPA.

558 **Q. Will the Net Metering Determination materially affect all classes of Customers?**

559 A. No. Due to the Corporation’s per service agreement determination, the Net Metering  
560 Determination will mainly prevent Non-Residential net metering Customers from  
561 bypassing the Transition Charges. Residential Customers will not be affected in any  
562 material respect because each service agreement – whether net metering or not – will be  
563 subject to a flat Transition Charge. Thus, the amount of load behind the meter will not  
564 affect the Transition Charge to an individual Residential net metering Customer.

565 **Q. Please explain the reasons for the Corporation’s Net Metering Determination to**  
566 **include estimated load served by net metering or estimated distributed generation**  
567 **(“behind the meter”) in determining Customer energy usage.**

568 A. Absent the Net Metering Determination, these Customers could reduce their  
569 responsibility to pay Transition Charges, and the responsibility for those avoided charges  
570 would be transferred to other Customers. This is not equitable given that the Financing  
571 Costs recovered through the Transition Charges result from historical PREPA operating  
572 and fuel costs and investment expenditures. Those costs and expenditures are reflected in

573 the PREPA legacy debt burden that the restructuring should mitigate. Current Customers  
574 should not be permitted to bypass paying their share of costs related to those historical  
575 obligations – and shift their share to other Customers – by deciding to install behind the  
576 meter generation. This cost shift would also disproportionately impact those Customers  
577 that could not afford to purchase such equipment to bypass the charges.

578 Allowing Customers to avoid their share of those costs would also create an  
579 artificial incentive to install and use such generation behind the meter and send an  
580 improper price signal encouraging the bypass of system electric supply even when not  
581 economic. Indeed, the increase in other Customers' Transition Charges would itself also  
582 create an even greater uneconomic incentive to bypass the PREPA system This would  
583 increase further the inequitable shift in the responsibility for Transition Charges.

584 **Q. In light of the Corporation's Net Metering Determination, will the rates charged to**  
585 **net metering Customers satisfy the criteria set out in Article 4 of Law No. 114-2007,**  
586 **as amended by Article 29 of the Revitalization Act ("Article 4 requirements") that**  
587 **charges to net metering Customers "be just?"**

588 **A.** Yes. The application of Transition Charges to net metering Customers' entire load is just  
589 because, as I mention above, these charges cover historical operating and fuel costs and  
590 investment expenditures. They were incurred to benefit all Customers and, therefore,  
591 should be distributed to all Customers. It would be not be just to allow net metering  
592 Customers to bypass the Transition Charges because doing so would place a greater  
593 burden on other Customers, including those who cannot afford to install distributed  
594 generation.

595 Q. **In light of the Corporation’s Net Metering Determination, will the rates charged to**  
596 **net metering Customers satisfy the Article 4 requirements that charges to net**  
597 **metering Customers “will cover operational and administrative costs of network**  
598 **services that the consumer received with the Net Metering Agreement?”**

599 A. Yes. The imposition of a Transition Charge will not affect how the overall rates charged  
600 to net metering Customers cover operational and administrative costs of network services  
601 that the consumer receives through the Net Metering Agreement. The overall rates  
602 charged to these Customers cover the operational and administrative costs related to  
603 serving them.

604 Q. **In light of the Corporation’s Net Metering Determination, will the rates charged to**  
605 **net metering Customers satisfy the Article 4 requirements requiring that charges**  
606 **“never will be excessive or established in such a way that it becomes an obstacle to**  
607 **the deployment of renewable energy projects?”**

608 A. Yes. In making the determination to include estimated load served by net metering in  
609 determining Customer energy usage, the Corporation and PREPA considered this Article  
610 of the Revitalization Act and believe that the Transition Charges will not affect the  
611 justness of charges to net metering Customers or the coverage of operational and  
612 administrative costs of network services provided to these Customers under their Net  
613 Metering Agreement with PREPA. In addition, the Transition Charges are not being  
614 established in a way that makes them an obstacle to the deployment of renewable energy  
615 projects.

616 I have reviewed the Transition Charges and how they are applied to net metering  
617 Customers. Here, the Transition Charge is just and will be paid by all Customers and will  
618 not be a greater burden on net metering Customers versus other PREPA Customers.  
619 Furthermore, it is very important that the Transition Charges remain neutral with no  
620 incentive – or disincentive – to implement behind the meter distributed generation.  
621 Either would create uneconomic incentives/disincentives to implement such technology.  
622 Thus, the inclusion of estimated load served by net metering in determining Customer  
623 energy usage should not play a role in a Customer’s decision whether to implement  
624 behind the meter distributed generation.

625 **Q. Will the inclusion of estimated load served by net metering or estimated distributed**  
626 **generation (“behind the meter”) in determining Customer energy usage limit the**  
627 **Commission’s authority over the overall charges paid by such Customers?**

628 **A.** No. The Commission retains authority over the design of PREPA’s rates, including the  
629 charges applicable to net metering Customers. As I testified earlier, the Corporation’s  
630 calculation of the Transition Charge, including how load is measured, will not affect that  
631 authority or limit the design of the PREPA rate charged to such Customers.

632 **Q. Will the methodology for the inclusion of the estimated load served by net metering**  
633 **or distributed generation (“behind the meter”) in the calculation of Transition**  
634 **Charges, in accordance with the Net Metering Determination, ensure the full and**  
635 **timely payment of the Restructuring Bonds in accordance with their terms and**  
636 **other Ongoing Financing Costs?**

637 A. Yes. Not allowing Customers who use behind the meter generating equipment to avoid  
638 paying a Transition Charge reflecting their actual and, typically, historical load will  
639 enhance the assurance that the Corporation will make full and timely payment of the  
640 Bonds.

641 Q. **Can you confirm that the methodology for including the estimated load served by**  
642 **net metering or distributed generation (“behind the meter”) in the calculation of**  
643 **Transition Charges, in accordance with the Net Metering Determination, is**  
644 **practical to administer?**

645 A. Yes. The inclusion of the estimated load served by net metering Customers in the  
646 calculation of Transition Charges is practical to administer. I am familiar with PREPA’s  
647 billing systems and customer information systems and do not see any issue with  
648 administering this methodology.

649 Q. **How will PREPA practically extract and provide the gross usage of net metering**  
650 **Customers as required in administering the calculation of the Transition Charges**  
651 **on a quarterly basis?**

652 A. Currently, PREPA has advanced electronic meters for all net metering Customers,  
653 measuring both total kWh used by the Customer from PREPA and total kWh exported to  
654 PREPA. Both of these separate values are transmitted by the remote metering systems  
655 and stored in the Billing System, where they are later netted out in the current rate  
656 structure. This enables PREPA to use the total kWh delivered from the PREPA system to  
657 calculate Transition Charges without an exported kWh offset, regardless of how other  
658 rates are calculated. As it becomes practicable, a second meter will be installed or

659 enabled in the largest net metering Customers to measure the true gross generation, and  
660 determine the total behind the meter kWh.

661 **E. Other Calculation Issues**

662 **Q. What are contributions in lieu of taxes (“CILT”) of municipalities?**

663 A. As a public corporation, PREPA is not required to pay property and other taxes, including  
664 to municipalities. CILT is a payment which PREPA provides to municipalities in lieu of  
665 taxes which they would be required to pay if they were a privately owned enterprise.

666 **Q. Does the Calculation Methodology include the entire estimated load of**  
667 **municipalities including the portion covered by CILT?**

668 A. No. The definition of “Customer” under the Article 31 of the Revitalization Act provides  
669 that “(e)ach municipality in the Commonwealth shall be a Customer to the extent that the  
670 dollar value of its usage of electric service (including in determining such dollar value of  
671 Transition Charges which would otherwise be imposed on such municipality and PREPA  
672 charges) in any fiscal year exceeds the dollar value owed by PREPA to such municipality  
673 as a contribution in lieu of taxes for such fiscal year.” PRA, Article 31, para. 7. Thus,  
674 only the usage of municipalities that exceeds CILT is included in the Calculation  
675 Methodology.

676 **Q. Will the Calculation Methodology permit the Commission to discharge its obligation**  
677 **to require PREPA (or other Servicer) to demonstrate that PREPA (or such other**  
678 **Servicer) has been prudent in addressing late payments, past-due bills, and non-**  
679 **payments?**

680 A. Yes. The Calculation Methodology includes an adjustment for late payments, past-due  
681 bills, and non-payments. Nothing in the Calculation Methodology prevents or interferes  
682 with the Commission's ability to require PREPA (or any subsequent Servicer) to  
683 demonstrate that it has been prudent in addressing late payments, past-due bills, and non-  
684 payments. Any finding of imprudence, however, will not – as provided by Article  
685 6.25A(d)(3) – affect the allocation of delinquencies.

686 Q. **How are the above concerns addressed?**

687 A. Detailed collection data will be included in each quarterly filing which will provide the  
688 Commission with the necessary information to discharge its obligation to require PREPA  
689 (or other Servicer) to demonstrate that PREPA (or such other Servicer) has been prudent  
690 in addressing late payments, past-due bills, and non-payments.

691 **F. Practicable to Administer and Ensures Full and Timely Payment**

692 Q. **Is the Calculation Methodology “designed to provide for the full and timely  
693 payment of the Restructuring Bonds in accordance with their terms and other  
694 Ongoing Financing Costs?”**

695 A. Yes. As is demonstrated in my testimony, the mechanism which has been designed will  
696 ensure that the Restructuring Bonds will receive full and timely payment.

697 Q. **Is the share of Financing Costs to be recovered from each Customer class calculated  
698 “in such manner which is practicable to administer?”**

699 A. Yes. The calculation supporting the distribution of Financing Costs to each Customer  
700 class (*i.e.* Residential and Non-Residential) is based upon kWh sales adjusted for

701 collections. The data required to perform these calculations is produced in the normal  
702 course of business at PREPA and is readily available.

