



House Committee on Natural Resources Hearing: Puerto Rico's Post-Disaster  
Reconstruction and Power Grid Development

Submission for the Record

Ingrid M. Vila Biaggi MS, PE, President

CAMBIO

November 17, 2022

---

**I. PROMESA has failed in bringing about the necessary electrical system transformation**

Six years after its passage, it is clear that PROMESA is not furthering the necessary transition towards an affordable and financially stable electricity system. PROMESA gives the Financial Oversight and Management Board the power to certify fiscal plans and budgets for the Puerto Rico Electric Power Authority (PREPA). As established by Section 201(b) of PROMESA, the fiscal plans are supposed to provide a path for PREPA to “achieve fiscal responsibility and access to the capital markets.” They are required to “improve fiscal governance, accountability, and internal controls” and “enable the achievement of fiscal targets.”<sup>1</sup> PROMESA further gives the FOMB the power to ensure that any law passed by the Puerto Rico legislature is consistent with an approved fiscal plan, including, if necessary, taking the Legislature to court to prevent the enforcement of the law.<sup>2</sup>

In practice, these provisions of PROMESA have enabled the FOMB to impose its own vision of the transformation of Puerto Rico's electrical system – namely, privatization – with no published analysis of how this will put the electrical system on a path towards fiscal health. It is noteworthy, that despite the Board's active opposition to many Commonwealth laws, the Board approved of the passage of Puerto Rico Law 120-2018. This law, which set forth the framework for the privatization of the electrical system, was fiscally irresponsible: it eliminated the requirement for cost-benefit evaluations for any electrical system privatization contract, it allowed for the sell-off of generation assets to private parties, which would restrict the use of federal funds and drive-up costs.<sup>3</sup> It also allows for the displacement of workers which have to be absorbed by other government entities, putting additional pressure on an already overburdened central government budget.<sup>4,5</sup>

CAMBIO noted in 2019, in our testimony at a House Natural Resources Committee listening session, that privatization was likely to raise rates and that, at that time, neither the Puerto Rico government nor the FOMB had published any study to demonstrate that privatization would lower or

---

<sup>1</sup> Puerto Rico Oversight, Management, and Economic Stability Act (PROMESA), Pub. L. No. 114-187 §201(b)(1) (2016) PROMESA.

<sup>2</sup> PROMESA, §204(a).

<sup>3</sup> Puerto Rico is now moving forward with a concession model for the privatization of the generation assets, apparently because no buyer could be found for the existing plants.

<sup>4</sup> <https://sincomillas.com/la-transferencia-de-empleados-de-la-ae-e-a-otras-agencias-le-va-a-costar-al-gobierno-mas-de-200-millones-anualmente/?print=print>

<sup>5</sup> <https://ieefa.org/resources/ieefa-us-poor-decisions-luma-contract-put-puerto-ricos-workers-and-communities-risk>

maintain electricity prices which were, at that time, 23 cents/kWh.<sup>6</sup> Since that time, no economic justification of privatization has been provided.

Unfortunately, the predictions in CAMBIO's 2019 testimony have come to pass. As discussed later, electrical service has deteriorated under the private operator LUMA, and – largely due to the failure to transition away from fossil fuels – rates are now nearly 30 cents/kWh. After seven PREPA fiscal plans, Puerto Rico is further than ever from having a resilient, reliable, clean and affordable electrical system.<sup>7</sup>

CAMBIO's analysis of the most recent 2022 PREPA Fiscal Plan shows that, despite these failures, the Board continues to (1) push for further privatization of the electrical system, and (2) overstate the amount of money potentially available to bondholders, thereby jeopardizing the future financial health of the system. The 2022 Fiscal Plan calls for the privatization of PREPA's power plants, without any cost-benefit analysis and without any analysis of the cost or savings from the first phase of electrical system privatization, the LUMA contract. The continued inclusion of privatization in the fiscal plans dramatically limits the Puerto Rico legislature from preventing further privatization of the electrical system (which would be a logical response to the problems caused by LUMA), given that the FOMB would almost certainly take the legislature to court to invalidate any such legislation.

