



Testimony

The Rebuilding and Privatization of the Puerto Rico Electric Power Authority (PREPA)

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Chairman Grijalva, Ranking Member Bishop, and members of the committee, thank you for giving me the opportunity to testify on the rebuilding and privatization of the Puerto Rico Electric Power Authority. In my testimony today, I'd like to make three main points:

- PREPA had structural failings that predate, and should not persist after, Hurricane Maria;
- The disciplining effect of competition in power generation and delivery is proven elsewhere in the United States and should be encouraged in the Commonwealth; and
- Given the scope and scale of federal disaster assistance, the federal government has a unique opportunity to contribute to improved performance of power infrastructure in Puerto Rico.

Let me elaborate.

PREPA: Recent History and Performance

In September of 2017, Hurricane Maria swept through Puerto Rico, and left in its wake an estimated 3,000 deaths, making it the deadliest natural disaster to impact the United States in over a century.^[1] Even now, more than a year after the disaster, the island's residents feel the hurricane's lasting impacts. The federal government has undertaken numerous efforts to provide relief assistance to the island, with approximately \$20 billion of assistance overseen through the Federal Emergency Management Agency (FEMA) as well as \$20 billion of Community Development Block Grants approved, and more assistance is being debated today.^[2] Despite this aid, Puerto Rico continues to struggle—but it would be a disservice to the residents of Puerto Rico and to federal taxpayers to ignore that Puerto Rico's recovery has been hampered by a central planning approach to policy.

Energy access is essential to recovery from natural disasters. It is no surprise that the number of people without power is a frequent metric of a natural disaster's impact. Hurricane Maria completely wiped out power to all 3 million residents of Puerto Rico.^[3] But the fact that there were still residents without power nearly a year after the hurricane was not a natural disaster—it was a man-made one. The Puerto Rico Electric Power Authority (PREPA), the island's government-owned electric utility company, has chronically performed poorly.

Prior to Hurricane Maria, PREPA owed more than \$9 billion, making up the largest portion of Puerto Rico's

over \$70 billion of debt.[4] This debt was no doubt exacerbated by the utility's \$250 million of annual subsidies to customers, including for-profit businesses.[5] Even before Hurricane Maria, the utility was \$4 billion behind in necessary upkeep.[6] These problems are not recent or transitory. In 2009, the Department of Homeland Security audited PREPA's use of FEMA funds after Hurricane Georges in 1998. The findings were that almost \$17 million of PREPA's costs were questionable, due to duplicated charges, losses already covered by insurance, undocumented charges, and even \$40,000 missing on account of "mathematical error." [7]

Twenty years after Hurricane Georges, the mismanagement remained. The governing board that is supposed to provide accountability and oversight to PREPA did not work, or even communicate at all, for two weeks following Hurricane Maria.[8] A year ago, this very board was investigating bribery allegations over PREPA's customer prioritization in restoring electricity.[9] Since Hurricane Maria, PREPA has had five different CEOs. [10]

The mismanagement during the Maria rebuilding extends to the inefficient and ineffective use of federal support, as well. Of the \$20 billion in federal assistance which FEMA is overseeing, over \$2.7 billion was allocated to the U.S. Army Corps of Engineers to provide emergency electricity generation and to repair the grid. [11] Another \$1.5 billion was directly allocated to PREPA for emergency protective measures.[12] To put this amount into perspective, more was spent on electricity restoration in Puerto Rico than FEMA spent for all relief from Hurricane Harvey (approximately \$3 billion).[13] Despite funding, it took PREPA 11 months to claim a full restoration of power.[14] To put this timeframe in context, Hurricane Irma cut power to 64 percent of Floridians, but power was almost universally restored within 8 days of landfall.[15] Hurricane Harvey knocked out power to 336,000 customers in Texas when it made landfall, but the electricity load returned to near average within 8 days.[16] The Electric Reliability Council of Texas noted that its disaster response procedures "performed well" and recommended no revisions to its operating procedures.[17]

