NEPR

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GOVERNMENT OF PUERTO RICO
PUBLIC SERVICE REGULATORY BOARD
PUERTO RICO ENERGY BUREAU

IN RE: **REQUEST FOR PROPOSALS FOR TEMPORARY EMERGENCY GENERATION**	CASE NO.: NEPR-AP-2020-0001 SUBJECT: Bench Order Entered on April 30, 2020.

MOTION IN COMPLIANCE WITH BENCH ORDER ENTERED ON APRIL 30, 2020

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

COMES NOW the Puerto Rico Electric Power Authority through the undersigned legal representation and respectfully sets forth and prays as follows:

1. On April 30, 2020, several Puerto Rico Electric Power Authority (PREPA)'s officers appeared at a Technical Conference held via telephone conference before the Energy Bureau of the Public Service Regulatory Board (the "Energy Bureau"). During the Technical Conference, the Energy Bureau questioned PREPA's officers on the status of the repair of the Unit 5 Costa Sur Plant. Also, the Energy Bureau directed PREPA to submit several documents to supplement the oral testimony provided during the Technical Conference (the "Bench Order").

2. In compliance with the Bench Order, PREPA herein submits the following information:

a. Mr. Arturo Delíz, Director of the Disaster Funds Management Office, submits that the following are the communications in his possession between FEMA and PREPA, or its representative, the Central Office of Recovery, Reconstruction and Resiliency (COR3) related to the repair of the Unit 5 Costa Sur Plant:

i. Letter from COR3 to FEMA related to FEMA-4473-DR-PR dated March 2, 2020.

ii. Letter from FEMA to COR3 related to FEMA-4473-DR-PR dated March 13, 2020.

iii. Letter from PREPA to COR3 related to FEMA-4473-DR-PR dated March 28, 2020.

iv. Letter from COR3 to FEMA related to FEMA-447-DR-PR dated March 31, 2020.

v. Letter from FEMA to COR3 related to FEMA-4473-DR-PR dated April 16, 2020.

vi. Letter from COR3 to FEMA related to FEMA-4473-DR-PR dated April 23, 2020.

All the communications listed above are attached to this motion as Exhibit A.

b. Eng. Efran Paredes, Director of Planning and Environmental Protection, submits that the following are the communications in his possession between the US Environmental Protection Agency (EPA) and PREPA related to PREPA's fleet compliance with environmental standards and regulations:

i. *Tolling Agreement Between the United States of America and the Puerto Rico Electric Power Authority for Claims Arising Under the Clean Air Act* dated March 16, 2020.

ii. Letter dated January 14, 2020 in which PREPA requests EPA a no-action assurance extension.

iii. No-Action Assurance granted by EPA to PREPA for Generation Units Subject to MATS dated February 13, 2020.

iv. No Action Assurance granted by EPA to PREPA for Fuel Consumption dated January 31, 2020.

v. No Action Assurance granted by EPA to PREPA for Internal Combustion Engines dated January 31, 2020.

vi. Letter dated April 29, 2020 in which PREPA requests EPA a no-action assurance extension.

All the communications listed above are attached to this motion as Exhibit B.

c. Mr. Sammy L. Rodríguez, Director of the Risk Management Office, submits that the following letters are the communications in his possession between PREPA and the insurance companies related to the insurance claims made by PREPA for damages to the Costa Sur Plan Unit 5 and the emergency generation lease.

i. Letter from RTS International Loss Adjusters to PREPA dated March 3, 2020.

ii. Report from Lloyd Warwick International to OIL Insurance Limited LTD dated March 20, 2020.

iii. Letters from JS Held to RTS International Loss Adjusters dated March 25, 2020.

iv. Letter from RTS to PREPA dated April 28, 2020 and attachments.

v. Letter from PREPA to RTS International Loss Adjusters dated May 4, 2020.

vi. Letter from PREPA to RTS International Loss Adjusters dated May 6, 2020.

All the communications listed above are attached to this motion as Exhibit C.

d. Eng. Gary Soto, Director of System Operations, submits the following information:

i. Update of the February 2020 graph indicating weekly generation and load for the remainder of the year. Exhibit D.

ii. List of units that PREPA uses on a regular basis for spinning and non-spinning reserve requirements. Exhibit E.

iii. Hourly generation reports for all days from March 1, 2020 through present day. Exhibit F.

WHEREFORE, PREPA requests the Energy Bureau to note PREPA's compliance with the Bench Order.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 7th day of May 2020.

/s Katiuska Bolaños
Katiuska Bolaños
kbolanos@diazvaz.law
TSPR 18,888

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CERTIFICATE OF SERVICE

It is hereby certified that, on this same date I have filed the above motion using the Energy Bureau's Electronic Filing System, at the following address: http://radicacion.energia.pr.gov and that a courtesy copy of the filing was sent via e-mail to: rstgo2@gmail.com; rolando@bufete-emmanuelli.com; jessica@bufete-emmanuelli.com; notificaciones@bufete-emmanuelli.com; pedrosaade5@gmail.com; larroyo@earthjustice.org; jluebkemann@earthjustice.org; [1] rmurthy@earthjustice.org. [2]

In San Juan, Puerto Rico, this 7th day of May 2020.

s/ Katiuska Bolaños
Katiuska Bolaños

[1] Counsel has not file an application to appear *pro hac vice*.
[2] *Id.*

Exhibit A

CN 078-04495
Rev. 11/17

GOVERNMENT OF PUERTO RICO
Puerto Rico Electric Power Authority

March 2, 2020

Ottmar J. Chávez
Executive Director
Central Office for Recovery, Reconstruction and Resilience COR3
Governor's Authorized Representative
GFR Building #50 Carr. 165
Parque Industrial Buchanan
Guaynabo, PR 00968-8024

Dear Mr. Chávez:

PREPA'S Request for Temporary Generation Following Disaster 4473

Overview

On January 6, 2020, a magnitude 5.8 earthquake struck the southwest region of Puerto Rico causing considerable damage to homes and other private and public structures as well as a partial electric power blackout leaving over 327,000 citizens without power. On January 7, 2020, a magnitude 6.4 earthquake, Puerto Rico's most destructive quake in a century, caused major damage to private and public structures and infrastructure, including structural and mechanical damage to Puerto Rico Electric Power Authorities (PREPA) Costa Sur power plant. Costa Sur, a 820 MW power plant provides over 26% of the electric power on the island. The island suffered a complete electric power blackout as a result of the earthquake and the Costa Sur power plant failure. On January 11, 2020, a magnitude 5.9 aftershock once again rattled Puerto Rico's southwestern coast exacerbating previous damages to the plant.

Damages and Inspections

A series of surface evaluations performed by PREPA and contracted engineering firms revealed significant damages to critical generation components and surrounding structural areas that makes the facility unsound and not feasible to be operated. Since late January 2020, there have been more than 100 earthquakes or aftershocks of magnitude 3 or higher, which have continued to deteriorate and exacerbate damages to the Costa Sur Power Plant all while exposing employees to significant safety risks.

"We are an equal opportunity employer and do not discriminate on the basis of race, color, gender, age, national or social origin, social status, political ideas or affiliation, religion; for being or perceived to be a victim of domestic violence, sexual aggression or harassment, regardless of marital status, sexual orientation, gender identity or immigration status; for physical or mental disability, for veteran status or genetic information."

The Occupational Safety and Health Administration (OSHA) performed an onsite intervention in which it was determined, as exhibited in its letter dated January 12th 2020, that Costa Sur was not suitable as a working environment and required PREPA to evacuate all the plant's employees (Attachment A – OSHA Letter). It was therefore, that PREPA's management completed a series of safety inspections, through independent contractors, that outlined several immediate repairs that need to be completed before further inspections, damage assessments, and employee access could be reinitiated. Report included herein as Attachment B, formally advises management of immediate repairs that should be completed within units 3, 4, 5, & 6 prior to permitting more extensive personnel access to the areas. Damages identified and recommended repairs addressed structural stabilization concerns within the units that pose significant safety risk to any individual present in the area. Areas deemed safe for access continued their damage assessment and inspection evaluations, refer to PREPA's Action Plan Report in Attachment C.

Furthermore, preliminary damage assessments and visual surface level evaluations performed before the Plant's closure, revealed the following:
Preliminary Damage Assessment:

Boiler water system – Fallen tanks, decoupled pipes, and damaged bases. Visual inspection shows cracks in the floor that cross the base of the tanks. Deformation in some tanks by possible cracks consisting of visual water leaks along with an eroded and broken base. Deformation in tank walls, cracks within the base and broken anchor bolts.

Boiler – Approximately 90% of the structural bracing members and gussets plates that provide support to the engine rooms and boiler require replacement due to buckling. Visual damages presented by the refractory insulation material in 90% of its entirety. Visual cracks in Boiler's concrete bases. Concrete secondary containment was broken at piping sleeve section due to movement or vibration of piping.

Turbines - Diaphragms of the one of the units broke and caused the refractory material to detach from the duct.

Switch Gear room and electrical panel - masonry wall south switchgear rooms are compromised; the rest of the panels were observed to be without surface damage.

Transformers - Common damage are within structures. Transformers derailed out of their bases showing oil leaks, broken radiators and impaired railing system. Differential settlement observed by visual cracks in masonry walls.

Natural Gas Piping Storage - Piping has displacement, bending of beam, cracks and settlement on the floor-pavement around the station (multiple areas) building columns base plates-footing anchor bolts up lifted and damaged.