Our analysis of the Fiscal Plan further shows that the Board has created an unrealistic expectation of the amount of money potentially available to service PREPA's debt, primarily by underestimating PREPA's fuel budget. The Board acknowledges that its projections of dramatic future declines in fuel prices are partially due to changes in its modeling assumptions that have no basis in the actual operation of the system.<sup>8</sup> If the Board puts forward another PREPA debt proposal to unsustainably raise rates to pay off the debt, it will perpetuate the continued underinvestment in system maintenance and labor that were a major cause in driving the system to its current state of near physical collapse.

While the 2022 Fiscal Plan does call for some initiatives, including greater investment in energy efficiency and renewable energy, that are needed to lower and stabilize electrical system costs, the Board's actions show where its priorities lie. The Board and its consultants have been deeply involved in the privatization process, to the point where the Board's contract with financial consultant CitiGroup includes a bonus of \$21.5 million for upon the consummation of electrical system privatization transactions.<sup>9</sup> There is no indication that the Board has undertaken any similar efforts to further renewable energy or energy efficiency on the island.

The Board has further lost credibility as a result of the conflicted advice that it has received from McKinsey, one of its lead consultants. As a direct result of recent federal legislation, it was revealed that McKinsey's consulting clients also include Quanta Services (one of LUMA's parent companies) and New

---

<sup>6</sup> Testimony of Ingrid M. Vila Biaggi, U.S. House of Representatives Committee on Natural Resources Listening Session, March 15, 2019.

<sup>7</sup> [https://cambiopr.org/wp-content/uploads/2022/08/CAMBIO\\_Informe\\_plan\\_fiscal\\_JCF\\_AEE\\_08\\_22.pdf](https://cambiopr.org/wp-content/uploads/2022/08/CAMBIO_Informe_plan_fiscal_JCF_AEE_08_22.pdf)

<sup>8</sup> <https://cambiopr.org/wp-content/uploads/2022/09/letter-to-FOMB-PREPA-Fiscal-Plan-8-10-22.pdf>

<sup>9</sup> [https://drive.google.com/file/d/12AFC-M4W7h9B12UQiP-XiaVxhiDY\\_TtO/view](https://drive.google.com/file/d/12AFC-M4W7h9B12UQiP-XiaVxhiDY_TtO/view)

Fortress Energy, which received a major LNG contract in Puerto Rico under questionable circumstances in 2019 and is poised to be granted the generation privatization contract.<sup>10,11,12</sup>

Furthermore, PROMESA established an inherent conflict of interest by allowing the Board the ability to be deeply involved in the negotiation of contracts, as they were in the LUMA contract, and then approving the final contract.

In short, the Board has failed to achieve its fundamental purpose of restoring PREPA to financial health. The only things the Board has to show for its six years of work on the electrical system are a failed privatization initiative and a failed debt restructuring agreement. In the following sections, I will provide more detail on the flawed privatization process that resulted in the LUMA contract, the failure of this contract to transform the electrical system, and recommendations for an alternative model that would result in lower rates and a more resilient system.

## **II. The LUMA contracting process raised many red flags**

The process undertaken by the Puerto Rico Public-Private Partnerships Authority (P3 Authority) to select LUMA Energy as the contractor to operate the non-generation services of Puerto Rico's electrical system (including operation of the transmission and distribution systems, power dispatch, customer service and billing) raised numerous questions about how and why LUMA was ultimately selected for this contract.

The privatization process was governed by Puerto Rico Law 120-2018 and Puerto Rico Law 29-2009, which together create a non-transparent process with no public participation for the development of concession contracts for the operation of Puerto Rico's electrical system. Indeed, the selection of LUMA was not publicly known until after the contract had been fully negotiated and signed. Unfortunately, this process facilitates exactly the sort of politically-driven contracting that was well-known to be a major problem under PREPA's operation of the system.

Subsequent to the signing of the contract, CAMBIO undertook a public records request to obtain documents related to the bidding and bid evaluation process undertaken by the P3 Authority.<sup>13</sup> A review of those documents showed that the 5-member committee appointed to review and evaluate the bids acted with a highly inappropriate level of coordination in their evaluations. Committee members were asked to evaluate and score the bids according to 38 separate criteria. Four of the five members of the committee arrived at identical scores in each of 37 of the 38 categories evaluated. The scores related to financial metrics, which accounted for 50% of the total score, appeared to have been copied directly from a report from FTI Consulting, a consultant to the P3 Authority. It is unclear how the rest of the identical scores were arrived at, but the high level of coordination between the committee members raises serious

---

<sup>10</sup> <https://www.wsj.com/articles/mckinsey-clients-won-puerto-rico-contracts-as-firm-advised-government-11656334801>

<sup>11</sup> <https://ieefa.org/media/90/download?attachment>

<sup>12</sup> <https://www.elnuevodia.com/negocios/economia/notas/luma-compara-chinas-con-elefantes-dice-el-representante-del-consumidor-torres-placa/>

<sup>13</sup> These documents are available on CAMBIO's website, <https://cambiopr.org/resources/>

questions about the independence of the process and how the decision to choose LUMA was actually made.