703 **Q. Is the share of Financing Costs to be recovered from each Customer class calculated**  
704 **in a manner “which ensures the full and timely payment of the Restructuring Bonds**  
705 **in accordance with their terms and other Ongoing Financing Costs?”**

706 **A.** Yes. The Calculation Methodology provides reasonable assurance that timely payment  
707 of the Bonds will occur. The following provisions are included in the calculation which  
708 ensures compliance with the Act: (1) calculations are based upon forward looking  
709 information; (2) trends in the number of service agreements and kWh sales are captured  
710 in the calculation; and (3) periodic reconciliations are performed in order to reduce  
711 significant variations from projected costs.

712 **Q. Please explain the basis for the Corporation’s determination that the Transition**  
713 **Charges and Adjustment Mechanism are designed and calculated to ensure the full**  
714 **and timely payment of the Restructuring Bonds in accordance with their terms and**  
715 **other Ongoing Financing Costs.**

716 **A.** The Restructuring Resolution, and Appendices thereto, set forth the Calculation  
717 Methodology and contain a form of Servicing Agreement under which PREPA, as the  
718 initial Servicer, will remit Transition Charge Revenues which are each designed to ensure  
719 adequate funds are available to pay debt service on the Bonds when due as well as other  
720 Ongoing Financing Costs. As I describe in more detail in the Independent Financial  
721 Consultant’s Report, attached to the Petition as Attachment 6.00, we have compared the  
722 projections of the Ongoing Financing Costs to the revenues expected from the Transition

723 Charges and conclude that the Calculation Methodology, including this periodic  
724 application of the Adjustment Mechanism, will ensure that the Transition Charge  
725 Revenues are sufficient to provide for the timely payment of Ongoing Financing Costs.

726 Q. **Are the provisions of the Restructuring Resolution, including the Calculation**  
727 **Methodology for the Transition Charges and the Adjustment Mechanism related to**  
728 **such Restructuring Bonds, consistent with the criteria set forth in Article 6.25A(d)?**

729 A. Yes. The provisions of the Restructuring Resolution, including the Calculation  
730 Methodology for the Transition Charges and the Adjustment Mechanism related to such  
731 Restructuring Bonds, are consistent with the requirements of Article 6.25A(d) and are  
732 sufficient for and provide for adequate protection for the full and timely payment of the  
733 Restructuring Bonds in accordance with their terms and other Ongoing Financing Costs.

734 **III. INDEPENDENT FINANCIAL CONSULTANT'S REPORT**

735 Q. **Are you an independent financial consultant with recognized expertise in financing**  
736 **public electric utilities?**

737 A. Yes. My personal qualifications are stated above. Navigant has provided similar  
738 services to other clients.

739 Q. **Does the Petition include or attach a report as described in Article 6.25A(e)(2)?**

740 A. Yes, I sponsor the Independent Financial Consultant's Report attached to the Petition as  
741 Attachment 6.00. The Independent Financial Consultant's Report, among other things,  
742 sets forth historical energy (kWh) usage by Customer class, includes a projection of  
743 Ongoing Financing Costs and Transition Charges during the term of the Restructuring  
744 Bonds and any other material assumptions used in the Report, and concludes that such

745 Transition Charges have been calculated as provided in Section 6.25A(e)(1) and, in  
746 accordance with the assumptions included in such Report, will ensure the full and timely  
747 payment of the Restructuring Bonds in accordance with their terms and all other Ongoing  
748 Financing Costs during the term of the Restructuring Bonds. In reaching that conclusion,  
749 I assume that the Calculation Methodology is properly administered and that accurate  
750 information is used.

751 **Q. What additional information is included in the Report?**

752 A. The Report includes: (a) historical energy (kWh) usage, a projection of Ongoing  
753 Financing Costs and Transition Charges during the term of the Restructuring Bonds and  
754 any other material assumptions used in the report; (b) my conclusion that the Transition  
755 Charges have been calculated as provided in clauses (ii), (iii), (iv) and (vi) of Article  
756 6.25A(e)(1), as applicable; and (c) my conclusion that in accordance with the  
757 assumptions included therein, that the Transition Charges will ensure the full and timely  
758 payment of the Restructuring Bonds in accordance with their terms and all other Ongoing  
759 Financing Costs during the term of the Restructuring Bonds.

760 **IV. OTHER TRANSITION CHARGE ISSUES**

761 **Q. Can you estimate the initial Transition Charges by Customer class including the**  
762 **percentage of the charge to total charges?**

763 A. Yes. That information is shown in the table below:

Line No.	Item	Amount
<b>1</b>	<b>Residential Customers</b>	
2	Average Monthly Revenue per Customer - FY 2014	\$99.34
3	Proposed Transition Charge - \$/Service Agreement	\$11.98
4	Transition Charge as a Percentage of 2014 Monthly Revenues	12.1%
5		
<b>6</b>	<b>Non-Residential Customers</b>	
7	Average Revenue per KWH - FY 2014	\$0.26418
8	Proposed Transition Charge - \$/KWH	\$0.03055
9	Transition Charge as a Percentage of 2014 Average Revenue per KWH	11.6%

764

765 Q. **Have you also estimated Transition Charges and how they compare to total charges**  
 766 **to Customers for electric service over the life of the Transition Charges?**

767 A. Yes. Attachment 3.02 sets forth estimates of Transition Charges by class and provides a  
 768 comparison of Transition Charges to total charges to Customers, each over the life of the  
 769 Transition Charges. The estimate is based upon the number of services agreements and  
 770 kWh usage in the current transition charge calculation and the estimated level of debt  
 771 service and other costs which will be captured in each time period.

772 Q. **How was the comparison of projected Transition Charges to total charges made?**

773 A. Two estimates were used to provide these estimates, one for Residential Customers and  
 774 one for Non-Residential Customers.

775 Q. **Please describe the approach used to estimate the projected Transition Charge to**  
 776 **the bills of Residential Customers.**

777 A. The average Residential Customer's bill for the time period fiscal year 2015 was used the  
778 denominator of the equation. The numerator of the equation is the transition charge, as  
779 stated in dollars per service agreement, as estimated above.

780 Q. **Please describe the approach used to estimate the projected Transition Charge to**  
781 **the bills of Non-Residential Customers.**

782 A. Non-Residential Customers are not as homogenous as Residential Customers. Further,  
783 the Transition Charge for these Customers is calculated on a per kWh basis. Therefore,  
784 the Transition Charge stated in dollars per kWh was compared to the average revenue per  
785 kWh for PREPA's non-residential tariff classes for the fiscal year.

786 Q. **Your calculations estimating the impacts of the Transition Charge on Customers**  
787 **assumes that PREPA's rate is constant over the long-run. Is that assumption**  
788 **realistic?**

789 A. PREPA's rate can be expected to change over time and will be impacted by a multitude  
790 of factors such as the cost of capital, fuel costs, and other factors. Adoption of the  
791 assumption that the average or average rate remains constant over time is a conservative  
792 assumption and will in all likelihood overstate the impact of the Transition Charge.

793 Q. **Will the Transition Charges be collected through a separate rate rider?**

794 A. Yes. The transition charge will be collected through a new Rider XX.

795 V. **CONCLUSION**

796 Q. **Does this complete your testimony?**

797 A. Yes.

**ATTESTATION**

The undersigned, RALPH ZARUMBA, being of legal age, married, executive and consultant, and resident of City of Evanston, County of Cook, State of Illinois, in his capacities as Director of Navigant Consulting, Inc., states that the foregoing testimony, presented in written Question and Answer format, is true and correct to the best of his knowledge and belief.

**IN WITNESS WHEREOF**, I have hereunto signed my name this \_\_\_\_ day of May 2016.

\_\_\_\_\_  
RALPH ZARUMBA

Director  
Navigant Consulting, Inc.

Affidavit No. \_\_\_\_

Acknowledged and subscribed before me by Ralph Zarumba, of the personal circumstances above mentioned, in his capacities as Director of Navigant Consulting, Inc., who is personally known to me, in San Juan, Puerto Rico, this \_\_\_\_ day of May 2016.

\_\_\_\_\_  
Notary Public

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

IN RE:

PUERTO RICO ELECTRIC POWER  
AUTHORITY REVITALIZATION  
CORPORATION,

Petitioner.

NO.

**SUBJECT: TESTIMONY  
SUPPORTING PETITION FOR  
RESTRUCTURING ORDER**

Revised Testimony of

**RALPH ZARUMBA**

Director, Navigant Consulting, Inc.

On behalf of the

Puerto Rico Electric Power Authority Revitalization Corporation

April 7 May 20, 2016

**TABLE OF CONTENTS**

- I. INTRODUCTION ..... 1
  - A. Witness Identification ..... 1
  - B. Summary of Direct Testimony and Attachments..... 1
  - C. Qualifications and Professional Background..... 4
  
- II. CALCULATION METHODOLOGY ..... 5
  - A. The Revenue Requirement and Its Distribution to Customer Classes ..... 5
  - B. Calculation and Adjustment of Transition Charges..... 11
  - C. Treatment of Delinquencies ..... 21
  - D. Net Metering and Behind the Meter Generation..... 23
  - E. Other Calculation Issues ..... 29
  - F. Practicable to Administer and Ensures Full and Timely Payment ..... 30
  
- III. INDEPENDENT FINANCIAL CONSULTANT’S REPORT..... 32
  
- IV. OTHER TRANSITION CHARGE ISSUES ..... 33
  
- V. CONCLUSION..... 35

1 **I. INTRODUCTION**

2 **A. Witness Identification**

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

4 A. My name is Ralph Zarumba. I am a Director in the Energy Practice at Navigant  
5 Consulting, Inc. (“Navigant”). My business address is 30 S. Wacker Drive, Suite 3100,  
6 Chicago, Illinois 60606.