Due to the intricate nature of all the equipment components of Costa Sur a comprehensive damage assessment is scheduled to initiate in the following weeks with the objective to provide a consolidated report containing all assessment activities and findings to be used as the basis for the decision of how to proceed with providing the lost 820MW of power generation at Costa Sur. Expected completion date of such report is 12 weeks after initiation (Attachment D – Sargent & Lundy Proposal).

Nevertheless, through the inspections initiated in condenser tanks 5 & 6 (areas marked safe for access), engineers have communicated preliminary to PREPA management that damages suffered by the event to the tanks require that those be demolished and rebuilt along with the construction of ancillary walls to prevent further seismic damages. Tanks are critical to the operation of the generation units and are expected be repaired with an estimated minimum 6 month scheduled. Such estimate does not consider the evaluation of load foundation pillars that will be examined once the demolition of tanks is initiated, thus possibly extending the initial estimated repairs beyond the 6-month base line. Refer to Attachment E – HGE Tank Structural Analysis proposal. Formal engineering report by contractor is expected to be received mid-march.

Imminent Threat

PREPA, as a State Corporation, has the fiducial responsibility to provide power to critical infrastructure across the island. Its Organic Act (Puerto Rico Electric Power Authority Enabling Act, Act No. 83 of May 2, 1941, as amended) tasks PREPA to provide electric power and contribute to the general welfare and sustainability of the development of Puerto Rico. PREPA is currently the only entity that provides electric service to all of Puerto Rico's citizens and business including all private and public critical facilities. Critical facilities include but are not limited to13 Police Regions, 63 Hospitals, 91 Fire Stations, 51 Waste Water Plants, 1,800 Sewage Pump Stations, 112 Potable Water Plants, 33 State Prisons, 10 Airports, 8 Ports, 2,224 K-12 Schools and 152 Higher Learning Institutions.
Moreover, providing power to access and functional needs citizens including169,000 disabled people in Puerto Rico and more than 850 licensed elderly homes across the island.

The loss of Costa Sur's 820 MW generation provoked a forecasted critical base energy deficiency of 634MW (345MW Min - 908MW Max) propelling PREPA to critical reserve levels and replacing "base" energy with sources of power not designed for this intended use, i.e. "peakers", refer to attachment H. The absence of base energy directly exposes PREPA to a shortage of reserve capacity, shortage of Primary and Secondary frequency regulation, extensive use of less efficient generating units, increasing operating costs,

reduced power system inertia, dynamic and transient stability margins, and alteration of PREPA's maintenance schedules.

Generation capacity at the Costa Sur plant has been lost and at present, PREPA is using nine peaking units as a stopgap measure to replace 26% total of Puerto Rico's electrical generation capacity that was lost due to the Costa Sur plant damage directly caused by the earthquakes. PREPA has no remaining usable equipment or methods to produce energy that are not currently being used as emergency measures. Furthermore, three of these base generators, that produce 150 MW, are not EPA compliant and the emissions waiver for these units ends April 30, 2020. After this date, the generators will be taken off line due to this Federal requirement putting a further burden onto Puerto Rico's power production, refer to Attachment G, EPA No Action Assurance letter.

It is logical that severe energy load sheds expose critical facilities (i.e. Hospitals, water facilities, ports and other essential services) as well as citizens whose lives depend on energy service to outages or a total system blackout threatening overall public health and safety.

Even with all emergency measures implemented, base generation capacity is still running at critical levels leaving PREPA to perform load sheds, experiencing two at around 20MW within the last month leaving a total of 20,000 citizens without power (Attachment F – PREPA Informe Mensal de Eventos Importantes). Load sheds are expected to become more recurring and severe considering that coming months reflects the Authority's peak demands exposing citizens to an imminent threat.

A critical base energy deficiency replaced by "peaking units" for an extended period of time will result in possible total system blackout / failure which in turn results the immediate threat to the lives, public health and safety to the people of Puerto Rico and its improved properties.

Moreover, temporary repairs due to the aftermath of Maria required PREPA to perform several deviations to lines in which identification of critical facilities may have been impaired, thus limiting PREPA's ability to reduce load sheds to essential services. Within PREPA's permanent work formulation the entity is assuring that significant mitigation measures are addressed to critical lines and that all the critical facilities and properly identified and incorporated.

Emergency Temporary Measures proposed

A temporary Emergency Protective measure is currently being pursued by PREPA by publishing a Request for Proposal that will lease or buy generators to meet that lost capacity at an approximate lease and fuel cost of $26 Million/month and $45 Million/month, respectively. The estimated total cost of generation of 500MW will be $71 Million a month to lease the equipment and operate such. PREPA estimates that 500 MW

should satisfy the deficiency of reliable power in PREPA's system to avoid load sheds that would adversely affect the lives of millions and may jeopardize the Island's economy stability PREPA is seeking temporary generation through the leasing/purchasing of

generation base units in order to eliminate or lessen the imminent threat that will certainly happen in the following months of high demand while PREPA performs a formal damage inspection and repairs, ultimately made to reinstate the damaged facility back to its full capacity and functionality. Such units will temporarily replace the loss base generation capacity of Costa Sur Power Plant, lessening the imminent threat of load shed and possible blackouts in the island.

PREPA is working to procure contracts, through an expedited competitive process (i.e., RFP), approved by its Board of Directors Resolution No. 4759, Attachment I, in accordance with PREPA's procurement policies and Title 2 C.F.R 200.317, in order to lease temporary/mobile generation to compensate for the loss of Costa Sur and ensure adequate capacity before the summer, the Island's high-demand season. This is the only option available to eliminate the imminent threat to life, health, safety and property that the foreseeable blackouts represent.

Another aspect worth considering is the geographical situation of Puerto Rico. Obviously, there is no option to obtain power from neighbor states or cities. PREPA has no other feasible option that leasing or buying power generators to replace generation capacity lost due to damages caused by the earthquakes. Knowing market availability limitations for these types of equipment, PREPA in its RFP allowed proposers to present offers to sell or lease the equipment. PREPA, after receiving offers from bidders, will definitely consider the best options and more economically sound to maximize both local and federal funds. A benefit cost analysis will be performed to ultimately maximize the use of funds and limit excess cost while still achieving the desired outcome.

Ultimately, the purpose of the RFP is to seek reputable and experienced firms (contractors) that can provide a timely solution to lease, install, operate and maintain the power generation system equipment necessary to bridge the gap caused by the loss of the 820 MW Costa Sur power plant in Guayanilla.

Financial Analysis

Regardless of FEMA's determination, PREPA definitely needs to lease or purchase these generators to prevent the damages that will be suffered in the following two months. However, PREPA is currently under a bankruptcy case and its operational liquidity is very low. Considering the exigent circumstances PREPA is facing, management will prioritize and reallocate budgetary items to fund these emergency measures, albeit consuming its working capital within a matter of months. Cost alternatives may only be feasible if external financial funds are available or programmed expenses budgets are

diverted to pay for the earthquake-caused emergency generation expenses, subject to the approval of its regulating entities. This is evidence that the measure that needs to be taken are way beyond state capacity.

It is important to note that even though PREPA is a revenue generating entity and ultimately recoups its cost from its clients, PREPA is not free to implement changes in its rates to recover costs, including extraordinary costs required to responds to an emergency, without having sought and obtained authorization from various regulatory bodies.

PREPA, as a comprehensively regulated entity, is not free to implement rate changes without first having received formal approval from its regulators, the Puerto Rico Energy Bureau "PREB". Such changes must, in addition, be consistent with the Fiscal Plan approved by the Financial Oversight Board for Puerto Rico (the "FOMB") created under the Puerto Rico Oversight, Management and Economic Stability Act of 2016, 48 U.S.C. 2101 et seq. ("PROMESA").

It has historically taken a great deal of time – measured in years- for PREPA to obtain certainty regarding its ability to recover the cost it has incurred in vesting in its infrastructure and in providing services. Moreover, PREPA extraordinary expenses incurred by Hurricane Maria were examined by the PREB to ensure that no costs associated with federal reimbursements were passed on to the clients.

The process for obtaining authorization to increase rates is demanding in terms of the information required to support a rate change filing, and in terms of time required to satisfy procedural requirements imposed by law, to complete required exchanges of information, to conduct the legally required hearings, and to obtain and Energy Bureau determination on its proposal.

Insurance Coverage

PREPA's insurance policy covers the costs associated in property damages due to the loss of Costa Sur power plant and the replacement, permanent and/or temporary, of its generation capacity. The insurance policy provides coverage for property damages, business interruption, and extra expenses (such as a more expensive fuel burnt) caused by unexpected events like earthquakes up to $300 million, with its related deductible, all considering that PREPA takes all necessary measures to mitigate the losses expeditiously. It is uncertain if PREPA will receive insurance proceeds in advance.

Moreover, PREPA is a shareholder in a mutual type insurance company (Oil Insurance Limited) that provides reasonable and effective insurance coverage up to $250 million. However, coverage is limited to property damages in excess of $300 million claimed within the commercial property insurance referenced above. If FEMA ultimately finds cost

measures incurred to be eligible and awards funding to reimburse such, FEMA will reduce funding by the anticipated or actual amount of insurance proceeds received to avoid a duplication of benefits excluding amounts relating to associated deductibles.

Insurance claim efforts are well underway to properly assess damages and losses covered by the insurance and ultimately identify uninsured losses eligible for FEMA reimbursement.