It is also important to note that one of LUMA Energy's parent companies, Texas-based Quanta Services, conducted federal lobbying during the same time period that it was bidding for the transmission and distribution system contract. Quanta's federal lobbying disclosures report the topic of its lobbying simply as "PREPA." The P3 Authority's regulations prohibit bidders from undertaking lobbying related to an ongoing bidding process, unless such lobbying is expressly approved by the P3 Authority.<sup>14</sup> This raises the question of whether (a) the P3 Authority did approve Quanta Services' federal lobbying related to PREPA and, if so, why; or (b) Quanta Services violated the P3 Authority's regulations, with no apparent consequences.

Finally, it is noteworthy that the Chairman of the Puerto Rico Energy Bureau, the island's energy regulator, played a dual role during the LUMA Energy contracting process. Chairman Aviles was one of the members of the 5-member committee established by the P3 Authority that selected LUMA and negotiated the contract. Then, in his role at PREB, he voted in favor of the PREB's approval of the contract.

It is important to recall these irregularities in the contracting approval process because they provided early indications that the LUMA contract— far from depoliticizing the electrical system, as promised by the FOMB— was the result of yet another politically-driven bidding process. As the next sections will show, LUMA's performance in its first 17 months of operations demonstrate that the company has not been up to the task of operating Puerto Rico's electrical system and, indeed, that privatization has not achieved any of the transformative goals that its backers promoted.

### **III. After more than a year of operations, LUMA has exceeded its budget and provided worse service**

In CAMBIO's prior testimony to this committee's hearing on "The Transformation of the Puerto Rico Electric Power Authority" on August 6, 2020, we raised concerns about several contract provisions that favored LUMA and that would leave the government of Puerto Rico with little recourse if LUMA failed to meet key publicly stated objectives of the transformation. Specifically, we noted that the contract imposed no obligation on LUMA to meet any rate affordability targets, nor did it provide any metrics for achievement of Puerto Rico's renewable energy targets — despite the fact that LUMA would be receiving billions of dollars in federal funds for the reconstruction of the grid. We also noted that the contract imposed no penalties, nor did it threaten cancellation of the contract, if key performance metrics were not achieved.<sup>15</sup>

In the first seventeen months of operations, LUMA has indeed not been penalized for its failure to perform. During this period there have been widespread complaints from citizens and mayors regarding

---

<sup>14</sup> Section 4.13(a) of the P3 Authority's Regulation for the Procurement, Evaluation, Selection, Negotiation and Award of Partnership Contracts and Sale Contracts for the Transformation of the Electric System Under Act No. 120-2018

<sup>15</sup> Ingrid M. Vila-Biaggi and Luis E. Rodriguez-Rivera, Written statement for the U.S. House of Representatives Committee on Natural Resources, "The Transformation of the Puerto Rico Electric Power Authority," August 6, 2020.

longer and more frequent power outages, as well as voltage fluctuations that damage home appliances and have even provoked fires. On multiple occasions, substation fires have caused widespread blackouts.<sup>16</sup> Recent testimony from the executive director of PREPA to the Puerto Rico House of Representatives included a list of events in which disturbances in the transmission and distribution system caused power plants to go offline as a protection measure, which resulted in major blackouts.<sup>17</sup>

LUMA's poor performance was highlighted by Hurricane Fiona. Even though Fiona affected the southwest portion of Puerto Rico as a Category 1 Hurricane the entire island was left without power. This impact of Fiona cannot be compared to the island-wide devastation caused by Category 4 Hurricane María, therefore it is not clear what was the cause of the electric system failure. Limited information has been disclosed by LUMA as to their preparation prior to the storm. However, it was reported that they underspent on vegetation management and did not use the budget allocated for inspecting powerlines.<sup>18</sup>