7 **Q. On whose behalf are you testifying?**

8 A. I am testifying as a witness on behalf of the Puerto Rico Electric Power Authority  
9 Revitalization Corporation (the “Corporation”).

10 **B. Summary of Direct Testimony and Attachments**

11 **Q. What does your testimony focus upon?**

12 A. The primary purpose of my testimony is to explain and support how the Calculation  
13 Methodology for the Transition Charges<sup>1</sup> and Adjustment Mechanism (collectively, the  
14 “Calculation Methodology”) operate to distribute Financing Costs<sup>2</sup> and derive and adjust  
15 specific Transition Charges in a manner that ensures the full and timely payment of the  
16 Restructuring Bonds issued under the Restructuring Resolution (the “Bonds”) and other  
17 Ongoing Financing Costs. My testimony supports and explains: (1) the determination of  
18 Customer classes among which Ongoing Financing Costs are distributed and the  
19 mechanics of how those allocations are made; (2) the calculation of Transition Charges

---

<sup>1</sup> Where I use capitalized terms that are defined in the Petition or the Attachments thereto, I intend the same meaning.

<sup>2</sup> “Financing Costs” are defined in PRA, Art. 31, para. 13. They include Upfront Financing Costs and Ongoing Financing Costs.

20 for Non-Residential Customers based upon historic energy usage (kWh) data; (3) the  
21 calculation of Transition Charges for Residential Customers on a per service agreement  
22 basis and the reasoning behind the Corporation's determination to calculate them in that  
23 manner; and (4) the calculation of estimated load including load served by net metering  
24 or distributed generation ("behind the meter") for the purposes of calculating Transition  
25 Charges, and the reasoning behind the Corporation's determination to propose that load  
26 be calculated in that manner ("Net Metering Determination"). I verify that the  
27 Calculation Methodology is practicable to administer and, based on its design and  
28 operation, and Customers' practical inability to bypass it without disconnecting from the  
29 system, ensures the full and timely payment of the Bonds.

30 **Q. How is your testimony organized?**

31 **A.** My testimony is organized in the following sections:

32 I. Introduction

33 II. Calculation Methodology

34 A. The Revenue Requirement and Its Distribution to Customer Classes

35 B. Calculation and Adjustment of Transition Charges

36 C. Treatment of Delinquencies

37 D. Net Metering and Behind the Meter Generation

38 E. Other Calculation Issues

39 F. Practicable to Administer and Ensures Full and Timely Payment

40 III. Independent Financial Consultant's Report

41 IV. Other Transition Charge Issues

42 V. Conclusion

43 Q. **Are there any exhibits to your testimony?**

44 A. Yes. My testimony includes the following exhibits:

- 45 • Exhibit 6.01: My resume;
- 46 • Exhibit 6.02: Puerto Rico Electric Power Authority's ("PREPA") current  
47 tariff classes and a mapping to the "Residential" or "Non-Residential"  
48 Customer classes; and
- 49 • Exhibit 6.03: Calculation of the Transition Charge. This Exhibit details the  
50 calculations supporting the Transition Charge and periodic adjustments  
51 thereto and includes the information that would be included in future  
52 quarterly reconciliation filings to the Commission. It allows the  
53 Commission to replicate the Transition Charge calculations in my testimony  
54 and Exhibit thereto.

55 In addition, while I discuss several Attachments<sup>3</sup>, I specifically support the  
56 following Attachments to the Petition:

- 57 • Attachment 3.02: Identifies and estimates Transition Charges by class and  
58 compares estimates of the Transition Charges to estimates of total charges to  
59 Customers over the life of the Transition Charge; and
- 60 • Attachment 6.00: Independent Financial Consultant's Report provided  
61 pursuant to Article 6.25A(e)(3).

---

<sup>3</sup> To avoid confusion in the designation of documents, attachments to the Petition are designated as "Attachments" and testimony, and documents attached thereto, are designated as "Exhibits."

62 **C. Qualifications and Professional Background**

63 **Q. What are your duties and responsibilities at Navigant?**

64 A. I lead Navigant's efforts in Retail Regulatory matters. Retail Regulatory matters include  
65 pricing, cost of service, determination of revenue requirements for state and local review  
66 of utility pricing, and cost of service reviews. The group I lead also advises clients on  
67 regulatory policy matters associated with state, territorial, provincial, and local regulatory  
68 oversight.

69 **Q. Prior to your current position, what was your professional background?**

70 A. For the past 20 years, I have worked in the Energy Practices of a number of consulting  
71 firms. From 1985 through 1995, I was employed by a number of regulated electric and  
72 combination electric and natural gas Investor-Owned Utilities ("IOU") in the United  
73 States which included Illinois Power Company, Eastern Utility Associates, Wisconsin  
74 Electric Power Company, and San Diego Gas and Electric Company.

75 **Q. What is your educational background?**

76 A. I graduated from Illinois State University, Normal, Illinois, with a Bachelor of Science  
77 degree in economics. I received my Master of Arts degree in economics from DePaul  
78 University, Chicago, Illinois.

79 **Q. Have you prepared a resume presenting your background and experience in greater  
80 detail?**

81 A. Yes. My resume is attached as Exhibit 6.01.

82 **Q. Have you appeared as a witness in other regulatory or legal proceedings?**

83 A. Yes, I appeared as an expert witness in a number of regulatory and legal proceedings  
84 addressing electric generation, transmission and distribution issues, unregulated  
85 operations of utility holding companies, asset valuation, and regulatory treatment of  
86 Smart Grid investments. I provided testimony before the Federal Energy Regulatory  
87 Commission (“FERC”), the Nova Scotia Utility and Review Board, the Massachusetts  
88 Department of Public Utilities, the Rhode Island Public Utilities Commission, the Illinois  
89 Commerce Commission, the Wisconsin Public Service Commission, the Ontario Energy  
90 Board, the New York Public Service Commission, the New Mexico Public Regulation  
91 Commission, the Kansas Corporation Commission and the Texas Public Service  
92 Commission, as well as a number of other venues.

93 **II. CALCULATION METHODOLOGY**

94 **A. The Revenue Requirement and Its Distribution to Customer Classes**

95 **Q. What costs will be recovered in the Transition Charge mechanism?**

96 A. Ultimately, the Approved Restructuring Costs, including those paid from the proceeds of  
97 the Bonds, are recovered over time through the Transition Charge. As provided in  
98 Finding of Fact 4 of the Restructuring Resolution (Attachment 1.00):

99 The Approved Restructuring Costs to be paid through the issuance of the  
100 Bonds and recovered through Transition Charges shall include the costs of  
101 (a) retiring the PREPA Bonds in exchange for the Exchange Offer Bonds  
102 or the 2016 PREPA Bonds in exchange for Post-Closing Date Bonds;  
103 (b) legally or economically defeasing Insured PREPA Bonds and 2016  
104 PREPA Bonds through the issuance of Mirror Bonds and the payment of  
105 such Mirror Bonds; (c) restructuring, refunding, redeeming, defeasing  
106 (legally or economically through the issuance of additional Mirror Bonds  
107 or otherwise), or purchasing PREPA Bonds through the issuance of  
108 Syncora Bonds; (d) the retirement of the obligations due and owing by  
109 PREPA under the Credit Agreements through the issuance of the Lender  
110 Bonds; (e) funding or replenishing any debt service reserve fund or

111 account or any other restricted accounts or subaccounts required to be  
112 established by the Trust Agreement, and to the extent permitted in the  
113 Trust Agreement, any Ancillary Agreement, including an additional  
114 reserve fund, to its required level, as provided in the Trust Agreement and,  
115 to the extent permitted in the Trust Agreement, any Ancillary Agreement  
116 (as the case may be), to secure payment of all or a portion of the Bonds;  
117 (f) funding any payment to the Internal Revenue Service (the “IRS”) in  
118 accordance with any PREPA agreement with the IRS under the voluntary  
119 closing agreement or similar program; (g) funding a deposit to the self-  
120 insurance fund (the “PREPA Self Insurance Fund”), established pursuant  
121 to the trust agreement, dated as of January 1, 1974, as amended, by and  
122 between PREPA and U.S. Bank National Association, as successor  
123 trustee, in an amount not to exceed \$50 million; (h) paying Financing  
124 Costs, including the Upfront Financing Costs, in connection with any  
125 issuance of Bonds and approved for recovery in the Restructuring  
126 Resolution; and (i) refunding, redeeming or purchasing Uninsured PREPA  
127 Bonds.