Eligibility Analysis

In terms of regulatory boundaries, eligibility of works under FEMA Public Assistance program are set based on "Robert T. Stafford Disaster Relief and Emergency Assistance Act", ("Stafford Act"), as the Congressional Act which authorizes all disaster recovery action by Federal Emergency Management Agency. Under Stafford Act authority, FEMA promulgated implementing regulations in Title 44 C.F.R. Part 206, and developed the Public Assistance Program and Policy Guide ("PAPPG") V3.1.

Regarding sections applicable to this request, PAPPG Chapter IV- B says:

Emergency protective measures conducted before, during, and after an incident are eligible if the measures:

a- Eliminate or lessen immediate threats to lives, public health, or safety; OR

b- Eliminate or lessen immediate threats of significant additional damage to improved public or private property in a cost-effective manner

Among the emergency protective measures that are considered eligible to eliminate or lessen immediate threats, the list specifically includes the use or lease of temporary generators for facilities that provide essential community services. Obviously, and as established in data provided before, PREPA is the only agency that provides energy to all territory of Puerto Rico. As it is known, power outages will affect continuity of public services, hospital care, darkness will provoke increase in crime, basic services to citizens will be interrupted and therefore enormous economic losses.

Also, FEMA is authorized to provide PA funding for Emergency Work, especially where there an immediate threat. FEMA policy states:
"Immediate threat" is the threat of additional damage or destruction from an incident that can reasonably be expected to occur within 5 years of the declared incident.

An immediate threat means imminent danger from an incident that can **reasonably be expected to occur within 5 years**. In this case, power outages will certainly occur in the following two (2) months. Therefore, the situation for what PREPA is requesting Cat B PW approval certainly fulfills "immediate threat" requirements.

The procurement of generation assets can be considered eligible under the provision for temporary relocation of essential services (PAPPG pages 76-80), under FEMA's Public Assistance Program, as an emergency protective measure. All of the conditions of eligibility for temporary relocation are or will be met for the emergency protective measures associated with temporary generation, including but not limited to;

- The disaster-damaged facility operated an eligible essential service as a public utility,
- Damage to Costa Sur is to the extent that it cannot be occupied safely and restoration cannot be completed without suspending operations of the facility for an unacceptable period of time,
- The temporary facilities will provide up to the pre-disaster capacity of the disaster-damaged facilities, and exist for the same function as the disaster-damaged facility, which is to provide power generation for the Puerto Rico electric power grid and system,

Later, PAPPG V3.1 sets in page 60 the guidelines for "Expenses Related to Operating a Facility or Providing a Service". Specifically, PAPPG says that:

> The Applicant may incur additional costs related to operating a facility as a result of the incident because of an increased demand for the services the facility provides.
>
> These additional costs are only eligible if:
>
> a- The services are specifically related to **eligible emergency actions to save lives or protect public health and safety or improved property**;
> b- The costs are for a **limited period of time** based on the exigency of the circumstances; and
> c- The Applicant tracks and documents the additional costs.

Potentially eligible increased operating costs include, **but are not limited to**, costs for:

a- **Generators** at a hospital or police station
b- Water testing and treatment supplies in the immediate aftermath of the incident to counter a specific threat
c- **Fuel** for increased use of a pumping station
d- EOC facility costs (e.g., utilities)

Examples of ineligible operating costs include, but are not limited to, costs for:

a- Obtaining electrical power from an alternate source

Now, when we look for a definition for the term "power alternate source", Dr. Ann Brown from Department of Mechanical Engineering, The Queen's University of Belfast, Belfast, N. Ireland, U.K., defines "Alternate Energy Sources" as "sources of energy that provide alternatives to conventional fossil". Some examples given by Dr. Ann Brown are: Wind Power, Water Power, Solar Energy, Geothermal Energy and Bioenergy. This definition provided by Dr. Ann Brown is supported by World Energy Council.

It shall be noted that PAPPG does not define at all the term "alternate source". However, it is an industry standard term that power alternate sources do not refer to power generators because in the examples list of increased costs eligible for reimbursement, the PAPPG does mention "Generators" at hospitals or police stations. The term alternate source of power deemed ineligible under PAPPG obviously refer to sources of energy that do not use fossil fuels or nuclear energy. This is clearly not the case in PREPA's request. PREPA's request is to obtain power generators leasing or purchase price reimbursement as well as fossil fuels costs reimbursement.

Finally, even though the term "limited time period" is not defined in PAPPG, we can certainly interpret it as the six (6) month period allowed for emergency protective measures or until the imminent threat the measure addresses ceases to exit. That limited period of time will be enough for PREPA to take measures to prevent damages that power outages bring. Accordingly, this request is definitely for a limited period of time until PREPA is able to complete adequate assessments and inspections, by certified engineering entities, that can establish a final work plan to repair and bring Costa Sur plan back to operation. Also, the request PREPA is presenting is to fulfill the high demand season forthcoming that will commence in next May and extend until end of next October.

Conclusion and Request

Therefore, due to Puerto Rico's current emergency situation and the foreseeable and imminent threats expressed before, PREPA is requesting a Category B Project Worksheet approval to deem eligible the costs associated with the emergency protective measures for emergency generation, including leasing, installing, operating and maintain power generation equipment necessary to substitute the 820 MW power generation lost due to Costa Sur power plant damages caused by the earthquakes. This request is eligible under FEMA's statutory, regulatory, and policy guidelines as addressed above. As an alternative, PREPA's request is that FEMA assists/or provide them with temporary equipment (generators) via direct federal assistance to prevent further energy interruption to the affected areas.

Sincerely,

Arturo Deliz Vélez
DFMO Administrator

CC: Alex Amparo – Federal Emergency Management Agency
Federal Coordinating Officer

Attachment A

GOBIERNO DE PUERTO RICO
DEPARTAMENTO DEL TRABAJO Y
RECURSOS HUMANOS

13 de enero de 2020

Hon. Briseida Torres Reyes
Secretaria

Luis E. Pardo Rosado
Secretario Auxiliar

Eric C. Vega Guzmán, MSOSH, CSHM
Director, Oficina Área San Juan

INFORME DE INTERVENCIÓN A LA CENTRAL COSTA SUR DE AEE

En el día de ayer, 12 de enero de 2020, se nos encomendó realizar una inspección a la Central Costa Sur de la Autoridad de Energía Eléctrica. Llegamos a la 1:00 p.m.

Representantes de PR OSHA: Sr. Eric C. Vega Guzmán, Director Área de San Juan
Sr. Melvin Pérez, Especialista en Seguridad y Salud

Representante del patrono:
Sr. Ángel Pérez, Jefe de Operaciones
Sr. Ramón Aguilar, Jefe de la Central
Sr. William Ríos Mera, Generación
Sr. Luis Felipe Torres, FSO
Sr. Héctor Tirado, FSO
Sr. Arturo Deliz, Administración DFMO
Sra. Mervet Rodríguez, Especialista de Proyectos
Sra. Shehaly Rosado, Jefa de Seguridad y Salud
Sra. Karilyn Salas, Supervisora de Seguridad y Salud
Sra. Diabel Colón, Oficial de Seguridad
Lcdo. Jorge Vega, Especialista de Proyectos

PROPÓSITO:

Realizar una intervención en la Planta Costa Sur para inspeccionar el Cuarto Eléctrico, el Taller de Mecánica General y el Almacén. Esto, a petición del patrono en su interés de tener más información para determinar si permitían el acceso a los empleados y el trabajo. Durante el recorrido observamos los daños ocurridos por los continuos temblores de tierra y riesgos de seguridad y salud ocupacionales.

POR MENORES DE LA VISITA:

Durante la visita nos acompañaron todos los representantes del patrono y se inspeccionaron las áreas establecidas de la central, en donde se observó lo siguiente:

Cuarto Eléctrico - Riesgos

- Panel eléctrico obstruido por armarios
- Paneles acústicos en el suelo como consecuencia de temblores
- Paneles eléctricos de distribución de potencia DC sin tapas
- Puerta de salida de emergencia obstruida por casilleros
- Cable eléctrico casero para energizar equipos de cocina en el salón comedor
- Panel de control de incendios deshabilitado – poner a funcionar
- Cuarto de controles en desorden y sucio
- "Multiplugs" conectados en cadena para energizar equipos en cuarto de comunicación
- Los conductos de aire acondicionado requieren limpieza
- Escalera de acceso al sótano no tiene pasamanos
- Habilitar baños

Taller de mecánica general - Riesgos

- Cilindros de acetileno y oxígeno almacenados juntos en un carrito por tiempo mayor a 24 horas
- Hacer una inspección anual a las grúas de techo
- Las lámparas de techo requieren estar sujetas de mejor forma
- Cable eléctrico sin clavija de "ground" en una esmeriladora
- Paneles eléctricos obstruidos por una máquina y materiales
- Ninguna de las esmeriladoras tenía los dispositivos de seguridad
- Receptáculos eléctricos sin tapas en las paredes
- Cilindros de gas abandonados en pasillo trasero del taller
- Habilitar estaciones de lavado de ojos y duchas de emergencia, realizarles inspecciones semanales
- Taladros sin resguardos de seguridad

Almacén 059 – Riesgos

- Pared derecha de la entrada tiene grietas – realizar un estudio estructural
- Extensión casera con caja de metal (4x2) como sustituto de cablería permanente
- Paredes con grietas en cuarto de llaves y comedor
- Eliminar cajas sobre anaqueles en el almacén anexo.
- Falta una tabla de capellada en el mezanine
- Cables flexibles usados como sustitutos de cables permanentes en cajas de interruptores de encender y apagar luces interiores

Impresión general de las áreas

- El área continúa temblando (réplicas), por lo que las estructuras y los equipos se podrían ver más afectados.
- Los riesgos observados son los comunes hallados en un lugar de trabajo que no tiene inspecciones de seguridad y salud ocupacional.

