

**COMMONWEALTH OF PUERTO RICO
PUERTO RICO ENERGY BUREAU**

IN RE: REVIEW OF THE PUERTO
RICO ELECTRIC POWER
AUTHORITY INTEGRATED
RESOURCE PLAN

NO. CEPR-AP-2018-0001

SUBJECT: Direct Testimony of
Todd W. Filsinger

Direct Testimony of


TODD W. FILSINGER

Chief Financial Advisor
Puerto Rico Electric Power Authority

June 14, 2019



TABLE OF CONTENTS



I. INTRODUCTION AND SUMMARY 1
 A. Witness Identification1
 B. Summary of Direct Testimony.....2
 C. Qualifications and Professional Background3
II. PREPA’S ACTION PLAN..... 6
III. CONCLUSION 11


1 **I. INTRODUCTION AND SUMMARY**

2 **A. Witness Identification**

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

4 A. My name is Todd W. Filsinger. I am a Senior Managing Director with Filsinger Energy
5 Partners (“FEP”), an energy-sector advisory firm, and, since December 2017, have served
6 as Chief Financial Advisor to the Puerto Rico Electric Power Authority (“PREPA”). My
7 business address is 80 Madison Avenue, Denver, CO 80206.

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

 9 A. I am testifying on behalf of PREPA in my capacity as Chief Financial Advisor
10 concerning the analyses and considerations that have driven development of PREPA’s
11 Integrated Resource Plan (the “IRP”), which was filed in this proceeding on June 7, 2019
12 as PREPA Ex. 1.0 (and attachments). One of my colleagues with FEP, Matthew Lee, is
13 also testifying on behalf of PREPA on the subjects I address in this Direct Testimony.
14 Mr. Lee was involved personally in the collaborative processes through which the plans I
15 discuss were developed and refined. Mr Lee will offer additional support for the
16 conclusions and recommendations I am offering. Mr. Lee’s Direct Testimony is
17 identified as PREPA (“Ex.”) 5.0.

18 **Q. Have you previously provided testimony before the Energy Bureau?**

19 A. I have not, although I submitted written testimony in connection with PREPA’s
20 February 13, 2019, Integrated Resource Plan filing (the “February 13 IRP”).

21 **B. Summary of Direct Testimony**

22 Q. **What are the purposes and subjects of your Direct Testimony?**

23 A. The subject and purpose of my testimony is to provide a high-level overview of PREPA's
24 IRP, and, in particular, its Preferred Resource Plan, as detailed in the Action Plan. The
25 IRP is presented in this proceeding as PREPA Ex. 1.0 (and attachments). The Action
26 Plan is found in Part 10 of the IRP, PREPA Ex. 1.0. PREPA's IRP consultant, Siemens
27 Power Technologies International ("Siemens"), through Dr. Nelson Bacalao, is
28 presenting detailed Direct Testimony in support of the Action Plan, which was developed
29 at the direction of and in close collaboration with PREPA's management. This testimony
30 appears as PREPA Ex. 6.0. The IRP and its associated Action Plan have the support of
31 PREPA's senior management, as expressed by Executive Director and Chief Executive
32 Officer ("CEO") José F. Ortiz Vázquez, in his Direct Testimony, PREPA Ex. 3.0.

33 Q. **What are your conclusions and recommendations?**

34 A. The IRP was developed through a rigorous process that began with and regularly engaged
35 PREPA's stakeholders. It considered multiple scenarios and applied to those scenarios
36 various resource strategies that, among other things, varied in their emphasis on
37 centralized generation versus increased reliance on distributed generation alternatives.
38 The Action Plan is aligned with PREPA's and the Government of Puerto Rico's
39 objectives in that it is designed to improve, cost effectively, the resiliency of the
40 Commonwealth's electric utility system through near-term replacement of aging peak
41 generation assets, and the mid- to long-term integration of "MiniGrids" (islands of
42 resiliency into which the system could be segregated following a major storm to facilitate
43 timely recovery from the impacts of the storm) and distributed generation resources

44 which will be strategically located to serve critical loads. These distributed generation
45 resources will include renewable energy resources of sufficient quantity to achieve Puerto
46 Rico's renewable energy portfolio standards (the "RPS"), as they have been modified by
47 the Puerto Rico Energy Public Policy Act, Act No. 17-2019, as well as substantial
48 amounts battery storage. It is my conclusion that the IRP, and the Action Plan that came
49 out of it, are in the interest of the people of Puerto Rico, and that they should be
50 approved.