As of September 26, more than a week after the storm, power had been restored to only 60% of customers; in the San Juan area, which suffered little physical damage, more than 10% of customers were still without power.<sup>19</sup> By comparison, after the 1996 category 1 hurricane Hortense, which had a similar trajectory to Fiona and caused similar flooding damage, 100% of power was restored within six days. The storm revealed poor prior coordination with island mayors; one mayor reported that LUMA did not arrive until 11 days after the storm and with only a single crew.<sup>20</sup> Other mayors sought to activate municipal workers to begin working on system restoration, as they had done after hurricane Maria, prompting LUMA to threaten the mayor of Isabelita with legal action.<sup>21</sup> LUMA decided not to procure the assistance of the American Public Power Association (APPA) claiming it had enough personnel, yet they were not able to restore power to over half a million clients for over a week.

LUMA's inability to properly operate the system stems from another flaw identified early in the contract: its failure to require LUMA to hire PREPA employees or to offer them the same level of benefits.<sup>22</sup> LUMA's decision, allowed by the contract, to not respect the PREPA employee's collective bargaining agreement resulted in LUMA not being able to hire the vast majority of PREPA's skilled workforce and thereby losing hundreds of years' worth of accumulated experience with Puerto Rico's electrical system.

---

<sup>16</sup> <https://www.elnuevodia.com/noticias/locales/notas/una-averia-en-costa-sur-provoca-un-apagon-general-en-puerto-rico/>; <https://www.elnuevodia.com/noticias/locales/notas/explosion-en-la-subestacion-de-luma-energy-en-jayuya-deja-sin-luz-a-todo-el-municipio/>; <https://www.elnuevodia.com/noticias/locales/notas/fuego-en-subestacion-de-monacillos-miles-de-abonados-continuan-sin-luz/>

<sup>17</sup> Testimony of Josue Colon before the Puerto Rico House of Representatives Committee on Economic Development, Planning, Telecommunications, Public-Private Partnerships and Energy, September 5, 2022. (<https://www.youtube.com/watch?v=1Heyn-OLuj8>, starting at 2 hour, 37 minutes).

<sup>18</sup> [https://www.elvocero.com/gobierno/agencias/luma-gast-menos-en-el-manejo-de-vegetacion/article\\_08f4a690-3241-11ed-9456-e3ca602cb51b.html](https://www.elvocero.com/gobierno/agencias/luma-gast-menos-en-el-manejo-de-vegetacion/article_08f4a690-3241-11ed-9456-e3ca602cb51b.html)

<sup>19</sup> Puerto Rico Emergency Portal System, [preps.pr.gov](https://preps.pr.gov), accessed 6pm on September 26, 2022.

<sup>20</sup> <https://radioisla.tv/11luma-energy-llega-a-municipio-de-lajas-11-dias-despues-del-huracan-fiona-con-una-brigada/>

<sup>21</sup> <https://www.elnuevodia.com/noticias/locales/notas/alcaldes-del-pnp-y-ppd-reprueban-la-gestion-de-luma-tras-fiona-no-han-sido-capaces-de-restablecer-el-servicio-electrico/>

<sup>22</sup> Ingrid M. Vila-Biaggi and Luis E. Rodriguez-Rivera, Written statement for the U.S. House of Representatives Committee on Natural Resources, "The Transformation of the Puerto Rico Electric Power Authority," August 6, 2020.

The Puerto Rico Energy Bureau recently published a report comparing LUMA's first year of performance to FY 2020, when the system was operated by PREPA. In two of the three industry standard grid reliability metrics (SAIDI and CAIDI), LUMA's performance is notably worse. Specifically, LUMA's CAIDI (Customer Average Interruption Duration Index) was 50% higher than the baseline PREPA year, and LUMA's SAIDI (System Average Interruption Duration Index) was 33% higher than the PREPA baseline. The Bureau further noted that LUMA has consistently had fewer employees than budgeted, indicating an ongoing difficulty in recruiting and retaining a qualified workforce.<sup>23</sup>

While the Energy Bureau has reported that LUMA has met or achieved baseline targets for 84% of metrics, this comparison is a mix of apples and oranges. It includes crucial reliability metrics (for which in many cases LUMA is not performing), but also other categories that are much less integral to the functioning of the system, such as the percentage of customers on AMI (Advanced Metering Infrastructure).<sup>24</sup> More importantly, some of these self-reported metrics are contrary to the experience lived on the island, such as response time to service and outage complaints for which LUMA self-reports 9hrs on average. The Energy Bureau has also not required reporting on any metrics of power quality (frequency and voltage stability), despite the large number of customer complaints on this issue.