The fundamental difference between PREPA and its mainland counterparts is in who bears the risk of failure. Texas represents one end of the spectrum, in that it has created as close to a purely competitive electricity marketplace as possible. When generators fail in Texas, the producers do not get paid. As a result, electric companies have an incentive to be as reliable as possible. Further, when a competitor can offer electricity for less, that competitor wins customers. In Texas, there is an incentive to be efficient and reduce production costs. By contrast, when PREPA fails to generate electricity, Puerto Ricans are still captive customers. If they want electricity, PREPA is their only choice. No competitor exists. When PREPA is inefficient, Puerto Ricans bear the costs. Because there is no competition, there is no incentive for PREPA to reduce costs to its beleaguered customers. There is no incentive for PREPA to be more reliable. The employees of PREPA, up to half of which are family members of politicians, do not face the costs of failure.[18] And, there is no incentive to restore power efficiently to customers that have no other choice.

PREPA was born of a philosophy that for the public to benefit from energy production, the public should own that production. There is now overwhelming evidence to show that philosophy was flawed.

The Need for Greater Competition in the Generation and Delivery of Power in Puerto Rico

In 2018, Puerto Rico approved the Puerto Rico Electric Power System Transformation Act, which will move to sell PREPA's assets and privatize the company.[19] This change will have some positive benefits for customers on the island. Private entities, which own their assets, have incentives to maintain their property. They also have a profit motive to improve the efficiency of their operations. These are essential to reducing electricity costs for consumers.

But it should be noted that merely privatizing PREPA will not be enough to fully transform the electricity system. Transitioning from a government-owned monopoly to a privately owned monopoly does not, on its own, create incentives to pass cost savings onto consumers. Generating competition should be a core focus of reforms to PREPA. In an environment of competition, companies increase their profits by increasing their market share. Raising prices can cause customers to move to an alternative provider, but lowering prices increases customers. A competitive market ensures that cost savings from improved efficiency are carried on to consumers. It also ensures that when companies take risks, the costs of failures are borne by the investors—not the customers.

Another bill, the Puerto Rico Energy Public Policy Act (otherwise known as Senate Bill 1121), has passed the Puerto Rican legislature and would enact several provisions to introduce competition to the electricity market if implemented.^[20] It would prohibit single companies from becoming monopoly providers. It would transform PREPA into a concessionaire of transmission assets, which would ensure that least-cost suppliers are the electricity provider of choice. It would establish a “Demand Response” system, whereby some customers could choose to reduce their electricity consumption in times of high demand. Demand Response has been enormously successful in Texas, as it has recognized that customers are not a uniform entity and have different preferences for how they can adjust their electricity consumption. These are policies that would help bring the benefits of competition to Puerto Rico, the same benefits that residents of the mainland have enjoyed for years.

Unfortunately, the same legislation aiming to introduce competition to Puerto Rico’s electricity market would likely also constrain that competition. Included in this legislative effort is a requirement that 100 percent of Puerto Rico’s electricity would have to come from renewable sources by 2050. This policy would create a bias in the market toward renewable energy, mitigating some of the positive effects of competition. It should be noted that Puerto Rico already has a “Renewable Portfolio Standard” of 12 percent, which Puerto Rico has failed to achieve, only getting 2.4 percent of its electricity from renewable sources.^[21] Furthermore, we do not even know if the goal is technically achievable. Nowhere in the United States has this goal been achieved at a utility scale. The National Renewable Energy Laboratory, which has estimated potential renewable electricity generation on the island, has noted a potential for 840 megawatts of wind power, and 1,100 megawatts of solar power. Peak demand in Puerto Rico, though, is 3,685 megawatts.^[22]

Renewable electricity sources have fallen in cost tremendously over recent years. Past American Action Forum research has noted that these cost decreases have contributed significantly to the retirements of coal power plants across the United States, delivering cheaper and cleaner energy to Americans.^[23] Renewable electricity will, hopefully, continue to fall in cost. But policymakers should appreciate that a major reason for renewable power’s falling costs is due to competition; producers of solar and wind power have had to become efficient enough to bid into power markets at a lower price than fossil fuel competitors. When a mandate is introduced that simply requires contracts be awarded to specific fuel types, it reduces market participants, and constrains competition. With less competition, there is less incentive to reduce costs, or to pass savings on to consumers.