128 Because some of those costs are paid or financed by the Bonds themselves, the  
129 Calculation Methodology recovers those costs over time by establishing Transition  
130 Charges that recover “the sum of (a) principal of (in accordance with the scheduled  
131 maturity date or dates (including scheduled mandatory sinking fund redemption dates)  
132 and interest on the Bonds when due and as accruing through and including the First Bond  
133 Payment Date, (b) any amount necessary or expected to be necessary to fund or replenish  
134 any debt service reserve fund or account, or any other restricted accounts or subaccounts  
135 required to be established by the Trust Agreement or any Ancillary Agreement as an  
136 additional reserve fund, to their required level, as and to the extent such funding or  
137 replenishment is required by the Trust Agreement or any Ancillary Agreement (as the  
138 case may be) on or prior to the First Bond Payment Date, and (c) all other Ongoing  
139 Financing Costs required to be paid or deposited on or prior to the First Bond Payment  
140 Date.” *Id.*

141 Q. **Please describe how the Corporation determined the Customer classes among which**  
142 **Ongoing Financing Costs are distributed.**

143 A. The Revitalization Act specifies that the Transition Charges are to be distributed to  
144 Residential and Non-Residential Customer classes.<sup>4</sup> Beyond those broad categories, the  
145 determination of Customer classes among which Ongoing Financing Costs are distributed  
146 and the distribution of Ongoing Financing Costs among Customer classes is addressed by  
147 the Restructuring Resolution and the Calculation Methodology and Adjustment  
148 Mechanism to Establish and Adjust the Transition Charge (the “Calculation  
149 Methodology”) (Attachment 1.00, and Appendix 2 thereto). Exhibit 6.02 to my  
150 testimony lists each of PREPA’s current tariff classes and maps them to the “Residential”  
151 or “Non-Residential” Customer classes for the purposes of the Calculation Methodology.  
152 If and when those PREPA rate classes evolve, the effective division will be preserved for  
153 Transition Charge calculation purposes.

154 Q. **Please describe what Customer groups are captured in the “Residential” and “Non-**  
155 **Residential” categories.**

---

<sup>4</sup> “Customer” means “any Person that is connected to or takes or receives electric service within the Commonwealth by means of the electric generation, transmission or distribution facilities constituting part of Electric System Assets, whether or not those electric generation, transmission, or distribution facilities are owned by PREPA. PREPA shall not be a Customer. Each municipality in the Commonwealth shall be a Customer to the extent that the dollar value of its usage of electric service (including in determining such dollar value of Transition Charges which would otherwise be imposed on such municipality and PREPA charges) in any fiscal year exceeds the dollar value owed by PREPA to such municipality as a contribution in lieu of taxes for such fiscal year.” PRA, Article 31, para. 7. For the avoidance of doubt, previous Customers that completely disconnect from Electric System Asset and have no service agreement with PREPA, including for backup, standby, or other service, are no longer considered to be “Customers” for all purposes under the Act and the Restructuring Resolution unless and until said customers reconnect.

156 A. Residential Customers are those Customers that use electricity for domestic use. For  
157 purposes of calculating the Transition Charges, all other Customers, including  
158 Governmental Customers, are considered Non-Residential Customers. PREPA generally  
159 follows the FERC system of accounts which defines Residential and Non-Residential  
160 Customers in this manner.

161 Q. **How does the Calculation Methodology distribute Ongoing Financing Costs between**  
162 **the Residential and Non-Residential Classes?**

163 A. The Calculation Methodology established in Appendix 2 to the Restructuring Resolution  
164 (Attachment 1.00) distributes the Revenue Requirement to determine specific Residential  
165 and Non-Residential Revenue Requirements for the Residential Customer Class and Non-  
166 Residential Customer Class (including Government Customers). In particular, the  
167 division is made based upon the share of the total actual historical kWh billed to  
168 Residential and Non-Residential (including Government) Customers, respectively, in the  
169 previous 12-month period ending with the last day of the most recently completed  
170 calendar quarter for which data is available.

171 The historical energy (kWh) usage data for Residential Customers, Non-  
172 Residential Customers, and Governmental Customers<sup>5</sup> that is used in the calculation of  
173 Transition Charges, by the Adjustment Mechanism, and in the distributions described in  
174 Article 6.25A(e)(1)(ii), (iii), (iv), and (vi) is provided in Attachment 5.00, along with  
175 prior historical data for reference and information purposes. This data includes, in most

---

<sup>5</sup> For purposes of calculating the Transition Charges, Governmental Customers are a subset of Non-Residential Customers and are provided in Attachment 5.00 for informational purposes.

176 cases, usage that is directly measured (*e.g.*, with a meter), but also includes usage that is  
177 calculated (*e.g.*, for a light fixture), or estimated (*e.g.*, where a meter fails or cannot be  
178 read). This data is the basis of the distributions of the Revenue Requirements between  
179 Customer classes and of the kWh calculations underlying the estimated and exemplar  
180 Transition Charges discussed in the Corporation's filing. Of course, actual Transition  
181 Charges over time will be based on updated data.

182 **Q. Why are the various existing PREPA rate classes consolidated into two Customer**  
183 **classes (Residential and Non-Residential) for purposes of distributing the Ongoing**  
184 **Financing Costs?**

185 A. The Calculation Methodology will not change over the life of the Bonds and, thus, it  
186 would undoubtedly become obsolete if it tracked PREPA's current rate classes. Nor is  
187 there any need for a more granular allocation of the Transition Charges in the Calculation  
188 Methodology. Maintaining two broad Customer classes in the Calculation Methodology  
189 gives the Commission and PREPA more flexibility to adjust rate classes down the road.  
190 For example, if the Commission at some point in the future seeks to approve a different  
191 rate design that eliminates a particular Customer class, it would be difficult to implement  
192 the change if that class was hard-wired in the Calculation Methodology.

193 Cost allocations shift over time between classes depending on a multitude of  
194 factors including energy use, economic issues, technology, expansion/contraction of the  
195 grid and other factors that we have no way of knowing far in advance. The Commission  
196 has broad discretion over the allocation of PREPA costs in rate cases. Simply stated, the  
197 allocation of PREPA's costs will be addressed in the Embedded Cost of Service analysis

198 filed in the upcoming and future PREPA rate cases. Moreover, because the Commission  
 199 retains jurisdiction over PREPA’s rates, it can effectively allocate the total cost paid by  
 200 Customers without altering, or being able to alter, in any way the Transition Charges or  
 201 their distribution among Customer Classes.

202 **Q. Please provide an example of how the Calculation Methodology distributes Revenue**  
 203 **Requirement between the Residential and Non-Residential Customer classes.**

204 A. The following is an illustrative projected example of the calculation used as part of the  
 205 development of Attachment 6.03, the Transition Charge calculation:

	<u>Estimated-Actual</u> KWH (No CILT) Billed <u>12 Months Ending 3/31/16 FY 2015</u>	Customer <u>Distribution Allocation</u>
Residential	<u>6,354,141,5746,249,541,676</u>	<u>3837.83%</u>
Non-Residential	<u>10,174,334,51410,270,239,212</u>	<u>62.17%</u>
<b>Total</b>	<u>16,528,476,08816,519,780,888</u>	100%

206 In this example, for Residential Customers, the total actual historical kWh billed  
 207 in ~~the previous 12 month period (ending with the end of the most recently completed~~  
 208 ~~calendar quarter for which data is available)~~FY 2015 or 16,528,476,08816,519,780,888  
 209 kWh is divided into the actual historical kWh billed to Residential Customers, or  
 210 6,354,141,5746,249,541,676, resulting in a 3837.83% distribution of the Revenue  
 211 Requirement to Residential Customers.

212 **B. Calculation and Adjustment of Transition Charges**

213 Q. **Please describe the Calculation Methodology including the Adjustment Mechanism**  
214 **and the manner of calculation of Transition Charges.**

215 A. For both Residential and Non-Residential Customers, the Calculation Methodology  
216 distributes Financing Costs and determines class-specific Revenue Requirements.  
217 Mathematically, the Calculation Methodology established in Appendix 2 of the  
218 Restructuring Resolution (Attachment 1.00) provides:

219 (a) **Step 1: Calculate Customer Class Revenue Requirement Shares.** As I discuss  
220 above, the Calculation Methodology distributes Financing Costs to determine a  
221 Residential Net Revenue Requirement and a Non-Residential Net Revenue  
222 Requirement based on the Residential Customer Allocation and the Non-  
223 Residential Customer Allocation, respectively. To do this, it specifies shares,  
224 which sum to 100%, of the total Revenue Requirement:

225 (1) Divide the Aggregated Actual kWh Billed for the previous 12-month  
226 period ending with the end of the most recently completed calendar  
227 quarter for which data are available into the Actual kWh Billed to  
228 Residential Customers during that same 12-month period. The resultant  
229 percentage is the “Residential Customer Allocation.”

230 (2) Divide the Aggregated Actual kWh Billed for the previous 12-month  
231 period ending with the end of the most recently completed calendar  
232 quarter for which data are available into the Actual kWh Billed for all  
233 Non-Residential Customers and Government Customers during the same  
234 12-month period. The resultant percentage is the “Non-Residential and  
235 Government Customer Allocation.”

236 This process meets the requirements of Article 6.25A(d)(ii)(1). As  
237 provided by Article 6.25A(e)(1)(vi), for net metering Customers and Customers  
238 with “behind the meter” generation, the Corporation has determined that it should

239 include their gross usage for purposes of calculating Transition Charges. This  
240 subject is discussed below in Section II.D of my testimony. Exhibit 6.03  
241 demonstrates these distribution calculations.

242 (b) **Step 2: Compare the Projected Transition Charge Revenues to the Required**  
243 **Revenues.** The Calculation Methodology provides for a direct mathematical  
244 comparison between the costs that must be recovered and the expected Transition  
245 Charge Revenues. The Adjustment Mechanism (Appendix 2 to Attachment 1.00)  
246 describes the steps as follows:

247 (3) Project the Transition Charge Revenues expected to be held by the Trustee  
248 on the proposed True-Up Adjustment Date after payment of Ongoing  
249 Financing Costs due on or prior to such date (but excluding amounts held  
250 or to be held on such date by the Trustee in any debt service reserve fund  
251 or account, or in any other restricted accounts or subaccounts required to  
252 be established by the Trust Agreement or any Ancillary Agreement as an  
253 additional reserve fund), and add to that amount the Transition Charge  
254 Revenues expected to be received by the Trustee after the True-Up  
255 Adjustment Date and during the First Collection Period from bills  
256 rendered prior to the True-Up Adjustment Date based on the Transition  
257 Charges then or previously in effect.