LUMA has been consistently over budget. During its transition year prior to taking control of the system on June 1, 2021, LUMA exceeded its budget by 20%. And during its first year of operation, LUMA exceeded its budget by \$20 million. Despite its understaffed and underskilled workforce, LUMA was 20% over budget in its first year on labor costs, due to having to spend additional funds on training and on importing workers from the United States. As a result of the flawed structure of the contract, and weak oversight by Puerto Rico government agencies, no penalties have been imposed on LUMA for its failure to meet budgetary or performance objectives.

#### **IV. The LUMA contract did not transform the failed PREPA model**

The 2021 PREPA Fiscal Plan anticipated that privatization would “depoliticize system management, improve the operational performance, competitive procurement utilization, management and maintenance of the T&D system, and the generation network, leading to tangible improvements in reliability, sustainability, compliance, and overall quality of service.”<sup>25</sup>

However, the LUMA contract has not produced any of these benefits, and has instead replicated or, in some cases, worsened the flaws of the failed PREPA governance model. Governance of the electrical system continues to be politicized; the management of the system has not been professionalized; there is less transparency and opportunity for public participation than under PREPA; and renewable energy goals continue to fail to be met. And, as described in the previous section, reliability and quality of service have declined.

The operation of the grid continues to be a highly contentious and politicized process. As described above, the process of the award of the LUMA contract appeared to be highly political. Given that there are billions of dollars of federal funds at stake, electric rates are nearly 30 cents/kWh, and

---

<sup>23</sup> <https://energia.pr.gov/wp-content/uploads/sites/7/2022/08/20220818-MI20190007-Resolution-and-Order.pdf>

<sup>24</sup> <https://energia.pr.gov/wp-content/uploads/sites/7/2022/08/20220818-MI20190007-Resolution-and-Order.pdf>

<sup>25</sup> <https://drive.google.com/file/d/1dXFJldZpOIsAOBmZDBd7T2P3j2xMPaal/view>

outages are frequent, it is unsurprising that the operation of the electrical system continues to be a high-profile political issue.

The operation of the grid also continues to be overly reliant on outside professional and technical consultants, who are unaccountable to the people of Puerto Rico and frequently unfamiliar with Puerto Rico's electrical system, despite the fact that privatization was supposedly going to bring an operator with in-house expertise. Specifically, CAMBIO has found that in fiscal year 2022, LUMA spent \$103.5 million in technical and professional consulting and legal services, an increase of 55% relative to the \$67 million that PREPA spent in fiscal year 2021 and 125% more than the \$46 million spent by PREPA in 2020.<sup>26</sup> And this number will only increase for fiscal year 2023: LUMA has recently signed over \$100 million in contracts related to engineering and project management, including \$30 million in contracts with a company that was only created in 2019.<sup>27</sup> The government of Puerto Rico justified LUMA's privatization contract in part indicating that LUMA would come to reduce consulting contracts, and yet LUMA has come to increase costs and consultant contracts.

The privatization model has proven to be less transparent than PREPA. An arrest warrant was issued by a Puerto Rico judge against LUMA CEO last fall for failing to provide basic information on LUMA's staffing to a Puerto Rico House committee.<sup>28</sup> The results of a CAMBIO public records request to the P3 Authority show that LUMA failed to provide information, or provided only incomplete responses, to P3 requests for information regarding outage statistics, staffing and customer service.<sup>29</sup> And similar to PREPA, LUMA has not opened any opportunities for public participation regarding the future direction of the electrical system.