51 Q. **Are there any exhibits attached to your testimony?**

 52 A. Yes. My testimony includes PREPA Ex. 4.01 – my *curriculum vitae*.

53 C. **Qualifications and Professional Background**

54 Q. **What are your duties and responsibilities at FEP?**

55 A. FEP is an independent energy advising firm consisting of senior executives and experts
56 who have decades of experience in the power sector and other sectors of the energy
57 industry. I lead and provide overall direction in FEP's provision of services to
58 participants in the energy sector. Our firm advises clients on issues relating to utility and
59 energy company restructuring; the development, purchase and disposition of utility-scale
60 power generation assets; pursuit of facility and enterprise-wide operational
61 improvements; utility and project finance; utility budgeting, billing and collection, and
62 other areas. In addition, we provide services including the performance of independent
63 engineering reviews of utility and power generation operations, advising on utility and
64 power generator financing, transmission and distribution operations, power supply
65 planning, assisting in construction monitoring, and advising on facility start-up, testing,

66 and operation and maintenance, as well as interim management services in the energy
67 sector. We also complete financial evaluations to support power supply investment and
68 business decisions.

69 Q. **What are your duties and responsibilities as the Chief Financial Advisor to PREPA?**

70 A. In my capacity as PREPA's Chief Financial Advisor, in accordance with PREPA's
71 revised Fiscal Plan I support PREPA's CEO. The members of my team and I provide the
72 CEO with general financial and managerial support on such matters as budgeting,
73 financial management, cash management, and creditor reporting and support. We also
74 advise and support the CEO in the implementation of the fiscal and operational
75 restructuring reforms and initiatives outlined in the certified Fiscal Plan and the
76 implementation of the certified Budget. We assist and support the CEO on any other
77 matters on which he requests our help. Mr. Lee and I have been involved in the IRP
78 development process, and in the formulation of the Action Plan that I will discuss further
79 below.

80 Q. **What is your professional background?**

81 A. Over the course of my 33-year career, I have assisted utility, energy and other
82 commodity-based businesses, including both regulated utilities and merchant energy
83 market participants, in the areas of economic evaluation, forecasting, strategy, regulatory
84 compliance, asset divestiture and capital allocation, and have provided interim
85 management solutions to energy companies experiencing financial difficulties. I am a
86 specialist in "turn-arounds" of energy sector companies, and have been involved in
87 numerous energy company restructurings. I have served as an interim executive leader

88 for several companies that have hired me to guide them through industry restructurings
89 and the restructuring of their own businesses and operations. Before taking on the role of
90 Chief Financial Advisor to PREPA in 2017, I served as the Lead Energy Advisor to the
91 debtors in the bankruptcy restructuring of Energy Future Holdings, including its
92 wholesale and retail electric power companies, Luminant and TXU Energy. I also served
93 as the Interim Chief Executive Officer and Interim Chief Financial Officer of Hawkeye
94 Growth and the Chief Operating Officer and Energy Restructuring Advisor for Calpine
95 Corporation.

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

97 A. I earned a B.S. in Mechanical Engineering at Colorado State University in 1986 and a
98 Master's in Business Administration from the University of Colorado in 1990. I am a
99 Registered Professional Engineer in the State of Colorado, and am accredited by the
100 American Society of Appraisers as a Senior Appraiser of Public Utility Property.

101 Q. **Have you appeared as a witness in other proceedings?**

102 A. I have. Over the preceding five years, I have testified as an expert at trial or by
103 deposition in the following matters:

104 *The Financial Oversight and Management Board for Puerto Rico as representative of*
105 *Puerto Rico Electric Power Authority, Case 17 BK 04780 (LTS), PROMESA Title III, in*
106 *the United States District Court for the District of Puerto Rico, 2018;*

107 *Ampersand Chowchilla Biomass, LLC, as Massachusetts limited liability company, and*
108 *Merced Power, LLC, a California limited liability company, Case 1:14-cv-00841-MCW,*
109 *United States Court of Federal Claims, 2017-2018. (ARRA 1603 case for two renewable*
110 *facilities in California);*


111 *Sandy Creek Energy Associates, L.P. v. Lower Colorado River Authority, AAA No. 01-*
112 *16-0002-6892, American Arbitration Association, 2017;*

113 *NRG Renew LLC v. SunPower Corporation, Case MSC14-00504, Superior Court of the*
114 *State of California in and for the County of Contra Costa, 2017;*

115 *Arkansas River Power Authority*, Civil Action No. 14-cv-00638-CMA-BNB, in the
116 United States District Court for the District of Colorado, 2015, 2016;
117 *Luminant Generation Company v. Somervell Central Appraisal District*, Cause Number
118 C10412, Somervell County, TX, 2016;
119 *Energy Future Holdings Corp., et al.*, Case No. 14-10979 in the United States
120 Bankruptcy Court for the District of Delaware, 2014-2015;
121 *Ponderosa Pine Energy, LLC*, Ad Hoc Arbitration, Dallas, Texas, 2015; and
122 *Western Biomass Energy LLC*, Case No. 12-21085 in the United States Bankruptcy Court
123 for the District of Wyoming, 2013.