Recomendación de PR OSHA

Si el patrono decide poner las áreas evaluadas en funcionamiento, debe:

- Enviar copia de los informes de inspección realizados por empresas contratadas al Sr. Luis Pardo, Secretario Auxiliar de PR OSHA.
- Corregir los riesgos hallados en cada área de trabajo.
- El plan de emergencia o desalojo debe revisarse conforme vayan surgiendo eventos adicionales, de manera que se pueda ajustar a las situaciones que encuentren.
- Tener una restricción completa de la entrada a las áreas afectadas y evaluadas por PR OSHA según informe anterior.
- Minimizar al máximo la entrada de personal de AEE a las instalaciones.
- Cada empleado deberá asistir con el uniforme completo y con su equipo de seguridad.
- Preparar un calendario por día que incluya los empleados de la AEE y los contratistas que trabajarán, así como los trabajos que se realizarán.
- Impedir el acceso a personas sin equipo de seguridad.
- Proveer adiestramiento a los empleados sobre desalojo de emergencia
- Proveer adiestramiento a los empleados sobre lockout/tagout para las máquinas en el taller de mecánica.
- Realizar diariamente *safety meetings*.
- El personal gerencial tiene que corregir riesgos identificados por los oficiales de seguridad y salud internos en un tiempo mínimo.
- Los Oficiales de Seguridad del patrono tienen la autoridad de detener cualquier trabajo que presente riesgo.
- Ampliar el área acordonada del edificio de administración y coordinar su demolición.

Nota: La AEE, como patrono, se reserva el derecho de poner en funcionamiento las unidades 5 y 6 y el acceso al área para el control de agua cruda.

El presente informe no releva a PR OSHA de realizar inspecciones de cumplimiento conforme a las disposiciones de la Ley 16 de 5 de agosto de 1975, Ley de Seguridad y Salud en el Trabajo.

Anejo Fotos

Puerto Rico Electric Power Authority

South Coast Plant Units 3, 4, 5 & 6

Emergency Structural Inspection and Assessment
Preliminary Report of Immediate Remediation Needs
And Repair Approach
1-30-20



Prepared by:

Island Structures Engineering, PC

319 Sunrise Highway, West Islip, NY 11795

PREPA South Coast Units 3-6
Emergency Structural Inspection and Assessment
Preliminary Report of Immediate Remediation Needs
And Repair Approach
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GENERAL:

PRPEA has requested this preliminary site inspection report, in anticipation of receiving a more complete evaluation of conditions and remediation recommendations to be submitted later next week. PREPA has requested this preliminary written report to indicate the extent of necessary remediation efforts that should be performed immediately so that PREPA and others can more safely enter the units to complete more thorough damage assessments.

PURPOSE:

Island Structures Engineering, PC (Island), working together with GE/Fieldcore personnel performed an initial inspection of the PREPA South Coast power generating units 3, 4, 5 and 6, on January 27 and 28, 2020 subsequent to a significant seismic event measuring 6.4 on the Modified Mercali Intensity Scale on January 7, 2020. Several smaller seismic events had occurred just prior to this significant event and numerous additional seismic events measuring in the 3, 4 and 5 range continue to occur at the time of this report. A formal initial assessment report is being developed and is expected to be issued during the week of February 7. Island provided a verbal post-inspection presentation to PREPA staff on January 29 and advised that certain damages should be remediated prior to proceeding further with more detailed inspections and damage assessments.

- Inspect and assess damage from recent seismic events to Units 3, 4, 5 and 6.
- Determine overall structural stability of Units 3 against gross structural collapse or major component structural failure which may pose significant threat to other plant facilities. It is not expected that these units will be placed back in service; however their demolition may not occur for several years. It is expected that personnel access will be limited to these units once stabilized.
- Determine the extent of immediate remediation work that should be performed in order to stabilize Units 5 and 6 to a degree sufficient to permit the further inspection of damages and repair investigations.
- Determine the extent of structural damage to Unit 5 in order for PREPA to evaluate the decision to make needed repairs to expedite its return to service within a few months. The structural assessment is also being supplemented with a similar assessment of the high energy piping systems, the boiler components (both internal and external), and budgetary costs for all the above.
- Determine the extent of structural damage to Unit 6 in order for PREPA to evaluate the decision to make needed repairs to expedite its return to service within the next several months. Due to damages to other process components such as demineralized water storage, boiler components and other required systems, it is currently anticipated that such other work could require considerably longer to return Unit 6 to service than Unit 5.
- This structural evaluation is being performed concurrently with an assessment of the Unit 5 and 6 high energy piping systems and an external boiler assessment. These assessments will be reported on in more detail with the

initial structural assessment. GE/Fieldcore will also be providing budgetary cost and preliminary schedule information for PREPA's use in the decision making as to whether to proceed with Unit 5 and/or Unit 6 repairs.

SCOPE OF ASSESSMENT:

- Units 3-6
- Inspection of critical lateral load resisting systems
- General overall structural inspection of all bracing and framing systems
- Inspection of high energy pipe supports for signs of distress from seismic event
- Unlike prior structural assessments performed by Island, this assessment includes the may bracing systems of the Equipment Building (located between the Boiler Structure and the T-G pedestal area.

EFFECTS OF RECENT SEISMIC EVENT:

- 6.4 on the Modified Mercali Intensity Scale
- Each number on scale is x10
  - 2 to 5 felt but minor damage
  - 5 to 6 slight damage
  - >6 a lot of damage
- Observations
  - Significant damages and indications of large displacement of structures, equipment and piping
  - Significant damages to lateral bracing systems throughout the Equipment Building from the seismic event
  - Significant damages to isolated members of the lateral bracing systems of the Unit 5 and Unit 6 bracing systems
  - Significant damages to the lateral boiler and steam drum restraints.
  - Significant damages to isolated support components of the high energy piping

APPROACH FOR REMEDIATION:

The following preliminary approach to addressing the issues observed was agreed to during the meeting attended by PREPA, Island, GE/FieldCore on January 29, 2020:

PHASE 1: Emergency Efforts to Stabilize Units Against Gross Failure:

- Phase IA: Island will compile the information ascertained during its site visit and inspections on January 27 and 28, 2020.
- Phase 1B: Island will prepare a summary of damages that need to be addressed to mitigate potential collapse failure **prior to performing more extensive assessments**. The summary to be transmitted by Island to PREPA and GE/Fieldcore simultaneously by January 31. GE/Fieldcore is to provide an immediate budget estimate and time frame required to complete these preliminary repairs. PREPA will determine if these repairs will be performed by GE/Fieldcore or by Others. These repairs are critical for the overall structural stability of the units and should be done at once, and prior to allowing additional inspections by personnel. These repairs will be required even in the event that the units are not returned to service, as this overall stability is necessary even for limited efforts required for the safe decommissioning efforts that would be required.

- Phase 1C: Complete repairs as noted above.

PHASE 2: Repairs to Units 5 and 6 required prior to placing units back in service:

- Phase 2A: Island will prepare a summary of structural repairs that are required **prior to returning Unit 5 and/or Unit 6 to service**. This report will be issued by the end of the week of February 7. Island will provide a draft list of repairs to GE/Fieldcore by Feb 4 so that they may establish budgetary cost and schedule information to supplement the report. This report will also be supplemented by a similar list of repairs required for the high-energy piping systems.
- Island 2B: Island will provide GE/Fieldcore a proposal cost estimate for the additional engineering and inspection services that would be required to detail the repairs noted in Phase 2A, provide recommended periodic inspections of the work and provide a final certification of the work, for inclusion by GE/Fieldcore in its budgetary estimate for the Unit 5 and Unit 6 repairs.
- Phase 2C: Upon review and approval by PREPA of the phase 2A & 2B scope, budget and schedule, the repairs will be performed by GE/Fieldcore with oversight by Island as a subconsultant to GE/Fieldcore, with inspection and final reports issued by Island to PREPA.

PHASE 3: Required repairs to Units 5 and 6 that may be completed with the Units in service:

- Phase 3A: Island will prepare a more detailed summary of structural repairs that are required for the continued safe operation of Units 5 & 6. The extent of these repairs will be determined with an anticipated useful operating life in the range of 5 to 10 years. Island will provide a draft list of these repairs to GE/Fieldcore by Feb 4 so that they may also be used to establish their Phase 3C budgetary cost and schedule information to supplement the February 7 report.
- Island 3B: Island will provide GE/Fieldcore a proposal cost estimate for the additional engineering and inspection services that would be required to detail the repairs noted in Phase 3A, provide recommended periodic inspections of the work and provide a final certification of the work, for inclusion by GE/Fieldcore in its budgetary estimate for the Unit 5 and Unit 6 repairs.
- Phase 3C: Upon review and approval by PREPA of the phase 3A & 3B scope, budget and schedule, the repairs will be performed by GE/Fieldcore with oversight by Island as a subconsultant to GE/Fieldcore, with inspection and final reports issued by Island to PREPA.

