

PUERTO RICO ELECTRIC POWER AUTHORITY

*House Committee on Natural Resources, Subcommittee on Oversight and Investigations
Hearing on Status of and Plans for the AES Coal-Fired Power Plant in Guayama, Puerto Rico,
June 30, 2021*

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PREPA appreciates the interest that the House Committee on Natural Resources continues to show in the status of the restoration and transformation of Puerto Rico's electric grid. PREPA also appreciates the Committee's interest in PREPA's ongoing efforts to replace existing legacy fossil generating resources, including the AES Puerto Rico coal-fired generating station in Guayama, with renewable generation coupled with energy storage resources.

Under Puerto Rico law, PREPA's approved Integrated Resource Plan ("IRP") and PREPA's ongoing renewable energy generation and energy storage resource procurement process contemplate that the AES coal-fired generating station will be retired at year-end 2027, once adequate generating and storage capacity is available from other resources. PREPA and the government of Puerto Rico, as well as the Financial Oversight and Management Board for Puerto Rico ("FOMB"), together with AES officials, are working to meet this statutory deadline responsibly.

Formal Process for Renewable Energy Procurement

We are pleased to inform this Subcommittee that PREPA has already made significant progress toward the goal of securing more renewable generation and energy storage resources. The Energy Bureau has approved the process and Procurement Plan under which PREPA is soliciting commitments from developers to supply new renewable generation and energy storage resources, including targets of 3,750 MW of new renewable energy generation and 1,500 MW of new energy storage by 2025. This process is conducted through Requests for Proposals ("RFPs") which prescribe a structured, transparent and competitive approach to resource procurement. PREPA is not authorized to procure new generation or storage resources other than through the RFP process.

PREPA has recently made major strides down this path. Earlier this year, PREPA undertook a formal procurement process seeking 1,000 MW of renewable energy generation capacity and 500 MW of energy storage capacity (through Tranche 1 of 6 RFP Tranches called for under the approved IRP). Results so far look encouraging.

- On June 18, 2021 PREPA received 70 proposals in response to the first of what will be six RFP Tranches for the development of renewable generation, battery energy

- storage and Virtual Power Plant resources. A PREPA Evaluation Committee, aided by technical experts, is now reviewing the proposals to ensure that they comply with the RFP requirements and will then evaluate them on their technical merits and pricing.
- It is too soon to tell how many of these proposals will ultimately be accepted. Some will end up not being compliant with the technical requirements of the RFP. Some proponents may have offered prices that are higher than those PREPA can accept. Some proponents may not be able to provide the required financial assurances, and some may fail to provide required confirmation of site control or ability to permit their projects. Nevertheless, we view the responses we have recently received as an encouraging start to a process that will make it possible to reduce Puerto Rico's reliance on fossil fuels for electric power generation, and to eliminate the use of coal altogether by 2027. Through this process, PREPA will move the Puerto Rico electric system toward reliance on modern, efficient and clean generating and storage capacity that will ensure system resiliency, stability and sustainability.
 - It is important to note that new renewable and storage projects will not be available, at the earliest, until 24 months following contract execution. Assuming that PREPA is able to hold to its current schedule for the Tranche 1 RFP, the first renewable generation, energy storage and VPP resources resulting from this solicitation will not be in service until the fourth quarter of 2023. It should be expected that delays will occur, and so it is unlikely that many of the first Tranche projects will commence commercial operation before 2024.
 - The second RFP Tranche is to be issued on August 30, 2021, in accordance with an Energy Bureau Resolution and Order issued June 24, 2021. PREPA is hopeful that this second RFP Tranche will generate interest and participation similar to what we have seen with Tranche 1.
 - We are committed to achieving the renewable portfolio standards established by law as promptly as possible. But we view it as unlikely that enough solar, solar plus storage, standalone storage and VPP capacity will be completed and brought on-line to permit the retirement of the AES Guayama plant significantly earlier than year-end 2027. Notably, even if a proposal to replace the AES Guayama coal-fired generating plant with new renewable plus energy storage facilities were to emerge, that proposal would have to be presented through, and selected in accordance with, the Energy Bureau-approved RFP process I have just described.