258 (4) Calculate the sum of (a) principal of (in accordance with the scheduled  
259 maturity date or dates (including scheduled mandatory sinking fund  
260 redemption dates)) and interest on the Bonds when due and as accruing  
261 through and including the First Bond Payment Date, (b) any amount  
262 necessary or expected to be necessary to fund or replenish any debt service  
263 reserve fund or account, or any other restricted accounts or sub accounts  
264 required to be established by the Trust Agreement or any Ancillary  
265 Agreement as a an additional reserve fund, to their required level, as and  
266 to the extent such funding or replenishment is required by the Trust  
267 Agreement or any Ancillary Agreement (as the case may be) on or prior to  
268 the First Bond Payment Date, and (c) all other Ongoing Financing Costs  
269 required to be paid or deposited on or prior to the First Bond Payment  
270 Date.

271 (5) Subtract the amount in clause (3) from the amount in clause (4) to  
272 determine the “Net Revenue Requirement” for the First Collection Period.

273 This is a mathematically sound and accurate way of determining over time  
274 the quantity of Transition Charge Revenues that are required to cover the  
275 Financing Costs. It complies with the requirements of Article 6.25A(d)(1) by  
276 providing for “the full and timely payment of the Restructuring Bonds in  
277 accordance with their terms and other Ongoing Financing Costs... .” Exhibit 6.03  
278 demonstrates how the calculations in Step 2 are calculated.

279 (c) **Step 3: Calculate the Gross Billing Requirements required to collect**  
280 **necessary Transition Charge Revenues for each Customer class and period.**

281 In order to calculate a correct Transition Charge, the required revenues must be  
282 adjusted or “grossed up” to take into account the fact that not all Customers pay  
283 and all Customers who do pay over time, pay at varying rates. To accomplish  
284 this, the Adjustment Mechanism calculates a Gross Billing Requirement for both  
285 the Residential and Non-Residential Classes for each relevant period. Those  
286 Gross Billing Requirements adjust (or gross up) the Net Revenue Requirement to  
287 account for historical billing data, the Composite Collection Curve – which I will  
288 discuss further below – and the write-off assumption, so that the Transition  
289 Charge Revenues expected to be remitted to the Trustee meet the calculated  
290 Revenue Requirements. The Adjustment Mechanism (Appendix 2 to Attachment  
291 1.00) describes this step as follows:

292 (6) Adjust (or gross up) the Net Revenue Requirement [to give effect to the  
293 number of billing cycles, the Composite Collection Curve and the write-  
294 off assumption,] to ensure that the Transition Charge Revenues expected  
295 to be remitted to the Trustee during the First Collection Period will satisfy  
296 the Net Revenue Requirement for the First Collection Period on a timely  
297 basis and will result in the Excess Funds Account held under the Trust

298 Agreement to be zero by the First Bond Payment Date. The result will be  
299 the “Gross Billing Requirement” for the First Collection Period.

300 Functionally, as I explain below, this results in the proper allocation of  
301 delinquencies – Transition Charges that are not collected from Customers – as I  
302 discuss in Section II.C, below, and it takes into account lag in the payment of  
303 Transition Charges. Exhibit 6.03 demonstrates how the Step 3 calculations will  
304 be performed.

305 **(d) Step 4: Calculate Transition Charge.** For Non-Residential Customers (which  
306 includes all Customers of PREPA other than Residential Customers), the  
307 Transition Charge is based on kWh consumption of each Customer by applying a  
308 rate derived from the Non-Residential Net Revenue Requirement and the total  
309 historical kWh usage of Non-Residential Customers, as specified above. For  
310 Residential Customers, the Transition Charge is a flat charge based on the  
311 Residential Net Revenue Requirement and the Residential Service Agreement  
312 Count, defined as the average number of Residential Service Agreements used for  
313 billing purposes during the previous 12-month period ending with the end of the  
314 most recently completed calendar quarter for which data is available as of the date  
315 of any calculation. The Adjustment Mechanism (Appendix 2 to Attachment 1.00)  
316 describes these steps as follows:

317 (7) Multiply the Gross Billing Requirement for the First Collection Period by  
318 the Residential Customer Allocation. The result will be the “Residential  
319 Gross Billing Requirement” for the First Collection Period.

320 (8) Multiply the Gross Billing Requirement for the First Collection Period by  
321 the Non-Residential and Government Customer Allocation. The result

322 will be the “Non-Residential and Government Gross Billing Requirement”  
323 for the First Collection Period.

324 (9) Divide the Residential Gross Billing Requirement for the First Collection  
325 Period by the Residential Service Agreement Aggregate Count for First  
326 Collection Period to produce a \$/per service agreement Transition Charge.  
327 The result will be the first possible Transition Charge for each Residential  
328 Customer to be effective on the True-Up Adjustment Date.

329 (10) Divide the Non-Residential and Government Gross Billing Requirement  
330 for the First Collection Period by the Actual kWh Billed for Non-  
331 Residential Customers and Government Customers during the comparable  
332 period to the First Collection Period in the prior 12-month period for  
333 which data are available (i.e., the calendar dates one year prior to the  
334 calendar dates in the First Collection Period, to produce an estimated  
335 volumetric (per kWh) Transition Charge. Subject to clause (12), the result  
336 will be the first possible Transition Charge (per kWh) for all Non-  
337 Residential and Government Customers to be effective on the True-Up  
338 Adjustment Date.

339 (11) Repeat the calculations described in clauses (3) through (10), inclusive, to  
340 determine the Transition Charges necessary to satisfy the revenue  
341 requirement for each consecutive Collection Period which ends during the  
342 Annual Calculation Period, replacing “First Bond Payment Date” with  
343 “Second Bond Payment Date” and “First Collection Period” with “Second  
344 Collection Period,” etc. through the Third and Fourth Collection Periods  
345 (if any) respectively.

346 (12) Compare the revenues produced by each set of Transition Charges  
347 resulting from the calculations above (i.e., one set for each Collection  
348 Period). The set of Transition Charges which is expected to produce the  
349 greatest revenue by the end of the First Collection Period will be the set of  
350 Transition Charges to be effective on the True-Up Adjustment Date.

351 These steps assure that the Transition Charges that go into effect assure a  
352 level of charges sufficient to pay the Bonds and related costs on each payment  
353 date. Exhibit 6.03 demonstrates how the calculations in Step 4 would be  
354 performed.

355 (e) **Step 5: True-Up and prospectively adjust the Transition Charge quarterly or**  
356 **more frequently, if required.** Transition Charges are initially established and  
357 are thereafter trued-up and prospectively adjusted, at least quarterly, through the  
358 formulaic Adjustment Mechanism. This mechanism accounts, over time, both for  
359 changes in the Revenue Requirement and for variations and changes in other  
360 parameters influencing the calculation of the Transition Charges and their  
361 collection. The Restructuring Resolution and the Calculation Methodology  
362 provide that PREPA, as the Servicer will recalculate the Transition Charge,  
363 subject to review by the Calculation Agent. For the purpose of assuring the  
364 mathematical accuracy of the calculations, true-ups will be conducted: (a)  
365 quarterly, beginning no more than three months from issuance of the Bonds and  
366 continuing until the Bonds and all other Ongoing Financing Costs are paid in full,  
367 and (b) at any other time if the Corporation, the Commission, the Calculation  
368 Agent, or any party to an Ancillary Agreement or the requisite bondholders  
369 determine that such adjustment is required to assure the timely payment of the  
370 Bonds and other Ongoing Financing Costs. The Adjustment Mechanism  
371 (Appendix 2 to Attachment 1.00) states:

372 The Corporation will adjust the Transition Charges for each Class as  
373 requested in each True-Up Letter, and such Transition Charges will be  
374 effective on the date specified in the True-Up Letter, so long as such  
375 effective date is at least 30 days after the filing with the Commission of  
376 such True-Up Letter, subject only to the correction of any mathematical  
377 errors by the Commission as set forth in the next sentence. Any  
378 adjustment to correct the mathematical inaccuracy, if ordered by the  
379 Commission, shall be made by the Servicer no later than the next  
380 succeeding True-Up Adjustment on which such adjustment can practically  
381 be made without delaying the effective date set forth in the True-Up  
382 Letter.

383                   Those periodic adjustments will (i) correct for any over-collections or  
384                   under-collections of Transition Charges by adjusting the revenues required going  
385                   forward, and (ii) to ensure that expected Transition Charge remittances to the  
386                   Trustee, after taking into account assumed charge-offs and payment delays, are  
387                   adequate (a) to pay timely principal of (in accordance with the expected  
388                   amortization schedule) and interest on the Bonds in the next 12-month period, (b)  
389                   to replenish the debt service reserve fund or account (or in any other restricted  
390                   accounts or subaccounts required to be established by the Trust Agreement or any  
391                   Ancillary Agreement as a rate stabilization or additional reserve fund) to its  
392                   required level no later than the date specified in the Trust Agreement and other  
393                   operative documents, and (c) to make timely payment of all other Ongoing  
394                   Financing Costs.

395   **Q.    Why, as reflected in Step 4, has the Corporation determined that Transition**  
396   **Charges applicable to Residential Customers should be a flat charge calculated on a**  
397   **per service agreement basis?**

398   **A.**    The per service agreement determination is administratively simple and will be able to be  
399           administered in a consistent manner over the life of the Transition Charges. Moreover,  
400           the per service agreement determination is reasonable because low income users tend to  
401           have a higher kWh usage due to PREPA's legacy flat charge rate design and generally  
402           inefficient electric use among these Customers. A Transition Charge based on kWh  
403           usage would place a significantly higher burden on these Customers than the per service  
404           agreement basis.