PHASE 4: Preliminary Assessment of Unit 5 and Unit 6 Original Lateral Load Design Capacity:

- Phase 4A: Island will review the available drawings (and other documentation that may be provided by PREPA) in order to advise PREPA as to the original design capacity of Units 5 & 6 to resist wind and seismic loads. This will be for informational purposes only, for PREPA's use in evaluating the viability of the units, as designed, for the limited life span noted above. Island will include the engineering fee for this effort in its proposal to GE/FieldCore for the other engineering services.

IMMEDIATE REPAIRS REQUIRED FOR OVERALL STRUCTURAL STABILITY:

The following are repairs that should be performed immediately and prior to permitting more extensive personnel access to the Units for the purpose of more detailed damage assessments.

UNIT 3:

- Unit 3 requires no immediate remediation at this time to permit limited access for further damage assessment. Note however, that all of the Unit 3/Unit 4 Equipment Building bracing at the lower level has been buckled. Although the bracing in this condition can still accept tension loading, the overall capacity of the unit to resist lateral loads is severely compromised. Personnel access should be limited and all personnel should vacate this building during periods of high winds and at the first indication of additional seismic activity.

UNIT 4:

- Column line G at column G-9 2/3 at the base level, the main diagonal brace (back to back L5x5x3/8) was previously cut and welded near the base of the column. The repair weld has completely failed (broken). The member must be realigned, the weld surfaces properly prepared and a full penetration bevel weld must be performed. Due to limited access between the vertical legs, a backer bar full penetration weld should be used for these welds. Welding should be performed by a certified welder. (photos 102-2399, 102-2400, 102-2401
- Column line E at column E-11 1/3 at the base level, the main diagonal brace (back to back L8x8x3/4 has buckled the web of the connecting T at the column base. The web of the gusset should be cut where buckled and replaced using a full penetration weld to remaining section of the T. (Photos 120-2403 and 120-2404).
- Note that all of the Unit 3/Unit 4 Equipment Building bracing at the lower level has been buckled. Although the bracing in this condition can still accept tension loading, the overall capacity of the unit to resist lateral loads is severely compromised. Personnel access should be limited and all personnel should vacate this building during periods of high winds and at the first indication of additional seismic activity.

UNIT 5:

- Column line E-5, at column E5-20.00, Level 2 (47'-4") the main diagonal brace (14WF48) has had a section replaced with incomplete splice repairs that must be full penetration welded. The weld ends must be properly prepared and full penetration bevel welds completed. We recommend removal of the temporary erection splice plate(s) after flanges are welded to allow for the proper welding of the web. (photo 120-2419 and 120-2420)
- Note that the majority of the Unit 5/Unit 6 Equipment Building bracing at both the lower and upper levels has been buckled. Although the bracing in this condition can still accept tension loading, the overall capacity of the unit to resist lateral loads is severely compromised. Personnel access should be limited and all personnel should vacate this building during periods of high winds and at the first indication of additional seismic activity.
- Note that the majority of the vertical bracing at the back of the DA framing (column line C, which is common to the east side of the Equipment Building has buckled. Note that all of the Unit 3/Unit 4 Equipment Building bracing at the lower level has been buckled. Although the bracing in this condition can still accept tension loading, the overall capacity of the unit to resist lateral loads is severely compromised. Personnel access should be limited and all personnel should vacate this area during periods of high winds and at the first indication of additional seismic activity.

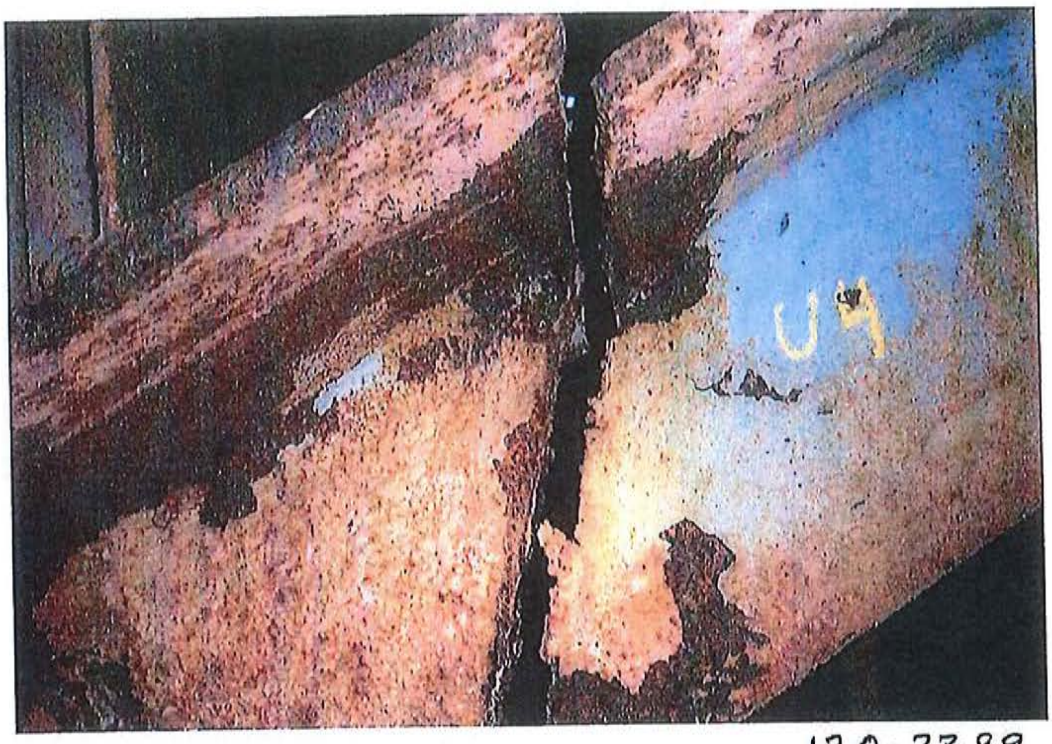
UNIT 6:

- Unit 6 requires no immediate remediation at this time to permit limited access for further damage assessment.
- Note that the majority of the Unit 5/Unit 6 Equipment Building bracing at both the lower and upper levels has been buckled. Although the bracing in this condition can still accept tension loading, the overall capacity of the unit to resist lateral loads is severely compromised.

Personnel access should be limited and all personnel should vacate this building during periods of high winds and at the first indication of additional seismic activity.

- Note that the majority of the vertical bracing at the back of the DA framing (column line C, which is common to the east side of the Equipment Building has buckled. Note that all of the Unit 3/Unit 4 Equipment Building bracing at the lower level has been buckled. Although the bracing in this condition can still accept tension loading, the overall capacity of the unit to resist lateral loads is severely compromised. Personnel access should be limited and all personnel should vacate this area during periods of high winds and at the first indication of additional seismic activity.