In the mainland United States, California is the best example of a state with both a competitive market and an ambitious renewable portfolio standard. California’s residential electricity costs are among the highest in the nation, at over 18 cents per kilowatt hour.^[24] The average residential electricity price in the rest of the United States is 12 cents per kilowatt hour. Electricity prices in Puerto Rico are already 22 cents per kilowatt hour.^[25] It is too early to know for sure if SB 1121 would do more to cause electricity prices to fall or rise, but California offers a cautionary tale that ambitious clean energy mandates frequently come at a cost. By contrast, Texas’ electricity prices are just under 12 cents per kilowatt hour, even at a time when Texas produces more than 25 percent of the nation’s total wind power.^[26] Competition, if anything, benefits the growth of renewable energy while maintaining cost savings for consumers. For Puerto Rico, it would be better to let competition, rather than

politicians, determine the appropriate timing for implementing renewable energy.

The Federal Role

The pressing question for policymakers today is if federal funds are being used effectively. The goal for aid that has been and will be delivered to Puerto Rico is, as always, to provide the most possible benefit despite scarce resources. With regard to a large utility, a serviceable approach is always to embrace competition wherever possible. This approach will mean requests for proposals and weighing how to award contracts and federal dollars. Unfortunately, this may at times conflict with the political inclinations of policymakers. The idea of a 100 percent renewable portfolio standard, for example, is certainly popular politically, but if it forces purchases of more expensive energy sources when an alternative is cheaper, then it reduces the effectiveness of federal relief.

The importance of electricity price should not be understated. Residents of Puerto Rico pay more for their electricity than Californians, while having less than a third of the gross domestic product (GDP) per capita. Electricity costs are equal to 7.7 percent of Puerto Rico's GDP, relative to 2 percent of GDP on the mainland.[27] The high costs of energy constrain economic prosperity in a similar manner to a tax. Residents have less money after paying energy costs, and their purchasing power is harmed by energy prices. Businesses make less profit and have less ability to raise their employees' wages. Energy is an input to virtually all measurable economic activity, and ensuring that Puerto Ricans have access to the least costly energy possible would improve economic growth.

For Puerto Rico, economic growth is especially salient—perhaps more than anywhere else in the United States. The island has experienced negative economic growth for more than a decade now. The population of the island is shrinking, having fallen more than 10 percent since 2010.[28] Puerto Rico's most educated, productive, and prosperous workers are leaving the island, as they can earn better pay and living standards elsewhere in the United States. The labor participation rate in Puerto Rico is barely above 40 percent, a far cry from the 63 percent in the mainland United States.[29] Among those who work, the median household annual income in Puerto Rico is \$20,078. In the mainland United States, it is nearly three times higher at \$56,516.[30] Puerto Rico's unemployment rate is 8.5 percent, compared to only 4 percent in the total United States.[31] These statistics paint a broad, but important picture: It is harder for many Puerto Ricans to find work, and when they do find it, it does not pay very well.

Improving the quality of life in Puerto Rico will require concerted policies aimed at improving economic growth. Businesses need to better attract capital, the demand for labor needs to rise, and productivity needs to improve. There is no singular policy that could achieve these outcomes. But the lessons learned from economies around the world that have been in similar doldrums, such as Finland, Ireland, and Singapore, is that government policy needs to be an aid to attracting capital and labor, not a hindrance.