The privatization has not furthered the island's renewable energy goals. As noted previously, there are no renewable energy-related metrics in the contract, despite the fact that LUMA will be receiving billions of dollars in federal funds which it could, in theory, use to underwrite a massive deployment of renewable energy and storage and invest in the necessary grid upgrades to enable the integration of greater amounts of distributed renewable energy. Instead, Puerto Rico is far from meeting its 40% by 2025 renewable energy target. Indeed, as of 2021, utility-scale renewable energy was at 2.4%, with distributed solar bringing the total to 5%.<sup>30</sup>

Far from restoring the electrical system's ability to drive economic growth in Puerto Rico, the high rates and worsened service under LUMA have turned the electrical system into an even greater economic liability, driving companies out of business and contributing to decisions to leave the island.<sup>31</sup>

---

<sup>26</sup> <https://www.periodicolaperla.com/actualidad/a-costa-del-pueblo-luma-dispara-gastos-en-consultores-y-servicios-legales/>

<sup>27</sup> Based on CAMBIO analysis of contracts filed with the Puerto Rican Comptroller office, LUMA's FY 2022 [Annual Report](#), and PREPA [budget-to-actuals reports](#).

<sup>28</sup> [https://www.elvocero.com/anuncios/un-juez-ordena-el-arresto-del-presidente-de-luma-energy-y-dice-que-se-burla/article\\_99d54bd8-4223-11ec-8475-67aff5c262ef.html](https://www.elvocero.com/anuncios/un-juez-ordena-el-arresto-del-presidente-de-luma-energy-y-dice-que-se-burla/article_99d54bd8-4223-11ec-8475-67aff5c262ef.html)

<sup>29</sup> Documents available at <https://cambiopr.org/resources/?aapp-luma>

<sup>30</sup> Utility-scale renewable energy data from PREPA's December 2021 Monthly Report to the Governing Board. Distributed solar data from filings in Puerto Rico Energy Bureau Case No. NEPR-MI-2019-0006, August 15, 2022.

<sup>31</sup> [https://www.elvocero.com/economia/otros/el-aumento-de-la-luz-amenaza-al-sector-comercial/article\\_52d426ae-edcd-11ec-b405-87186b9013b1.html](https://www.elvocero.com/economia/otros/el-aumento-de-la-luz-amenaza-al-sector-comercial/article_52d426ae-edcd-11ec-b405-87186b9013b1.html),

## V. Queremos Sol provides an alternative model of electrical system transformation

CAMBIO has worked closely with community and environmental organizations, electrical system experts, and labor unions to develop an alternative pathway towards a resilient and affordable electrical system, based on public ownership. The Queremos Sol proposal calls for achieving 75% distributed renewable energy by 2035 and 100% by 2050, including an energy efficiency target of 25% by 2035. The proposal envisions the widespread deployment of rooftop solar and storage, including the deployment of small solar and battery systems for resiliency on every home on the island. This would be supplemented by distributed solar on commercial installations, closed landfills and other contaminated lands to achieve 75% by 2035.

In March 2021, CAMBIO published the results of a detailed grid modeling study, based on system data obtained from a public records request of PREPA, to analyze the feasibility of achieving 75% distributed renewable energy by 2035.<sup>32</sup> The modeling found that it is not only viable and cost effective but that assigned federal funds can accelerate implementation. Key results of the modeling include:

- Provide resiliency to 1 million homes via rooftop solar and storage installations (2.7kV PV with 12.6 kWh storage)
- The transformation would reduce fuel costs to \$430 million per year.
- The use of \$9.6 billion in federal funds to implement the transformation would reduce and stabilize electrical system costs at approximately 15 cents/kWh.
- This transformation can be undertaken without any new investment in natural gas infrastructure (in contrast to the Puerto Rico government's current plan to build a new 300 MW natural gas plant).
- CO<sub>2</sub> emissions would be reduced nearly 70%, putting Puerto Rico at the forefront of addressing climate change with urgency.
- Existing fossil fuel-based generation could be retired, starting with the AES coal plant and then the Palo Seco and Aguirre oil-burning plants. The remaining units would be used for very few hours of the year, if at all, with 75% renewable energy.
- The proposal would dramatically reduce dependence on the vulnerable south-to-north transmission system that catastrophically failed during hurricane Maria.
- The proposal would ensure that all communities would receive the resiliency benefits of distributed renewable energy.