124 **II. PREPA'S ACTION PLAN**

125 **Q. What is PREPA's Action Plan?**

 126 A. The Energy Bureau's directives call for the IRP to include an Action Plan for the next
127 five years, subject to the statutory three year cycle for IRP review. PREPA's Action Plan
128 is set forth in Part 10 of the IRP main Report (PREPA Ex. 1.0) (and attachments). The
129 Action Plan incorporates PREPA's preferred approach to the improvement of the
130 Commonwealth's electric utility system by, among other things, creating MiniGrids that
131 will incorporate sufficient localized generation to serve critical loads connected to each
132 MiniGrid under conditions of system stress. The Action Plan envisions the
133 implementation of elements of two least-cost scenarios developed through the IRP
134 process that are commonly referred to as the Energy System Modernization Plan (the
135 "ESM Plan") and Scenario 4, Strategy 2 ("S4S2"). The key difference between the ESM
136 Plan and S4S2 is the ESM's deployment of additional fuel and generation infrastructure –
137 projects that require multiple years to develop. Given the uncertainties in weather, load
138 forecasts, and future costs of generation resources and energy storage systems, the ESM
139 Plan will position PREPA to respond to deviations in IRP assumptions that can be
140 reevaluated near the end of project development activities and before making any large

141 contractual commitments for equipment or construction. If actual conditions do not
142 support these projects, then PREPA may cancel them, and continue to execute the S4S2
143 components of the Action Plan. A detailed approach to this execution strategy can be
144 found in Section 10.1.7 of the IRP main Report.

145 Both the ESM and S4S2 Plans are low cost, practical options that will support
146 increased reliance on renewable generation resources, in line with Puerto Rico's energy
147 public policy, while improving the reliability and resiliency of the electric system as a
148 whole. Filsinger Energy Partners shares the view of PREPA management and Siemens
149 that the ESM Resource Plan is somewhat more flexible than the S4S2 Plan and therefore
150 better adapted to the need to address uncertainties relating to electric demand forecasts,
151 the impacts of energy efficiency improvements, the costs of generation resources and
152 battery storage systems and the timing of generating resource additions.

153 **Q. How was the Action Plan developed?**

154 **A.** The Action Plan was developed by a collaborative working group led by PREPA and the
155 Puerto Rico Central Office for Recovery, Reconstruction and Resiliency ("COR3");
156 supported by advisors to PREPA and COR3, including FEP. The Action Plan reflects
157 significant input from other utility industry experts and governmental agencies, such as
158 the U.S. Department of Energy, particularly with respect to the repowering of the Palo
159 Seco generating facility.¹

160 **Q. Please describe the Action Plan in a bit more detail.**

161 **A.** The Action Plan represents PREPA's preferred implementation strategy considering all
162 other plans that were evaluated during the recent IRP process. There is a great deal of

¹ The U.S. Department of Energy has expressed particular interest in the repowering of the Palo Seco Power Plant as it represents a key resource located in PREPA's highest load region.

163 commonality among those plans; however, the Action Plan, which draws primarily on the
164 ESM Plan and the S4S2 scenario, represents a flexible, low cost, practical means of
165 achieving PREPA's stated objectives of improving system resiliency through the
166 integration of MiniGrids and distributed generation. It envisions the deployment of
167 distributed generation technologies that conform to RPS requirements, including the
168 more ambitious RPS requirements incorporated into the recently enacted Puerto Rico
169 Energy Public Policy Act, Act No. 17-2019. While incorporating a large contribution
170 from renewable generation resources, implementation of the Action Plan will
171 significantly enhance the resiliency of Puerto Rico's electric utility system. It is flexible,
172 in that it will permit PREPA to adjust its pursuit of new generation resource additions,
173 either increasing or decreasing the amount of new natural gas-fired generating capacity to
174 be added to the system in order to respond to permitting or renewable resource
175 deployment delays or to changes in electricity demand projections.

176 The Action Plan contemplates that PREPA will pursue the resource additions and
177 system configuration changes identified in the ESM that were also selected in the
178 optimization process reflected in the S4S2 Plan. Under the Action Plan, PREPA and
179 resource developers will begin as soon as possible preliminary development activities for
180 identified resources that will require long lead times for permitting, acquisition,
181 procurement and construction. These include certain natural gas-fired combined cycle
182 generating facilities in locations judged to be best suited to achieving needed
183 improvements in system resiliency and reliability. The Action Plan contemplates that
184 PREPA will re-evaluate the need for these resources on the basis of updated information
185 relating to load growth, cost of renewables and the impact of energy efficiency

186 improvements, before making any substantial commitments involving equipment
187 purchase or construction. Having these “off ramps” will enable PREPA to hedge against
188 uncertainties and maintain its ability to ensure that adequate generation resources are
189 available as and where needed.