Contributions of the AES Plant – Reliability, Grid Stability and Low Cost of Energy

In the meantime, the AES Puerto Rico coal-fired generating facility in Guayama continues to be among the most reliable sources of generation in Puerto Rico. The Guayama plant has a maximum capacity of 454 MW, or around one-fifth of PREPA's maximum capacity requirement on most days. It has been highly reliable over its history, in most years achieving a capacity factor of over 85 percent. And it is a low-cost producer: energy delivered from the Guayama plant is the lowest cost source of baseload energy available to PREPA.

The PREPA-AES Power Purchase and Operating Agreement will expire at the end of 2027. Puerto Rico Act 17-2019 prohibits the use of coal for power generation in Puerto Rico after January 1, 2028. In its August 24, 2020 Resolution and Order addressing PREPA's IRP, the Puerto Rico Energy Bureau approved PREPA's plans for the continued operation and year-end 2027 retirement of the AES Guayama plant. So the scheduled 2027 expiration of the PREPA-AES contract, the Energy Bureau's order addressing PREPA's generating resource planning and Puerto Rico law are all in alignment.

Closing the AES Guayama plant before its scheduled retirement at year end 2027 would present a number of serious challenges for PREPA, Puerto Rico's electric system and electricity consumers. These include generation capacity constraints, electric system limitations, production cost impacts and legal limitations.

- *Generation Constraints* – Currently PREPA does not have available adequate baseload generating resources to permit the early retirement of the AES coal plant without experiencing a baseload capacity shortfall. The AES plant is essential to meet baseload demand during most months of the year given the current state of the PREPA generating fleet. It is the workhorse of Puerto Rico power system, running around the clock for the majority of the year. Even with the addition of renewable generating and storage resources as contemplated by PREPA's approved Integrated Resource Plan over the next five years, the AES Guayama plant's capacity will continue to be needed until very close to the 2027 expiration of the PREPA-AES contract. Retiring the AES plant without an equally reliable combination of generators and storage resources capable of generating electricity around the clock would be catastrophic – regularly leaving more people of Puerto Rico without power for longer. The Energy Bureau has recognized this in approving PREPA's proposal to maintain the Guayama plant in operation for the balance of the contract term.
- *System Limitations* – The AES plant provides an important source of reliability and system resiliency to the PREPA grid. Its operation is essential to the provision of voltage support that is key to the reliability of the PREPA high voltage transmission system. Historically, the AES plant has been a reliable source of energy and capacity

even during and immediately following weather events. Retiring the AES plant early would increase the vulnerability of the PREPA grid to natural disasters (potentially contributing to worse natural disaster outcomes than seen in the past), increased frequency of service interruptions and potential loss of other baseload generating units. It will take at least five years for PREPA and the T&D system operator, LUMA Energy, to add alternative sources of generating capacity and transmission system reinforcements that would reduce this vulnerability; in the meantime, the AES plant remains a vital resource for Puerto Rico.

- *Production Cost Impacts* – The AES plant currently is the lowest cost source of electric energy available in Puerto Rico. PREPA pays 2-3 cents per kilowatt hour less for each marginal kilowatt hour of energy produced by the AES plant than what appears to be the average per kilowatt hour price proposed by solar photovoltaic generator developers in PREPA’s Tranche 1 renewables RFP. Multiple electric system operations modeling runs performed in support of the approved IRP show, as the Energy Bureau has found, that the early retirement of the AES plant would substantially increase the costs of energy for PREPA customers.
- *Legal Limitations* – The existing contract between AES and PREPA provides that the contract term shall run through the end of 2027. Terminating the contract before its expiration would be a breach of the contract and would give AES a basis for demanding compensation for that breach from PREPA. Payment of this compensation would increase costs PREPA would have to recover from its customers.
- *The Most Prudent Path Forward* – For all these reasons, PREPA and its regulator have concluded that the course of action that is in the best interest of Puerto Rico electricity consumers is for PREPA to maintain the AES Guayama plant in operation and to take advantage of its low energy costs, system resiliency benefits and high levels of reliability through 2027, while at the same time standing up renewable generation, storage and transmission system improvements to protect system reliability, resiliency, sustainability and consumers’ pocketbooks. Alternative courses of action would leave PREPA short of required baseload capacity, would adversely affect grid reliability and would increase consumer costs.