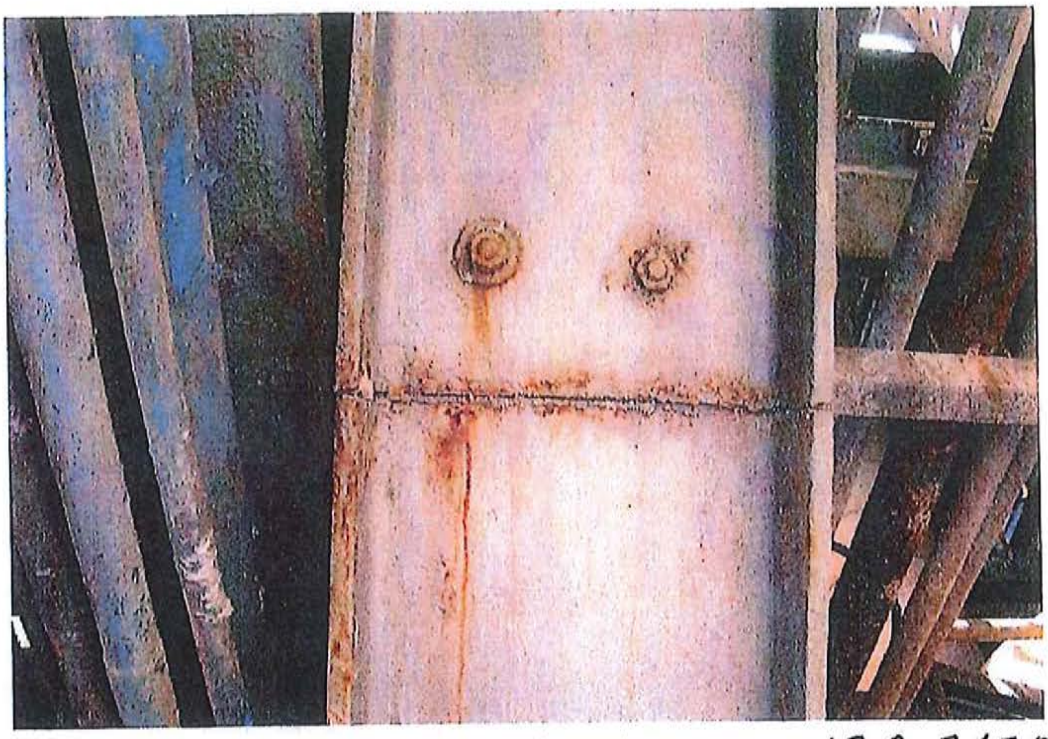
PHOTOS



120-2399



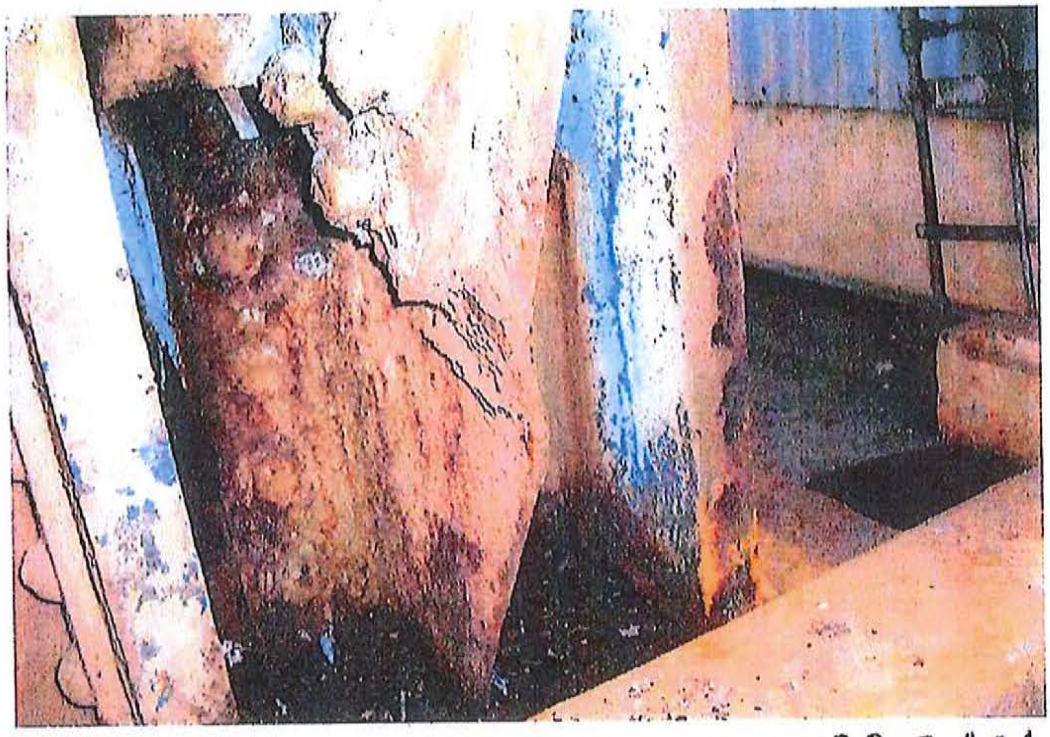
120-2400



120-2420



120-2401



120-2404



120-2419



120-2403

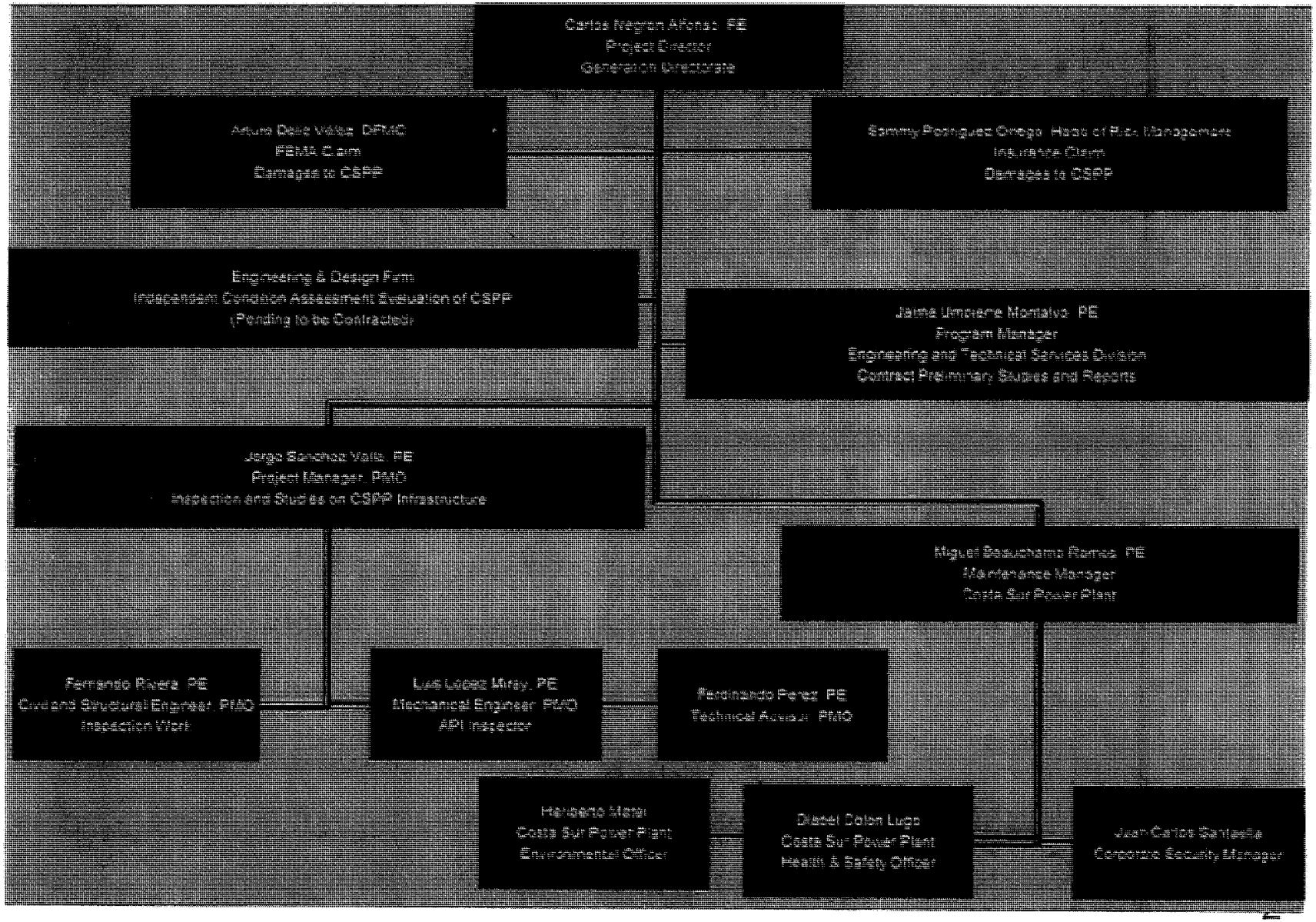
Attachment C

Puerto Rico Electric Power Authority

Strategic Action Plan
Condition Assessment, Value Engineering and Decision Making
Restoration of Lost Power Capacity at Costa Sur Power Plant (CSPP) due to Earthquake Damages

January, 2020

Organigram – Execution Strategic Action Plant CSPP



Strategic Action Plan - Condition Assessment, Value Engineering and Decision Making Restoration of Lost Power Costa Sur Power Plant

I. First Step - as an initial response, just after the earthquake hit PR, PREPA began an inspection of the facilities of the CSPP to determine safety issues and operational capability.

II. Second Step – Prepare and execute an Strategic Action Plan (SAP) to determine the feasibility of restoring the lost power capacity of the CSPP through repair or replacement works.

Strategic Action Plan - Condition Assessment, Value Engineering and Decision Making Restoration of Lost Power Costa Sur Power Plant

FIRST STEP

- As an initial response, just after the earthquake hit PR, PREPA began an inspection of the facilities of the CSPP.
- Objective – to determine safety issues and operational capability.
- Purpose –
  - If the work area was safe for the employees
  - That there had not been an incident of spillage of fuel, oil or any other chemical that could directly affect any natural resources or the live or property of the people of Guayanilla and Peñuelas
  - If the power plant could once again enter into operations and continue contributing energy to the electrical system of the island.
  - Quantify the damages that occurred to begin the claim process to the insurance companies, in coordination with any claim that was to be made to the Federal Emergency Management Agency (FEMA).
- Results – After studying the data obtained from these inspections, taking into account the continuous seismic aftershocks, and the priority the safety of the personnel that operates and administers the power plant, PREPA made the difficult decision to close the operations of this facility.

Strategic Action Plan - Condition Assessment, Value Engineering and Decision Making Restoration of Lost Power Costa Sur Power Plant

SECOND STEP

- Prepare an Strategic Action Plan (**SAP**) to determine the feasibility of restoring the lost power capacity of the CSPP through repair or replacement works.
- Purpose –
  - The purpose of this step is to require to a qualified Engineering and Design Firm (E&D) all the activities necessary to present an engineering and commercial opinion of whether is feasible to put back into service a more resilient and safe Costa Sur Power Plant.
- The SAP is broken-down in 4 Phases:
  - Phase 1 – Commissioning by PREPA of Engineering Studies on Four Critical Parts of the Power Plant
    - Boilers Unit 5 and 6 Exterior and Interior Inspection and Report
    - Boilers and Main Equipment Steel Structure Units 1, 2, 3, 4, 5 and 6
    - Fuel and Water Tanks (Storage and Service) Inspection and Report
    - Concrete Pedestals Supports for Power Turbine and Generator Units 5 and 6
  - Phase 2 – (Selection of E&D) – is intended for the selection of a recognized and specialized E&D for the condition assessment survey, value engineering and decision making on the future of CSPP.

SECOND STEP (Cont.)