Puerto Rican communities are rapidly moving in the direction of rooftop solar and storage, limited primarily by the high level of poverty on the island. More than 370 MW of distributed rooftop solar have been installed in Puerto Rico, with 112 MW of that amount installed just within the last year.<sup>33</sup> This rapid growth of rooftop solar is the only advance in renewable energy that has been made since Hurricane

---

[https://www.elvocero.com/actualidad/otros/aseguran-que-la-crisis-de-vivienda-en-la-isla-empeora-con-la-inflacion/article\\_8211ca7a-00ba-11ed-a9ba-9316a335edf4.html](https://www.elvocero.com/actualidad/otros/aseguran-que-la-crisis-de-vivienda-en-la-isla-empeora-con-la-inflacion/article_8211ca7a-00ba-11ed-a9ba-9316a335edf4.html)

<sup>32</sup> <https://cambiopr.org/solmastechos/>

<sup>33</sup> Puerto Rico Energy Bureau Case No. NEPR-MI-2019-0006, Anejo 2 Datos-Energía-Renovable-NEPR-MI-2019-0016, August 15, 2022.



Maria; not a single MW of utility-scale solar has been deployed in the last five years. Meanwhile, rooftop solar kept the lights on during and after Hurricane Fiona, for those households fortunate enough to have access. Directing \$1 billion in already assigned FEMA funds would allow installation of rooftop solar and storage to 100,000 households (2.7 kW systems with 12.6 kWh storage).

The Queremos Sol model proposes not only a technical transformation of the electrical system, but also a transformation of the governance model to one that is professional, transparent, democratic and accountable to the public.<sup>34</sup> This governance transformation includes the following components:

- The expiration of the LUMA contract November 30, 2022 and the transition of transmission and distribution system responsibilities to a new public entity that prioritizes the recruitment, of former PREPA employees displaced by the contract.
- A new public business model for this new entity that centers conservation, energy efficiency and the integration of distributed rooftop solar and storage.
- A Board of Directors where the majority of members are democratically elected from different sectors, rather than serving at the will of the governor.
- A requirement for consultations or referendums before the Board is able to take certain decisions including, for example, signing contracts longer than 5 years.
- Establishing a much broader public participation process for the development of Puerto Rico's Integrated Resource Plan.
- Establishing a Citizens Advisory Committee that would incorporate public participation into Energy Bureau proceedings, analyze and present evidence and testimony on energy policies, and provide public education on energy-related topics.

#### **VI. Federal funds are not being deployed to further the transition to a resilient, renewable-energy based grid**

Finally, CAMBIO is deeply concerned over the use of the billions of dollars of FEMA and HUD funds destined towards Puerto Rico's electrical system. There has been no public participation in the deployment of the FEMA funds, which total more than \$14 billion,<sup>35</sup> and no publicly available plan from PREPA or LUMA that provides a holistic explanation of how the different projects for which funding is sought will result in a reliable and resilient electrical system. What is clear is that almost none of this money is being directed towards renewable energy or storage. Indeed, the only renewable energy and/or storage projects that have been proposed for federal funding are (1) a \$35 million rooftop storage initiative by PREPA to install residential rooftop solar and storage in three of the municipalities that experienced the longest blackouts after hurricane Maria, and (2) a \$20.6 million renewable energy microgrid initiative by LUMA, and (3) a \$362.5 million grid-scale storage initiative by LUMA – representing

---

<sup>34</sup> Queremos Sol (We Want Sun): New Governance for Environmental and Energy Sustainability, October 2022. [https://www.queremossolpr.com/\\_files/ugd/3debae\\_86a32a2fb68749e085074b54b9f36244.pdf](https://www.queremossolpr.com/_files/ugd/3debae_86a32a2fb68749e085074b54b9f36244.pdf)

<sup>35</sup> This includes approximately \$12 billion in FEMA 428 and 404 funds, according to PREPA and LUMA's June 2021 Updated 10-Year Infrastructure Plan and more than \$2 billion in FEMA 406 funds estimated in PREPA's March 2021 Updated 10-Year Infrastructure Plan.

3% of the funding available.<sup>36</sup> The remainder of the FEMA funds are destined towards hardening of the transmission and distribution system in a way that appears inconsistent with the IRP. The 2020 IRP approved only \$911 million for distribution system upgrades over the next five years, while PREPA and LUMA's June 2021 Updated 10-Year Infrastructure Plan calls for LUMA to manage over \$1.5 billion in federally funded distribution projects by 2023.<sup>37</sup>

This use of the FEMA funds squanders a unique opportunity for the federal government to help Puerto Rico become a model of electrical system decarbonization and climate change adaptation and mitigation. President Biden's January 2021 Executive Order calls for a "carbon pollution-free electricity sector no later than 2035", an ambitious goal that could be realized in Puerto Rico if the federal government were willing to ensure that grid reconstruction funds were used appropriately.

