Insight

To Restore Power, Puerto Rico Must Rein in Utilities

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Summary

- Puerto Rico is struggling to get electricity back to consumers on the island; 89 percent of the territory remains without electricity.
- Puerto Rico's biggest source of debt comes from its government-owned and managed electric authority, PREPA, which is $9 billion in debt.
- PREPA's misguided policies have caused large deficits, as for-profit businesses receive subsidized electricity, and discouraged private-sector investment in infrastructure maintenance and resiliency.

In the wake of Hurricane Maria, the problems of Puerto Rico's infrastructure have become extraordinarily visible. As of this writing, 89 percent of the island remains without electricity, even though it has been two weeks since the hurricane. For comparison, one week after Hurricane Harvey, AEP Texas (a major utility servicing the area affected by Harvey) had already restored power to 80 percent of its customers in affected areas—despite Harvey being considered worse than average for electricity restoration due to persistent flooding. The challenges in Puerto Rico for the restoration of electricity are multi-faceted; even before the hurricane the island's electricity infrastructure was behind on investing in its reliability and resiliency. Government ownership of electric utilities led to the politicization of purveyed rates, and federal restrictions on commerce limited the flexibility of energy choice. As Puerto Rico's already troubled electricity infrastructure is now totally devastated, serious policy changes will be required to attract the necessary investment in reconstruction and resiliency investments. Whatever policy forms, it must begin with the idea that electricity on the island should be treated like a good that is bought and sold, and not a free service offered to the government's favored enterprises .

Prior to Hurricane Maria, Puerto Rico was over $73 billion in debt. One of the largest contributors to that debt is the Puerto Rico Electric Power Authority (PREPA), which is approximately $9 billion in debt. Previous American Action Forum (AAF) research on Puerto Rico's debt crisis has highlighted PREPA among other public utilities in need of fiscal reform. In addition to its debt, it was estimated that PREPA was behind on approximately $4 billion worth of necessary resiliency investments. It should not come as a surprise that given its deficiencies, PREPA is struggling to restart service to its customers—but how did it get to be so bad? The answer lies in PREPA's deviation from market principles.

PREPA is a government-owned public utility, managing all of Puerto Rico's approximately 5.5 gigawatts' worth of power plants. PREPA also owns all of the island's oil-fueled power plants, which make up 47 percent of its total electricity generation. Electricity rates in Puerto Rico average around 19 cents per kilowatt hour, or 46 percent higher than the U.S. average, falling behind only Hawaii for highest rate among U.S. states and territories. However, those rates are far lower than they have been in the past. In 2014, Puerto Rico's residential electricity prices were closer to 28 cents/KWh, reflecting the cost of oil which was around $100/barrel (relative to the $50/barrel consumers enjoy now). The high cost of electricity in the territory constrains demand, and most Puerto Ricans average only a third of the per-capita energy consumption of the rest of the United States. With such low energy consumption already, there likely is not much opportunity to reduce electricity demand. Rather, policies need to focus on improving the supply side of the equation and attracting more investment in electricity generation.

Under normal circumstances, the high price of electricity in Puerto Rico would signal that there is profit to be had from investing in electric infrastructure, but that has not happened. Part of the reason for this lack of interest from outside investors is PREPA's mismanagement. PREPA is currently engaged in agreements with for-profit businesses wherein electricity is provided at no cost. As PREPA is a government-owned entity, and its utilities are publicly owned, this behavior is tantamount to a cost transfer from the business to either the taxpayers liable for the incurred debt, or the ratepayers that are paying their bills. Getting customers to pay bills seems to be another issue entirely, as PREPA continues to provide electricity even when bills go unpaid. In one case, a hospital owed over $4 million in payments before having the electricity shut off, only for a court to rule in the hospital's favor and force PREPA to continue supplying free electricity.