- The SAP is broken-down in 4 Phases (Cont.):
  - Phase 3 (Formalize a Contract between PREPA and E&D) –is intended to comply with all commercial and legal steps necessary to formalize a contract between the E&D and PREPA for execution of all activities require under this SAP.
  - Phase 4 (Condition Assessment Survey, Value Engineering and Decision Making on the Future of CSPP) – is intended to provide PREPA with a value engineering study in order to make a decision as to repair or replace the plant for restoration of lost generation capacity as noted above. A qualified (E&D) shall perform a condition survey and value engineering study with a recommendation for at least two options including repair or replace to restore 820 MW capacity due to earthquake damages. The two options are:
    a) **If the power plant is to be repair, design shall be based on current code and standards to the extent practical.**
    b) **If a new power plant must be built, it shall be in compliance with all current codes and standards. Also, if this new plant may be built at the same existing site.**

SECOND STEP - Status on Phase 1

Item Num	Inspection/Study Title	Start Date	Completion Date	Percentage Completed	Comments
1	Exterior Mechanical Inspection Boilers Units 5 and 6	Jan 8, 2020	Feb 11, 2020	100%	Report by General Electric recommends Non-destructive testing.
2	Preliminary Inspection of Steam Piping and Equipment Structural Supports	Jan 27, 2020	Feb 5, 2020	100%	Report by General Electric recommends repair works.
3	Preliminary Inspection of Steel Structural Elements for Boilers and Auxiliary Equipment U. 3-6	Jan 27, 2020	Jan 31, 2020	100%	Report by General Electric recommends immediate repair works to continue interior inspections of the units.
4	Structural Elements Repair Work to Allow Additional Interior Inspection of the Boilers and Other Equipment of the CSPP	Feb 14, 2020	Mar 16, 2020	1%	Immediate repairs recommended by GE Structural study as step 1 to continue with inspection of interior of boilers and other equipment and structures.
5	Interior mechanical inspection of the condition of the boilers	Mar11, 2020	April 11, 2020	0%	Shall start after finishing with immediate repair works.

SECOND STEP - Status on Phase 1 (Cont.)

Item Num	Inspection/Study Title	Start Date	Completion Date	Percentage Completed	Comments
6	More Detail Inspection, Structural Design Work for Repairs Units 5 and 6 (Before Put On Service)	Feb 12, 2020	Mar 12, 2020	5%	This work shall be performed as Recommendation on Preliminary Study for this Structure by the company Island Structure Engineering, PC (GE/Fieldcore)
7	Fuel and Water Tanks Structural Assessment	Feb 11, 2020	Mar 30, 2020	10%	Inspection and report on the structural conditions of 20 tanks.
8	Condition Survey and Testing for Concrete Pedestals for Power Turbine and Generator Units , 5 and 6	Feb 24, 2020	April 30, 2020	0%	Structural condition assessment of the concrete support for the Units 5 and 6 Power Blocks. The study shall include visual inspection, concrete resistance test, petrographic testing.

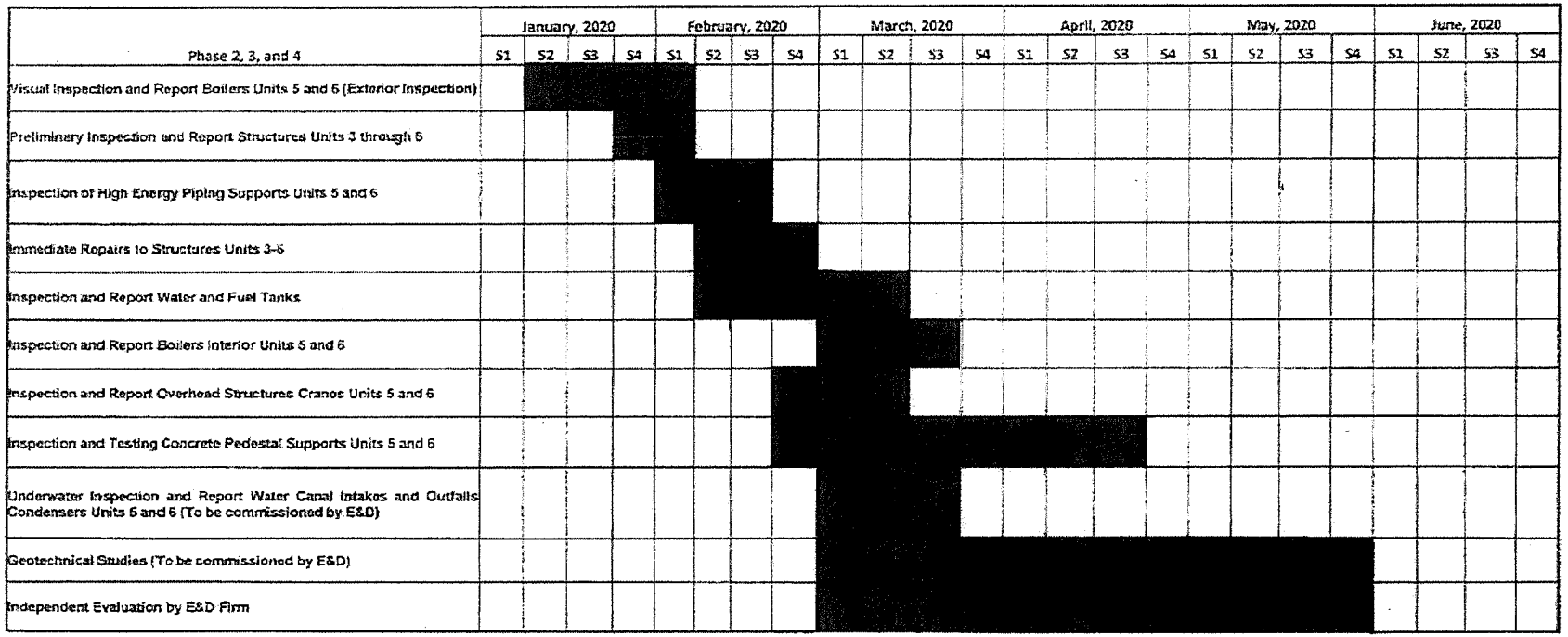
SECOND STEP - Status on Phase 2 and 3

- PREPA is on the process of selecting of a recognized and specialized E&D for the condition assessment survey, value engineering and decision making on the future of CSPP. The E&D shall be selected based on the following criteria:
  - Experience in work related to what is required in this SAP.
  - Economic capacity to finance internal and external resources that will be required to achieve the operational objective of PREPA for this SAP.
  - Economical proposal for this SAP.
  - Compliance with PREPA's deliverables time requirement for this SAP.

- PREPA expects to have selected the E&D firm on the last week of February, 2020.
- For Phase 3 PREPA expect to have contracted the E&D firm on the first week of March, 2020.

SECOND STEP – Forecast for Phase 4

- Included is a Forecast of Main Milestones for Phase 4:



Cost on Studies

Item	Equipment/Structure Name	Inspection/ Study Description	Status on Inspection/Study	Start Date	Completion Date	Inspection/Study Findings	Engineering Consultant Firm	Cost Amount	Comments
1	Boilers Units 5 & 6	Exterior mechanical inspection of the condition of the boilers	Completed	January 8, 2020	February 11, 2020	Recommendation of Nondestructive Tests	General Electric-Fieldcore (GEF)	$ 60,000.00	Report Delivered by GE to PREPA. Costs are an approximate. Pending GE Invoicing.
2	High Energy Piping Units 5 & 6	Preliminary Visual Inspection of Steam Piping and Equipment and Structural Supports.	Completed	January 27, 2020	February 5, 2020	Pending	GEF/Island Structures Engineering	$ 21,000.00	Report Delivered by GE to PREPA. Costs are an approximate. Pending GE Invoicing.
3	Structures Units 3 & 4	Preliminary Inspection and Steel Structural Elements for Boilers and Auxiliary Equipment	Completed	January 27, 2020	January 31, 2020	Need Repairs	GEF/Island Structures Engineering	$ 20,000.00	Report Delivered by GE to PREPA. Costs are an approximate. Pending GE Invoicing. Next Step: Complete Phase 1 - Inmediate Repairs to permit additional Inspection Work on Unit 5.
4	Structures Units 5 & 6	Preliminary Inspection and Steel Structural Elements for Boilers and Auxiliary Equipment	Completed	January 27, 2020	January 31, 2020	Need Repairs	GEF/Island Structures Engineering	$ 20,000.00	Report Delivered by GE to PREPA. Costs are an approximate. Pending GE Invoicing. Next Step: Complete Phase 1 - Inmediate Repairs to permit additional Inspection Work on Unit 6.
5	Inmediate Repairs Structures Units 4, 5 and 6	Structural Elements Repair Work to Allow Additional Interior Inspection of the Boilers and Other Equipment of the CSPP	On Procurement	February 14, 2020	March 16, 2020	Need Repairs	Enersys	$ 56,563.00	The Start and Completion Dates Shall depend on the Notice to Proceed. Costs are an approximate and shall depend on procurement process between GE and Enersys. (Units 5 and 6 Equipment Building have inmediate Repairs)