405 Q. **How are Transition Charges calculated at each Adjustment date for a Collection**  
406 **Period?**

407 A. The Transition Charge is calculated to meet all payments due during the Collection  
408 Period in the 12-months following the rate effective date. The rate must be calculated to  
409 collect sufficient funds to meet scheduled payments of Ongoing Financing Costs  
410 (including debt service on the Bonds) as they become due.

411 Q. **Please describe the process where PREPA as the Servicer will monitor the level of**  
412 **collections and determine if an adjustment is required to assure the timely payment**  
413 **of the principal and interest on the Bonds.**

414 A. After month-end data is available, PREPA as the Servicer will prepare monthly reports  
415 which will compare the actual collection of revenues for the Transition Charge to that  
416 which was estimated for that month. The Calculation Methodology describes the steps as  
417 follows:

418 To initiate any True-Up Adjustment, the Servicer will make a preliminary  
419 calculation of the True-Up Adjustment and will prepare and submit to the  
420 Calculation Agent a draft request for adjustment (a “True-Up Letter”).  
421 The Calculation Agent will review the draft True-Up Letter, including the  
422 mathematical calculations related to the proposed True-Up Adjustment,  
423 and forward any corrections or modifications to the Servicer. The  
424 Servicer will then file the True-Up Letter, reflecting any such corrections  
425 or modifications, with the Corporation, the Commission and the Trustee,  
426 not later than 30 days prior to the proposed effective date of the  
427 adjustment set forth in the True-Up Letter (such effective date being  
428 referred to as the “True-Up Adjustment Date”).

429 Each True-Up Adjustment will be designed (i) to correct for any over-  
430 collections or under-collections of Transition Charges through the  
431 proposed True-Up Adjustment Date and (ii) to ensure that expected  
432 Transition Charge Revenues remitted or to be remitted to the Trustee, after  
433 taking into account assumed charge-offs and payment delays, are adequate  
434 (A) to pay timely principal of (in accordance with the scheduled maturity

435 date or dates (including scheduled mandatory sinking fund redemption  
436 dates)) and interest on the Bonds on each of the Payment Dates that occurs  
437 during the related Annual Calculation Period (defined below), (B) to fund  
438 or replenish any debt service reserve fund or account or any other  
439 restricted accounts or subaccounts required to be established by the Trust  
440 Agreement or any Ancillary Agreement as an additional reserve fund) to  
441 its required level, as provided in the Trust Agreement or the Ancillary  
442 Agreement (as the case may be), and (C) to make timely payment of all  
443 other Ongoing Financing Costs during the related Annual Calculation  
444 Period.

445 **Q. Explain how the filing provides information sufficient to allow the Commission to**  
446 **replicate the Transition Charges for Non-Residential and Residential Customers.**

447 **A.** For any level of Revenue Requirement, the data provided with the filing would allow the  
448 Commission to replicate the calculation of the Transition Charges that I have performed.  
449 Attachment 3.02 estimates the Transition Charges by class and compares the estimates to  
450 the total charges to Customers over the life of the Transition Charges. Exhibit 6.03  
451 details all of the calculations supporting the Transition Charge calculation and contains  
452 the information that would be provided in future quarterly reconciliation filings to the  
453 Commission. The calculations in this Exhibit are straightforward and allow the  
454 Commission to replicate each step of the process to understand precisely how the  
455 Transition Charge was calculated.

456 **Q. Does the distribution of responsibility for Transition Charges among Customer**  
457 **classes and Customers limit the discretion of the Commission in addressing the**  
458 **allocation of responsibility for the PREPA revenue requirement in any PREPA rate**  
459 **case?**

460 A. No. In PREPA’s general rate proceedings, the cost of service analysis will reflect all of  
461 the components of PREPA’s revenue requirement, as well as debt service on the  
462 Restructuring Bonds and related costs. This approach would be utilized whether or not a  
463 debt restructuring occurs. Thus, for rate design purposes, PREPA will include the debt  
464 service of the Restructuring Bonds in the cost of service analysis while including the  
465 revenues from the Transition Charge as a revenue credit. In future PREPA rate cases, the  
466 Commission will approve a design for PREPA rates that allocates all total costs billed to  
467 Customers (including debt service and other costs associated with the Bonds). While the  
468 decisions in those cases cannot affect the Transition Charges themselves, they can adjust  
469 how PREPA costs are allocated among Customers, preserving the full discretion of the  
470 Commission over how the Transition Charges impact Customers.

471 Q. **Please describe how costs are allocated to rate classes in the PREPA rate case.**

472 A. The Embedded Cost of Service Study (“ECOSS”) will be performed without regard to  
473 the existence of the Transition Charges, and will allocate total costs using a methodology  
474 generally accepted in the industry. After the overall responsibility for revenue  
475 requirements has been determined for each rate class under an ECOSS methodology, the  
476 revenues from the Transition Charge will be deducted and the remaining PREPA revenue  
477 requirement will be recovered from base rates and other rate design components. (In the  
478 event that the Commission elects to rely on a Marginal Cost of Service Study, the same  
479 principles will apply and the overall allocation of charges will simply be driven by  
480 marginal as opposed to embedded costs.) Transition Charges will be calculated and  
481 collected as established by the Restructuring Resolution and the Revitalization Act and

482 remain unaffected by PREPA rate cases, while the Commission retains jurisdiction over  
483 the overall costs assessed to, and price signals sent to, particular rate classes.

484 **Q. Please explain what would occur in a rate case if the Transition Charges imposed on**  
485 **a particular Customer class collect more than the share of debt service costs**  
486 **attributed to that class in a cost study.**

487 A. If the Transition Charges impute more than a particular class' debt service share (as  
488 determined by the cost of service study), the overall cost allocation (including debt  
489 service and other costs), with all else being equal, will be adjusted downward so that the  
490 allocation of total costs and determination of rates for that class is equitable.<sup>6</sup> Again, that  
491 does not change the Transition Charges themselves, but it preserves the Commission's  
492 authority of the design of the rates that govern the total liability of Customers for electric  
493 service, including the PREPA rates.

494 **C. Treatment of Delinquencies**

495 **Q. Will Customer delinquencies in any period be added to the revenue requirement of**  
496 **the next period and allocated among all Customer classes consistent with the**  
497 **methodology described above?**

498 A. Yes. The Restructuring Resolution includes a provision that delinquencies of any class of  
499 Customers will be distributed among all Customer classes as previously described and  
500 included in the Adjustment Mechanism (Appendix 2 to Attachment 1.00). Consistent

---

<sup>6</sup> By way of illustration only, and using entirely hypothetical numbers for ease of explanation, if the Commission desired to reduce the economic effect of a fixed \$2.00 Transition Charge on a group of Customers, it could reduce the allocation of PREPA charges to that group of Customers by \$1.00. While the Transition Charge would remain payable by those Customers without change, the effective change in those Customer's total bill due to the imposition of the Charge would have been modulated.

501 with Article 6.25A(d)(3) of the Revitalization Act, the calculation of the Gross Billing  
502 Requirement in the Adjustment Mechanism allocates delinquencies among all Customer  
503 classes consistently with how other Financing Costs are allocated.

504 **Q. What is a Composite Collection curve and how is it used in the Calculation**  
505 **Methodology?**

506 **A.** A Composite Collection Curve is used to determine the appropriate gross-up factor for  
507 the collections lag. Using historical data, the Composite Collection Curve calculates the  
508 estimated time it takes all Customers to pay their bills. This estimated time is then used  
509 to determine the amount of collections relative to when debt service payments are due.  
510 Following is a description of the Composite Collection Curve in the Adjustment  
511 Mechanism (Appendix 2 to Attachment 1.00):

512 In estimating the expected receipts of Transition Charges for any period  
513 the Servicer will apply a “collection curve” reflecting the most recent 12-  
514 month history of collections for which data are available. In connection  
515 with each True-Up Adjustment filing, the Servicer will develop one  
516 collection curve reflecting payment history for all Customers (the  
517 “Composite Collection Curve”). A collection curve is data reflecting the  
518 timing of payments of outstanding bills during a 12-month period,  
519 adjusted to assume that any Transition Charges which are not collected  
520 within 120 days of billing are written off. Each month’s billings are  
521 divided into aging buckets based on the number of days for which such  
522 billings have been outstanding (e.g., 0 to 29 days, 30 to 59 days, 60 to 89  
523 days, and 90 to 119 days outstanding). The aging buckets are then used to  
524 estimate the dollar amount of each month’s billings collected within 30,  
525 60, 90 and 120 days, as well as the dollar amount not collected within 120  
526 days (amount written off) for the 12-month period. For such 12-month  
527 period, the collection curve is calculated by dividing each of the total  
528 dollar amount of billings collected within 30, 60, 90, and 120 days by the  
529 total dollar amount of billings collected within 120 days. The Composite  
530 Collection Curve will also be used to calculate the Days Sales Outstanding  
531 referred to in Annex 3 to the Servicing Agreement

532 Q. **Is the use of a Composite Collection Curve in the Calculation Methodology an**  
533 **appropriate tool to forecast receipts of Transition Charge revenues?**

534 A. Yes. The Composite Collection Curve utilizes past collection experience to forecast the  
535 amount of revenue that is expected to be received from the Transition Charges. A  
536 Composite Collection Curve represents the amount and timing by which outstanding bills  
537 have been paid during a collection period<sup>7</sup> adjusted to assume that any Transition  
538 Charges which are not collected within 120 days of billing are written off. A description  
539 of the Composite Collection Curve in the Adjustment Mechanism (Appendix 2 to  
540 Attachment 1.00) is provided in the answer to the immediately preceding question.