Conclusion

I look forward to answering your questions on what can be done to alleviate hardships in Puerto Rico and the role of the federal government in facilitating pro-growth policies. Thank you.

[1] Adrian Florido. "Hurricane Maria Caused 2,975 Deaths In Puerto Rico, Independent Study Estimates." National Public Radio. August 28, 2018. Accessed April 4, 2019.
<https://www.npr.org/2018/08/28/642615337/hurricane-maria-caused-2-975-deaths-in-puerto-rico-independent-study-estimates>

- [2] “Federal Recovery Updates.” Hurricane Maria | FEMA.gov. March 14, 2019. Accessed April 04, 2019. <https://www.fema.gov/hurricane-maria>.
- [3] “Puerto Rico’s electricity service is slow to return after Hurricane Maria.” Energy Information Administration. October 24, 2017. Accessed April 4, 2019. <https://www.eia.gov/todayinenergy/detail.php?id=33452>
- [4] Mary Williams Walsh. “Puerto Rico’s Power Authority Effectively Files for Bankruptcy.” The New York Times. July 2, 2017. Accessed April 4, 2019. <https://www.nytimes.com/2017/07/02/business/puerto-ricos-electric-power-authority-effectively-files-for-bankruptcy.html>
- [5] “Fiscal Plan.” Puerto Rico Electric Power Authority. August 1, 2018. Accessed April 4, 2019. [https://aeepr.com/es-pr/Documents/Exhibit-1-FiscalPlan_\(PREPA\)-20180801.pdf](https://aeepr.com/es-pr/Documents/Exhibit-1-FiscalPlan_(PREPA)-20180801.pdf) (CILT and subsidies, page 36)
- [6] Nick Brown, Robin Respaut, Jessica Resnick-Ault. “Special Report: The bankrupt utility behind Puerto Rico’s power crisis.” Reuters. October 4, 2017. Accessed April 4, 2019. <https://www.reuters.com/article/us-usa-puertorico-utility-specialreport/special-report-the-bankrupt-utility-behind-puerto-ricos-power-crisis-idUSKBN1C92B5>
- [7] C. David Kimble. “Hurricane Georges Activities for Puerto Rico Electric and Power Authority.” Department of Homeland Security. August 11, 2009. Accessed April 4, 2019. https://www.oig.dhs.gov/assets/GrantReports/OIG_DA-09-21_Aug09.pdf
- [8] Gloria Ruiz Kuilan and Joanisabel Gonzalez. “PREPA Governing board did not work for 14 days.” El Nuevodia. October 31, 2017. Accessed April 4, 2019. <https://www.elnuevodia.com/english/english/nota/prepagoverningboarddidnotworkfor14days-2370433/>
- [9] “Committee Seeks Answers on Corruption at Puerto Rico Power Utility.” House Committee on Natural Resources. March 12, 2018. Accessed April 4, 2019. <https://republicans-naturalresources.house.gov/newsroom/documentsingle.aspx?DocumentID=404177>
- [10] Yalixa Rivera and Jonathan Levin. “Fifth Time’s A Charm? Puerto Rico Power Utility Taps Another CEO.” Bloomberg. July 18, 2018. Accessed April 4, 2019. <https://www.bloomberg.com/news/articles/2018-07-18/fifth-time-s-a-charm-puerto-rico-power-utility-taps-another-ceo>
- [11] “Fact Sheet: Obligated Funding for Puerto Rico.” Federal Emergency Management Agency. September 10, 2018. Accessed April 4, 2019. <https://www.fema.gov/news-release/2018/09/10/fact-sheet-obligated-funding-puerto-rico>
- [12] Ibid.
- [13] “Texas Hurricane Harvey (DR – 4432).” Federal Emergency Management Agency. Accessed April 4, 2019. <https://www.fema.gov/disaster/4332>
- [14] Frances Robles. “Puerto Rico Spent 11 Months Turning the Power Back On. They Finally Got to Her.” The