Energy Sector Transformation and the AES Plant

No less important, and a key policy and economic priority for Puerto Rico and PREPA, is managing the historic and dramatic transformation of the island’s energy infrastructure as called for under local law and the fiscal plan certified by the FOMB. Together with the Governor and the FOMB, PREPA is working hard to restructure its debt, advance its privatization initiatives

and exit from bankruptcy. Our current situation presents significant financial challenges and limitations that come with bankruptcy. Therefore, ensuring a stable power generation base, achieving the lowest possible cost to consumers, and successfully integrating substantial renewable and battery resources – while reconstructing the island’s T&D grid (which is beginning Q3 2021 under LUMA’s leadership) – is essential and no small challenge. Early closure of the AES plant would only add to the already considerable challenges PREPA faces.

Under PROMESA, any contract with an energy resource developer must be submitted to, and approved by, the FOMB. PREPA is therefore not in a position under the governing laws, including those imposed by Congress, simply to agree to any proposal that would result in the retirement and replacement of the AES Guayama plant. In order to pursue any such proposal, PREPA would have to seek and secure an Energy Bureau order modifying the approved Integrated Resource Plan, an Energy Bureau order approving the manner in which the replacement resource proposal is to be procured, and an FOMB determination that the replacement resource proposal, if implemented, would be consistent with the then-current PREPA Fiscal Plan. If experience is any guide, the FOMB will not approve any AES Guayama plant replacement proposal that increases costs to electricity consumers.

Environmental Concerns

PREPA is nonetheless sensitive to the environmental impacts associated with operation of the Guayama coal-fired generating facility. PREPA is aware of concerns regarding coal ash disposal, fugitive emissions from ash piles and coal piles and air emissions associated with the facility. AES is subject to a variety of environmental laws and other requirements relating to its handling of coal and coal ash, impacts of its operations on groundwater and impacts of the combustion of coal on ambient air quality. PREPA expects that AES complies with, and will continue to comply with, those laws, as the PREPA-AES power purchase and operating agreement requires. Concerns regarding the AES plant’s compliance with applicable laws and permit conditions should be directed to AES.

PREPA will continue to move as quickly as possible to secure agreements that will result in the addition of renewable generation and energy storage resources to the Puerto Rico electric grid. It will do all that it can to achieve the ambitious renewable portfolio standards established by Puerto Rico law. But even as it succeeds in this effort, it will continue to require the baseload capacity and low-cost energy that the AES Guayama plant provides until very close to the scheduled retirement of that plant at year end 2027. PREPA sees little chance that it would be able to procure and developers would be able to deliver the amounts of renewable generation capacity and, crucially, energy storage capacity that would be necessary to replace the AES Guayama plant significantly earlier than early 2025 under ideal circumstances. And even if quantities of renewable and storage capacity roughly equivalent to the AES plant’s capacity were

to be available in that time frame, a better, environmentally conscious course for consumers would be for PREPA to retire older, less efficient and more costly oil-fired generating capacity first.

Conclusion

In conclusion, I want stress that in compliance with applicable laws and regulations, PREPA is embarking on an aggressive path to transform the Puerto Rico electric system to be more reliable, resilient, cleaner, affordable, and more customer-centric.

Thank you for the opportunity to appear before you today.