541 Q. **How frequently will the Composite Collection Curve be updated?**

542 A. The Composite Collection Curve will be updated with each reconciliation adjustment is  
543 filed with the Commission.

544 **D. Net Metering and Behind the Meter Generation**

545 Q. **Does the Calculation Methodology include the estimated load served by net**  
546 **metering or distributed generation (“behind the meter”)?**

547 A. The Corporation has made a determination, as I recommend, that Transition Charges will  
548 be calculated based on total gross load of Customers, including total behind the meter  
549 consumption, as it becomes practicable to measure or estimate that load reliably. The Net  
550 Metering Determination is reflected in the Calculation Methodology (Appendix 2 to  
551 Attachment 1.00) which defines “Actual kWh Billed,” for this purpose, “without regard

---

<sup>7</sup> “Collection Period” means, for the purposes of any True-Up Adjustment, the period which commences on a True-Up Adjustment Date and which ends five (5) Business Days prior to a designated Bond Payment Date. Adjustment Mechanism (Appendix 2 to Attachment 1.00).

552 to any offset for net-metering and adjusted for estimated distributed generation usage.”  
553 Initially, the Corporation proposes that Customers be charged the total kWh measured by  
554 the billing meter, with no offset for exported – or “net metered” – kWh. As it becomes  
555 practicable over time, and as meter data measuring the output of the distributed  
556 generation itself becomes available, the load of such Customers for these purposes will  
557 include the gross output of the distributed generation plus the net deliveries from  
558 PREPA.

559 **Q. Will the Net Metering Determination materially affect all classes of Customers?**

560 A. No. Due to the Corporation’s per service agreement determination, the Net Metering  
561 Determination will mainly prevent Non-Residential net metering Customers from  
562 bypassing the Transition Charges. Residential Customers will not be affected in any  
563 material respect because each service agreement – whether net metering or not – will be  
564 subject to a flat Transition Charge. Thus, the amount of load behind the meter will not  
565 affect the Transition Charge to an individual Residential net metering Customer.

566 **Q. Please explain the reasons for the Corporation’s Net Metering Determination to**  
567 **include estimated load served by net metering or estimated distributed generation**  
568 **(“behind the meter”) in determining Customer energy usage.**

569 A. Absent the Net Metering Determination, these Customers could reduce their  
570 responsibility to pay Transition Charges, and the responsibility for those avoided charges  
571 would be transferred to other Customers. This is not equitable given that the Financing  
572 Costs recovered through the Transition Charges result from historical PREPA operating  
573 and fuel costs and investment expenditures. Those costs and expenditures are reflected in

574 the PREPA legacy debt burden that the restructuring should mitigate. Current Customers  
575 should not be permitted to bypass paying their share of costs related to those historical  
576 obligations – and shift their share to other Customers – by deciding to install behind the  
577 meter generation. This cost shift would also disproportionately impact those Customers  
578 that could not afford to purchase such equipment to bypass the charges.

579 Allowing Customers to avoid their share of those costs would also create an  
580 artificial incentive to install and use such generation behind the meter and send an  
581 improper price signal encouraging the bypass of system electric supply even when not  
582 economic. Indeed, the increase in other Customers' Transition Charges would itself also  
583 create an even greater uneconomic incentive to bypass the PREPA system This would  
584 increase further the inequitable shift in the responsibility for Transition Charges.

585 **Q. In light of the Corporation's Net Metering Determination, will the rates charged to**  
586 **net metering Customers satisfy the criteria set out in Article 4 of Law No. 114-2007,**  
587 **as amended by Article 29 of the Revitalization Act ("Article 4 requirements") that**  
588 **charges to net metering Customers "be just?"**

589 **A.** Yes. The application of Transition Charges to net metering Customers' entire load is just  
590 because, as I mention above, these charges cover historical operating and fuel costs and  
591 investment expenditures. They were incurred to benefit all Customers and, therefore,  
592 should be distributed to all Customers. It would be not be just to allow net metering  
593 Customers to bypass the Transition Charges because doing so would place a greater  
594 burden on other Customers, including those who cannot afford to install distributed  
595 generation.

596 Q. **In light of the Corporation’s Net Metering Determination, will the rates charged to**  
597 **net metering Customers satisfy the Article 4 requirements that charges to net**  
598 **metering Customers “will cover operational and administrative costs of network**  
599 **services that the consumer received with the Net Metering Agreement?”**

600 A. Yes. The imposition of a Transition Charge will not affect how the overall rates charged  
601 to net metering Customers cover operational and administrative costs of network services  
602 that the consumer receives through the Net Metering Agreement. The overall rates  
603 charged to these Customers cover the operational and administrative costs related to  
604 serving them.

605 Q. **In light of the Corporation’s Net Metering Determination, will the rates charged to**  
606 **net metering Customers satisfy the Article 4 requirements requiring that charges**  
607 **“never will be excessive or established in such a way that it becomes an obstacle to**  
608 **the deployment of renewable energy projects?”**

609 A. Yes. In making the determination to include estimated load served by net metering in  
610 determining Customer energy usage, the Corporation and PREPA considered this Article  
611 of the Revitalization Act and believe that the Transition Charges will not affect the  
612 justness of charges to net metering Customers or the coverage of operational and  
613 administrative costs of network services provided to these Customers under their Net  
614 Metering Agreement with PREPA. In addition, the Transition Charges are not being  
615 established in a way that makes them an obstacle to the deployment of renewable energy  
616 projects.

617 I have reviewed the Transition Charges and how they are applied to net metering  
618 Customers. Here, the Transition Charge is just and will be paid by all Customers and will  
619 not be a greater burden on net metering Customers versus other PREPA Customers.  
620 Furthermore, it is very important that the Transition Charges remain neutral with no  
621 incentive – or disincentive – to implement behind the meter distributed generation.  
622 Either would create uneconomic incentives/disincentives to implement such technology.  
623 Thus, the inclusion of estimated load served by net metering in determining Customer  
624 energy usage should not play a role in a Customer’s decision whether to implement  
625 behind the meter distributed generation.

626 **Q. Will the inclusion of estimated load served by net metering or estimated distributed**  
627 **generation (“behind the meter”) in determining Customer energy usage limit the**  
628 **Commission’s authority over the overall charges paid by such Customers?**

629 **A.** No. The Commission retains authority over the design of PREPA’s rates, including the  
630 charges applicable to net metering Customers. As I testified earlier, the Corporation’s  
631 calculation of the Transition Charge, including how load is measured, will not affect that  
632 authority or limit the design of the PREPA rate charged to such Customers.

633 **Q. Will the methodology for the inclusion of the estimated load served by net metering**  
634 **or distributed generation (“behind the meter”) in the calculation of Transition**  
635 **Charges, in accordance with the Net Metering Determination, ensure the full and**  
636 **timely payment of the Restructuring Bonds in accordance with their terms and**  
637 **other Ongoing Financing Costs?**

638 A. Yes. Not allowing Customers who use behind the meter generating equipment to avoid  
639 paying a Transition Charge reflecting their actual and, typically, historical load will  
640 enhance the assurance that the Corporation will make full and timely payment of the  
641 Bonds.

642 Q. **Can you confirm that the methodology for including the estimated load served by**  
643 **net metering or distributed generation (“behind the meter”) in the calculation of**  
644 **Transition Charges, in accordance with the Net Metering Determination, is**  
645 **practical to administer?**

646 A. Yes. The inclusion of the estimated load served by net metering Customers in the  
647 calculation of Transition Charges is practical to administer. I am familiar with PREPA’s  
648 billing systems and customer information systems and do not see any issue with  
649 administering this methodology.

650 Q. **How will PREPA practically extract and provide the gross usage of net metering**  
651 **Customers as required in administering the calculation of the Transition Charges**  
652 **on a quarterly basis?**

653 A. Currently, PREPA has advanced electronic meters for all net metering Customers,  
654 measuring both total kWh used by the Customer from PREPA and total kWh exported to  
655 PREPA. Both of these separate values are transmitted by the remote metering systems  
656 and stored in the Billing System, where they are later netted out in the current rate  
657 structure. This enables PREPA to use the total kWh delivered from the PREPA system to  
658 calculate Transition Charges without an exported kWh offset, regardless of how other  
659 rates are calculated. As it becomes practicable, a second meter will be installed or

660 enabled in the largest net metering Customers to measure the true gross generation, and  
661 determine the total behind the meter kWh.

662 **E. Other Calculation Issues**

663 **Q. What are contributions in lieu of taxes (“CILT”) of municipalities?**

664 A. As a public corporation, PREPA is not required to pay property and other taxes, including  
665 to municipalities. CILT is a payment which PREPA provides to municipalities in lieu of  
666 taxes which they would be required to pay if they were a privately owned enterprise.

667 **Q. Does the Calculation Methodology include the entire estimated load of**  
668 **municipalities including the portion covered by CILT?**

669 A. No. The definition of “Customer” under the Article 31 of the Revitalization Act provides  
670 that “(e)ach municipality in the Commonwealth shall be a Customer to the extent that the  
671 dollar value of its usage of electric service (including in determining such dollar value of  
672 Transition Charges which would otherwise be imposed on such municipality and PREPA  
673 charges) in any fiscal year exceeds the dollar value owed by PREPA to such municipality  
674 as a contribution in lieu of taxes for such fiscal year.” PRA, Article 31, para. 7. Thus,  
675 only the usage of municipalities that exceeds CILT is included in the Calculation  
676 Methodology.