There are also \$2.7 billion in HUD funds that will become available for electrical system work.<sup>38</sup> CAMBIO has publicly urged HUD to bulk purchase standardized, small-scale rooftop solar and storage systems that could meet household critical needs during a grid emergency. The use of the \$1.9 billion in HUD funds earmarked for "Electrical Power System Enhancements and Improvements" could result in the installation of approximately 140,000 systems by a combination of PREPA, municipalities and/or community organizations. This would radically transform the resiliency situation for more than 10% of households on the island, and should be done in a manner that prioritizes low-income communities that experienced the longest delays in service restoration after Hurricane Maria.<sup>39</sup>

In short rather than using the vast majority of the federal funds to rebuild a centralized system that has already catastrophically failed, CAMBIO urges that the majority of federal funds be allocated to facilitate the widespread deployment of rooftop solar and storage. This is the transformation that the people of Puerto Rico are demanding and, as noted above, those that can afford it are already "voting with their feet" by purchasing their own rooftop solar and storage systems. But with more than 44% of the population of Puerto Rico living below the federal poverty line, this alternative is out of reach for the majority of households, who are stuck with an increasingly expensive and unreliable grid. The use of federal funds to facilitate the widespread deployment of rooftop solar and storage is critical to allow low-income households, who currently are priced out of the private market for solar, to participate in the resiliency benefits of rooftop solar and storage. It would also allow installations to proceed at a lower cost, making use of economics of scale from bulk purchasing the components of residential solar and storage systems.<sup>40</sup>

---

<sup>36</sup> Puerto Rico Energy Bureau Case No. NEPR-MI-2021-0002, PREPA Motion to Inform Reallocation of FEMA 404 HMGP Funds and Request for Approval of Generation Projects, August 2, 2022.

<sup>37</sup> Puerto Rico Energy Bureau, Final Resolution and Order on the Puerto Rico Electric Power Authority's Integrated Resource Plan, August 24, 2020, paragraph 907.

<sup>38</sup> This includes \$1.9 billion of CDBG-DR funds for Electrical System Enhancements, as well as \$300 million in CDBGDR funds for community energy and water resilience installations and another \$500 million in CDBG-MIT funds for community energy and water resilience installations.

<sup>39</sup> CAMBIO comments on the Puerto Rico Department of Housing's Draft Action Plan for CDBG funds for Electrical Power System Enhancements and Improvements, November 2021.

<sup>40</sup> [https://cambiopr.org/wp-content/uploads/2022/01/CAMBIO-DER-Implementation-Roadmap-Report-01\\_22.pdf](https://cambiopr.org/wp-content/uploads/2022/01/CAMBIO-DER-Implementation-Roadmap-Report-01_22.pdf)

## **VII. Conclusion and Recommendations**

PROMESA has failed to enable the necessary electrical system transformation in Puerto Rico. The Financial Oversight and Management Board aggressively facilitated and then approved the LUMA grid privatization contract, which has been a costly disaster for the people of Puerto Rico. Service has worsened and we are no closer to PROMESA's goals of restoring the electrical system to financial stability and access to capital markets. Nor has substantial progress been made on the renewable energy transformation, which is essential for addressing climate change with urgency and for reducing and stabilizing electrical system costs. The federal government has not played the necessary role in ensuring that the billions of dollars of funds earmarked for Puerto Rico's electrical system will actually result in a more resilient and cleaner grid. Civil society organizations, including CAMBIO, have proposed the Queremos Sol alternative for a rapid transition to a decentralized electrical system, based on rooftop solar and a reformed, public governance model. This is the Plan B that Puerto Rico needs to put immediately in place.

CAMBIO presents the following recommendations:

- Congress needs to dissolve the FOMB and provide the government or Puerto Rico a dignified and viable debt restructuring process, and promptly provide the people of Puerto Rico with a mechanism to exercise its right to self-determination;
- This committee should urge the government of Puerto Rico to end the LUMA contract when it expires on Nov. 30. It should further investigate how the LUMA contract was awarded, and, in particular, the role of Quanta Services' federal lobbying in the award of the contract, as well as, the role of FOMB consultants McKinsey and Citi.
- This committee should ensure that federal funds are used to provide every household in Puerto Rico with rooftop solar and storage, prioritizing installation in low-income, vulnerable communities, consistent with climate change policy.