New York Times. August 14, 2018. Accessed April 4, 2019. <https://www.nytimes.com/2018/08/14/us/puerto-rico-electricity-power.html>

[15] Tyler Hodge and April Lee. “Hurricane Irma cut power to nearly two-thirds of Florida’s electricity customers.” Energy Information Administration. September 20, 2017. Accessed April 4, 2019. <https://www.eia.gov/todayinenergy/detail.php?id=32992>

[16] April Lee and Tyler Hodge. “Hurricane Harvey caused electric system outages and affected wind generation in Texas.” Energy Information Administration. September 13, 2017. Accessed April 4, 2019. <https://www.eia.gov/todayinenergy/detail.php?id=32892>

[17] “Hurricane Harvey Event Analysis Report.” Electric Reliability Council of Texas. May 18, 2018. Accessed April 4, 2019. http://www.ercot.com/content/wcm/lists/144927/Hurricane_Harvey_Event_Analysis_Report.pdf

[18] Frances Robles. “C.E.O. of Puerto Rico Power Authority Resigns.” The New York Times. November 17, 2017. Accessed April 4, 2019. <https://www.nytimes.com/2017/11/17/us/prepa-ceo-resigns-puerto-rico.html>

[19] Commonwealth of Puerto Rico House Bill 1481, Approved June 21, 2018. “Puerto Rico Electric Power System Transformation Act.” Accessed April 4, 2019. <http://www.oslpr.org/download/en/2018/A-120-2018.pdf>

[20] “Puerto Rico Energy Public Policy Act.” McConnel Valdes LLC. October 23, 2018. Accessed April 4, 2019. <http://www.mcvpr.com/newsroom-publications-Puerto-Rico-Energy-Public-Policy-Act>

[21] “Puerto Rico Territory Energy Profile.” Energy Information Administration. July 19, 2018. Accessed April 4, 2019. <https://www.eia.gov/state/print.php?sid=RQ>

[22] Energy Transition Initiative. “Energy Snapshot Puerto Rico.” National Renewable Energy Laboratory. March 2015. Accessed April 4, 2019. <https://www.nrel.gov/docs/fy15osti/62708.pdf>

[23] Philip Rossetti “Coal Declines Explained Mostly by Markets.” American Action Forum. April 6, 2017. Accessed April 4, 2019. <https://www.americanactionforum.org/research/coal-declines-markets/>

[24] “Electric Power Monthly (Table 5.6.a).” Energy Information Administration. March 26, 2019. Accessed April 4, 2019. https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a

[25] “Puerto Rico Territory Energy Profile.” Energy Information Administration. July 19, 2018. Accessed April 4, 2019. <https://www.eia.gov/state/print.php?sid=RQ>

[26] “State Profile and Energy Estimates: Texas.” Energy Information Administration. February 21, 2019. Accessed April 4, 2019. <https://www.eia.gov/state/analysis.php?sid=TX>

[27] Energy Transition Initiative. “Energy Snapshot Puerto Rico.” National Renewable Energy Laboratory. March 2015. Accessed April 4, 2019. <https://www.nrel.gov/docs/fy15osti/62708.pdf>; “Total Electric Industry Revenue.” Energy Information Administration. 2017. Accessed April 4, 2019. https://www.eia.gov/electricity/sales_revenue_price/pdf/table3.pdf (2 percent is rough average of \$390 billion electric industry revenue divided by US GDP).

[28] “Quick Facts: Puerto Rico.” United States Census Bureau. July 1, 2018. Accessed April 4, 2019. <https://www.census.gov/quickfacts/pr>

[29] Ibid.

[30] Ibid.

[31] “Economy at a Glance: Puerto Rico.” United States Department of Labor, Bureau of Labor Statistics. February 2019. Accessed April 4, 2019. <https://www.bls.gov/eag/eag.pr.htm>