677 **Q. Will the Calculation Methodology permit the Commission to discharge its obligation**  
678 **to require PREPA (or other Servicer) to demonstrate that PREPA (or such other**  
679 **Servicer) has been prudent in addressing late payments, past-due bills, and non-**  
680 **payments?**

681 A. Yes. The Calculation Methodology includes an adjustment for late payments, past-due  
682 bills, and non-payments. Nothing in the Calculation Methodology prevents or interferes  
683 with the Commission’s ability to require PREPA (or any subsequent Servicer) to  
684 demonstrate that it has been prudent in addressing late payments, past-due bills, and non-  
685 payments. Any finding of imprudence, however, will not – as provided by Article  
686 6.25A(d)(3) – affect the allocation of delinquencies.

687 Q. **How are the above concerns addressed?**

688 A. Detailed collection data will be included in each quarterly filing which will provide the  
689 Commission with the necessary information to discharge its obligation to require PREPA  
690 (or other Servicer) to demonstrate that PREPA (or such other Servicer) has been prudent  
691 in addressing late payments, past-due bills, and non-payments.

692 **F. Practicable to Administer and Ensures Full and Timely Payment**

693 Q. **Is the Calculation Methodology “designed to provide for the full and timely  
694 payment of the Restructuring Bonds in accordance with their terms and other  
695 Ongoing Financing Costs?”**

696 A. Yes. As is demonstrated in my testimony, the mechanism which has been designed will  
697 ensure that the Restructuring Bonds will receive full and timely payment.

698 Q. **Is the share of Financing Costs to be recovered from each Customer class calculated  
699 “in such manner which is practicable to administer?”**

700 A. Yes. The calculation supporting the distribution of Financing Costs to each Customer  
701 class (*i.e.* Residential and Non-Residential) is based upon kWh sales adjusted for

702 collections. The data required to perform these calculations is produced in the normal  
703 course of business at PREPA and is readily available.

704 **Q. Is the share of Financing Costs to be recovered from each Customer class calculated**  
705 **in a manner “which ensures the full and timely payment of the Restructuring Bonds**  
706 **in accordance with their terms and other Ongoing Financing Costs?”**

707 A. Yes. The Calculation Methodology provides reasonable assurance that timely payment  
708 of the Bonds will occur. The following provisions are included in the calculation which  
709 ensures compliance with the Act: (1) calculations are based upon forward looking  
710 information; (2) trends in the number of service agreements and kWh sales are captured  
711 in the calculation; and (3) periodic reconciliations are performed in order to reduce  
712 significant variations from projected costs.

713 **Q. Please explain the basis for the Corporation’s determination that the Transition**  
714 **Charges and Adjustment Mechanism are designed and calculated to ensure the full**  
715 **and timely payment of the Restructuring Bonds in accordance with their terms and**  
716 **other Ongoing Financing Costs.**

717 A. The Restructuring Resolution, and Appendices thereto, set forth the Calculation  
718 Methodology and contain a form of Servicing Agreement under which PREPA, as the  
719 initial Servicer, will remit Transition Charge Revenues which are each designed to ensure  
720 adequate funds are available to pay debt service on the Bonds when due as well as other  
721 Ongoing Financing Costs. As I describe in more detail in the Independent Financial  
722 Consultant’s Report, attached to the Petition as Attachment 6.00, we have compared the  
723 projections of the Ongoing Financing Costs to the revenues expected from the Transition

724 Charges and conclude that the Calculation Methodology, including this periodic  
725 application of the Adjustment Mechanism, will ensure that the Transition Charge  
726 Revenues are sufficient to provide for the timely payment of Ongoing Financing Costs.

727 **Q. Are the provisions of the Restructuring Resolution, including the Calculation**  
728 **Methodology for the Transition Charges and the Adjustment Mechanism related to**  
729 **such Restructuring Bonds, consistent with the criteria set forth in Article 6.25A(d)?**

730 A. Yes. The provisions of the Restructuring Resolution, including the Calculation  
731 Methodology for the Transition Charges and the Adjustment Mechanism related to such  
732 Restructuring Bonds, are consistent with the requirements of Article 6.25A(d) and are  
733 sufficient for and provide for adequate protection for the full and timely payment of the  
734 Restructuring Bonds in accordance with their terms and other Ongoing Financing Costs.

735 **III. INDEPENDENT FINANCIAL CONSULTANT'S REPORT**

736 **Q. Are you an independent financial consultant with recognized expertise in financing**  
737 **public electric utilities?**

738 A. Yes. My personal qualifications are stated above. Navigant has provided similar  
739 services to other clients.

740 **Q. Does the Petition include or attach a report as described in Article 6.25A(e)(2)?**

741 A. Yes, I sponsor the Independent Financial Consultant's Report attached to the Petition as  
742 Attachment 6.00. The Independent Financial Consultant's Report, among other things,  
743 sets forth historical energy (kWh) usage by Customer class, includes a projection of  
744 Ongoing Financing Costs and Transition Charges during the term of the Restructuring  
745 Bonds and any other material assumptions used in the Report, and concludes that such

746 Transition Charges have been calculated as provided in Section 6.25A(e)(1) and, in  
747 accordance with the assumptions included in such Report, will ensure the full and timely  
748 payment of the Restructuring Bonds in accordance with their terms and all other Ongoing  
749 Financing Costs during the term of the Restructuring Bonds. In reaching that conclusion,  
750 I assume that the Calculation Methodology is properly administered and that accurate  
751 information is used.

752 **Q. What additional information is included in the Report?**

753 A. The Report includes: (a) historical energy (kWh) usage, a projection of Ongoing  
754 Financing Costs and Transition Charges during the term of the Restructuring Bonds and  
755 any other material assumptions used in the report; (b) my conclusion that the Transition  
756 Charges have been calculated as provided in clauses (ii), (iii), (iv) and (vi) of Article  
757 6.25A(e)(1), as applicable; and (c) my conclusion that in accordance with the  
758 assumptions included therein, that the Transition Charges will ensure the full and timely  
759 payment of the Restructuring Bonds in accordance with their terms and all other Ongoing  
760 Financing Costs during the term of the Restructuring Bonds.

761 **IV. OTHER TRANSITION CHARGE ISSUES**

762 **Q. Can you estimate the initial Transition Charges by Customer class including the**  
763 **percentage of the charge to total charges?**

764 A. Yes. That information is shown in the table below:

Line No.	Item	Amount
<b>1</b>	<b>Residential Customers</b>	
2	Average Monthly Revenue per Customer - FY 2014	\$99.34
3	Proposed Transition Charge - \$/Service Agreement	\$11.98
4	Transition Charge as a Percentage of 2014 Monthly Revenues	12.1%
5		
<b>6</b>	<b>Non-Residential Customers</b>	
7	Average Revenue per KWH - FY 2014	\$0.26418
8	Proposed Transition Charge - \$/KWH	\$0.03055
9	Transition Charge as a Percentage of 2014 Average Revenue per KWH	11.6%

765

766 Q. **Have you also estimated Transition Charges and how they compare to total charges**  
 767 **to Customers for electric service over the life of the Transition Charges?**

768 A. Yes. Attachment 3.02 sets forth estimates of Transition Charges by class and provides a  
 769 comparison of Transition Charges to total charges to Customers, each over the life of the  
 770 Transition Charges. The estimate is based upon the number of services agreements and  
 771 kWh usage in the current transition charge calculation and the estimated level of debt  
 772 service and other costs which will be captured in each time period.

773 Q. **How was the comparison of projected Transition Charges to total charges made?**

774 A. Two estimates were used to provide these estimates, one for Residential Customers and  
 775 one for Non-Residential Customers.

776 Q. **Please describe the approach used to estimate the projected Transition Charge to**  
 777 **the bills of Residential Customers.**

778 A. The average Residential Customer's bill for the time period fiscal year 2015 was used the  
779 denominator of the equation. The numerator of the equation is the transition charge, as  
780 stated in dollars per service agreement, as estimated above.

781 Q. **Please describe the approach used to estimate the projected Transition Charge to**  
782 **the bills of Non-Residential Customers.**

783 A. Non-Residential Customers are not as homogenous as Residential Customers. Further,  
784 the Transition Charge for these Customers is calculated on a per kWh basis. Therefore,  
785 the Transition Charge stated in dollars per kWh was compared to the average revenue per  
786 kWh for PREPA's non-residential tariff classes for the fiscal year.

787 Q. **Your calculations estimating the impacts of the Transition Charge on Customers**  
788 **assumes that PREPA's rate is constant over the long-run. Is that assumption**  
789 **realistic?**

790 A. PREPA's rate can be expected to change over time and will be impacted by a multitude  
791 of factors such as the cost of capital, fuel costs, and other factors. Adoption of the  
792 assumption that the average or average rate remains constant over time is a conservative  
793 assumption and will in all likelihood overstate the impact of the Transition Charge.

794 Q. **Will the Transition Charges be collected through a separate rate rider?**

795 A. Yes. The transition charge will be collected through a new Rider XX.

796 V. **CONCLUSION**

797 Q. **Does this complete your testimony?**

798 A. Yes.

**ATTESTATION**

The undersigned, RALPH ZARUMBA, being of legal age, married, executive and consultant, and resident of City of Evanston, County of Cook, State of Illinois, in his capacities as Director of Navigant Consulting, Inc., states that the foregoing testimony, presented in written Question and Answer format, is true and correct to the best of his knowledge and belief.

**IN WITNESS WHEREOF**, I have hereunto signed my name this \_\_\_\_ day of May 2016.

\_\_\_\_\_  
RALPH ZARUMBA

Director  
Navigant Consulting, Inc.

Affidavit No. \_\_\_\_

Acknowledged and subscribed before me by Ralph Zarumba, of the personal circumstances above mentioned, in his capacities as Director of Navigant Consulting, Inc., who is personally known to me, in San Juan, Puerto Rico, this \_\_\_\_ day of May 2016.

\_\_\_\_\_  
Notary Public