190 Q. **Does PREPA believe that the Action Plan is in the best interests of the people of**
191 **Puerto Rico?**

192 A. Yes, it does.

193 Q. **Do you share that view?**

194 A. I do.

195 Q. **Why?**

196 A. The devastation caused by Hurricane Maria exposed critical vulnerabilities in the current
197 physical condition and configuration of the Puerto Rico electrical grid. The lack of
198 functional microgrid technologies and sufficient distributed generation resources – which
199 can operate autonomously from the centralized grid, helping to mitigate grid disturbances
200 – resulted in large areas of Puerto Rico being without electricity for many months
201 following the disaster. As Puerto Rico rebuilds its electrical infrastructure, it must do so
202 in an integrated manner in order to balance and optimize resiliency, economic efficiency,
203 and sustainability. The Action Plan aims to achieve not only a low-cost outcome to meet
204 future electricity demand, but also would significantly improve reliability in a
205 sustainable, economically sound, and environmentally responsible manner. In addition,
206 the Action Plan is consistent with current initiatives which PREPA and other Puerto Rico

207 agencies are pursuing to support broader transformation objectives established by the
208 Governor and the Fiscal Oversight and Management Board.

209 The Action Plan proposes to begin procurement activities for all of the “no
210 regrets” / “minimum regrets” resource options identified in the ESM and S4S2 plans. In
211 addition, the Action Plans flexibility preserves options should IRP assumptions not
212 materialize, assumptions that include low load growth, low costs of renewable energy,
213 increasing energy efficient gains, and deployment of distributed generation. Developing
214 new fuel infrastructure and generation projects is a multi-year process, and the Action
215 Plan provides for contingencies against uncertainties by beginning development activities
216 immediately. The need for these potential projects will be reevaluated by PREPA prior
217 to making equipment or construction commitments.


218 Q. **The Energy Bureau’s Regulation No. 9021 sets forth a variety of criteria that are to**
219 **be applied in selecting a Preferred Resource Plan. Did PREPA apply these criteria**
220 **in selecting the Action Plan?**

221 A. Yes, it did. I understand that Regulation No. 9021, at section 2.03(H)(2)(d), lists as
222 criteria for use in selecting the Preferred Resource Plan (i) minimization of the present
223 value of revenue requirements; (ii) system reliability; (iii) short- and long-term risk;
224 (iv) environmental impacts; (v) transmission needs and implications; (vi) distribution
225 needs and implications; (vii) financial impacts on PREPA; and (viii) the public interest.
226 At section 2.03(H)(2)(d)(iii), Regulation No. 9021 provides that the Preferred Resource
227 Plan need not be the lowest-cost portfolio evaluated, so long as the reasons for choosing a
228 portfolio that is not lowest-cost are described in detail. PREPA took those factors into

229 consideration, as is reflected in the IRP, the Action Plan, and the testimony Mr. Lee and
230 Dr. Bacalao are presenting.

231 **III. CONCLUSION**

232 Q. **What action or actions do you recommend that the Energy Bureau take in this**
233 **proceeding?**

234 A. The IRP and associated Action Plan are designed to serve PREPA's customers, while
235 providing contingencies against modeling uncertainties that can be reevaluated before large
 236 capital commitments are made. Therefore, I recommend that the Energy Bureau find and
237 conclude that the IRP and the Action Plan it has yielded should be approved as being in
238 the best interest of the people of Puerto Rico.

239 Q. **Does this conclude your Direct Testimony?**

240 A. Yes, it does.

ATTESTATION

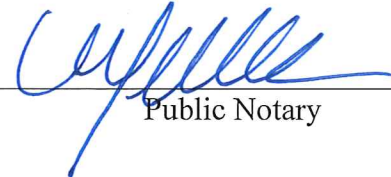
Affiant, Todd W. Filsinger, being first duly sworn, states the following: The prepared Pre-Filed Direct Testimony and the information, documents and workpapers attached thereto and the portions of the IRP filing I am sponsoring constitute the direct testimony of Affiant in the above-styled case. Affiant states that he would give the answers set forth in the Pre-Filed Direct Testimony if asked the questions propounded therein at the time of the filing. Affiant further states that, to the best of his knowledge, his statements made are true and correct.



Todd W. Filsinger

Affidavit No. 154

Acknowledged and subscribed before me by Todd W. Filsinger, in his capacity as Chief Financial Advisor, for the Puerto Rico Electric Power Authority, who is personally known to me or whom I have identified by means of his driver's license number 92-070-9876, in San Juan, Puerto Rico, this 14 day of June, 2019.



Public Notary



EXENTO PAGO ARANCEL
LEY 47
4 DE JUNIO DE 1982