Reports on PREPA show a litany of errors, as the utility fails to comply with mandates. The authority did not come to agreements on the purchasing power agreements that would set profitable rates for privately owned renewable utilities to be established on the island, meaning that despite a legal target of 12 percent renewable energy generation by 2015,

only 2 percent is from renewable energy. An electric utility bill provided to AAF shows that despite PREPA being unable to supply electricity to its consumers since Hurricane Maria, it continues to charge customers and has been threatening to shut off electricity—even though there is no electricity to shut off.

Fixing Puerto Rico's electric infrastructure problem will require three major changes. First, PREPA needs to be reformed. An audit by the Department of Homeland Security found concerns regarding PREPA's accounting and expenditure of Federal Emergency Management Agency funds after Hurricane Georges (1998). The audit identified questioned costs totaling almost $17 million resulting from duplicate charges; losses covered by insurance; undocumented, excessive, and unrelated charges; and mathematical error. About 23 percent of those charges were not supported by adequate documentation required under federal standards for financial management. This egregious mismanagement by PREPA of federal relief funding threatens the efficiency and effectiveness of repairing Puerto Rico's devastated electric transmission and distribution system.

Furthermore, PREPA needs to be more in line with a purveyor of a commodity. That means a sunset on PREPA's provision of free electricity to select customers. The rates set by PREPA's regulatory agency, the Puerto Rico Energy Commission, need to reflect the "just and reasonable" guidelines of utilities engaged in regulatory compacts. That is to say, rates charged need to fully recover the costs of providing electricity, provide a reasonable return on investment to the parties that must provide the funds to rebuild Puerto Rico's infrastructure, and avoid the potential for monopolies to charge rates above what would be dictated under normal competitive market conditions. The vast majority of Americans pay reasonable electricity rates and do not fear their utility companies will go out of business or fail to attract the investments necessary to provide reliability and resiliency in times of disaster.

The second change is that federal provisions that unnecessarily raise fuel costs in Puerto Rico should be repealed. The Jones Act, a federal law requiring U.S. flagged vessels to transport U.S. goods between the mainland United States and Puerto Rico, unnecessarily adds to the cost of imported goods. Any oil imports that Puerto Rico receives come from the United States (recall that 47 percent of Puerto Rico's electricity comes from oil), therefore residents are limited in their choice of shipping companies. Constrained choice of shipping companies potentially slows the delivery of needed fuel to Puerto Rico and could raise fuel and transportation costs. Previous AAF research showed that protectionist policies like the Jones Act are likely doing more harm than good, as protected industries may have higher costs than foreign competitors.

Third, PREPA needs better implementation of distributed energy technologies to its grid.

Puerto Rico faces many of the same energy challenges as other islands, principally, that it cannot buy electricity from its neighbors. It also faces high shipping costs to bring fuel to the island. Generation from locally available energy sources is in most cases more expensive than traditional methods. But for an island that already faces high costs, producing electricity from renewable energy sources like wind and solar can be well below the costs of importing petroleum-based fuel. PREPA could accommodate private parties seeking to collaborate and invest in small-scale solar or wind farms, known as microgrids, to alleviate their electricity burdens (e.g. homeowners that may be in inefficient locations for solar may pool resources to create a small solar farm in a more ideal location). In 2016, Puerto Rico enacted legislation that put into statute the right of microgrid owners to connect to the grid, but for unclear reasons, PREPA has not been expeditious in integrating microgrids to its electricity delivery.

Fixing Puerto Rico's electric infrastructure to get its recovery on track will require monumental change. PREPA needs to start acting like a proper utility, with a plan for recovering its costs and becoming financially stable. Providing free electricity may sound great, but the economic effect is the creation of a subsidy where the liability ultimately falls upon the taxpayers who are responsible for PREPA's debt, as well as the ratepayers who actively are paying their bills. Unless the politically motivated policies in Puerto Rico are ended or reformed, the island's electric infrastructure will never attract the billions of dollars in investment that is needed to restart the island's economy.