Cost on Studies

Item	Equipment/Structure Name	Inspection/ Study Description	Status on Inspection/ Study	Start Date	Completion Date	Inspection/ Study Findings	Engineering Consultant Firm	Cost Amount	Comments
6	Boilers Units 5 & 6	Interior mechanical inspection of the condition of the boilers	Not Started Pending Repairs on Structures	March 11, 2020	April 11, 2020	Pending	GEF	Pending	Start and Completion Dates Shall are estimated and shall depend on the repairs that must be performed on the structure of the boilers and the GE's Work Plan.
7	Structures Units 1 & 2	Preliminary Inspection and Steel Structural Elements for Boilers and Auxiliary Equipment	Not Started	February 17, 2020	February 21, 2020	Pending	GEF/Island Structures Engineering	$ 20,000.00	Costs are an approximate. Pending GE invoicing.
8	Phase 2- Structures 5 & 6	More Detail Inspection, Structural Design Work for Repairs Units 5 and 6 (Before Put On Service)	On Course	February 12, 2020	March 12, 2020	Pending	GEF/Island Structures Engineering		This work shall be performed as Recommendation on Preliminary Study for this Structure by the company Island Structure Engineering, PC (GE/Fieldcore)
9	Water and Fuel Tanks Inspection	Visual Inspection and Ultrasonic Inspect API 653	On Course	February 11, 2020	March 30, 2020	Pending	Heisen Global Engineering (HGE)	$ 134,448.00	Start and Completion Dates Shall Depend on the Contract Approval date of the Consultant. Contract 85840. There is going to be a Change Request to add an additional 8 tanks that were not included in the first Contract. An ammendment was approved for the inspection of 8 additional tanks, including all tanks used for the Water Treatment Process. The amount added to the original contract was $48,358 and an extension of 15 days to original schedule time.

Cost on Studies

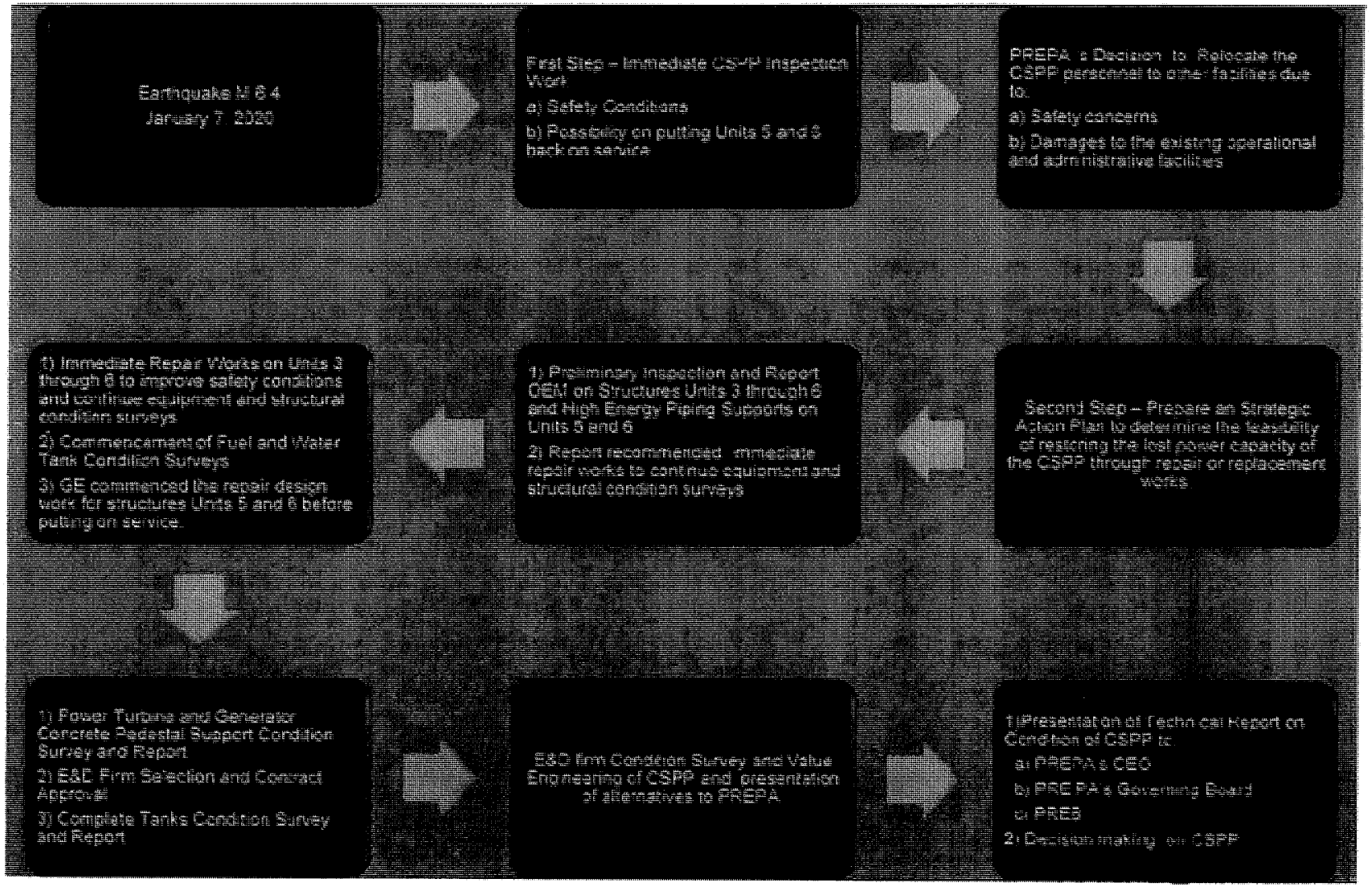
Item	Equipment/Structure Name	Inspection/ Study Description	Status on Inspection/ Study	Start Date	Completion Date	Inspection/ Study Findings	Engineering Consultant Firm	Cost Amount	Comments
10	Units 5-6 Concrete Pedestals for Power Blocks	Condition Survey and Testing for Concrete Pedestals for Power Turbine and Generator Units , 5 and 6	On Procurement	February 25, 2020	April 30, 2020	Pending	Heisen Global Engineering (HGE)	$ 55,160.00	This Studies will be commissionto HGE, PSC. The Start and Completion Dates Shall depend on the Notice to Proceed. The study shall include visual inspection, Concrete Resistance Test, Petrographic Testing.
11	Concrete Water Closed Channel Condenser Unit 5	Underwater Visual Inspection of the Structural Condition of the Closed Channel Into and Exit of Condenser Unit 5	Not Started			Pending	E&D Company Selected by PREPA		This Studies will be commission by E&D Selected by PREPA for Engineering Independent Report
12	Concrete Water Closed Channel Condenser Unit 6	Underwater Visual Inspection of the Structural Condition of the Closed Channel Into and Exit of Condenser Unit 6	Not Started			Pending	E&D Company Selected by PREPA		This Studies will be commission by E&D Selected by PREPA for Engineering Independent Report
13	Concrete Open Channel Sea Water Discharge	Underwater Visual Inspection of the Structural Condition of the Open Channel Sea Water Discharge from Condensers 5 and 6	Not Started			Pending	E&D Company Selected by PREPA		This Studies will be commission by E&D Selected by PREPA for Engineering Independent Report
14	Overhead Cranes Units 5 and 6	Condition Survey Structure for Overhead Cranes Units 5 and 6	Not Started			Pending	E&D Company Selected by PREPA		This Studies will be commission by E&D Selected by PREPA for Engineering Independent Report

Cost on Studies

Item	Equipment/Structure Name	Inspection/ Study Description	Status on Inspection/ Study	Start Date	Completion Date	Inspection/ Study Findings	Engineering Consultant Firm	Cost Amount	Comments
15	Geotechnical Studies	Provide post-earthquake geotechnical evaluation of the foundation support of the different structures in the facility. Provide general recommendations on mitigation of seismic related damage. Provide general recommendations on geotechnical design parameters for the current site conditions, which will allow to adequately perform further structural assessment of the different structures that may had been affected by the recent seismic events and subsequent aftershocks.	Not Started				Pending	E&D Company Selected by PREPA	This Studies will be commission by E&D Selected by PREPA for Engineering Independent Report

Total Cost on Studies $ **387,171.00**

Sequence of Events on PREPA's Response to CSPP After the Earthquake of January 7, 2020



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February 5, 2020
Proposal No.0287.136

Puerto Rico Electric Power Authority
San Juan, Puerto Rico

SUBJECT: **STRATEGIC ACTION PLAN**
Condition Assessment, Value Engineering, Decision Making and Design Restoration of Lost Power Capacity at Costa Sur Power Plant due to Earthquake Damages, January 2020

Introduction:

Sargent & Lundy L.L.C. (S&L) is pleased to present this revised proposal to the Puerto Rico Electric Power Authority (PREPA) associated with the condition assessment, value engineering, for the decision making for the restoration of lost power capacity at Costa Sur Power Plant due to Earthquake damages sustained in January of this year.

Our proposal is centered on arranging S&L's power industry leading technical expertise in the engineering and design of power plants along with a strong core of experience working with the PREPA team and at PREPA facilities. Our revise proposal includes an allowance for sub-contractor services.

We will include on our team local service firms (sub-contractors) that will be qualified on a technical basis to perform the required scope of services. These firms will be responsible for providing specialized inspection services for turbines, power block structures, overhead crane structure, condenser cooling water intake and discharge channels, NDE, surveying, electrical and geotechnical work under the technical supervision of S&L.

Sargent & Lundy History:

Sargent & Lundy is a 128 year old full-service, customer-centric and solutions-oriented consulting engineering firm with more than 2,000 people dedicated exclusively to the power industry. We provide our customers with a turnkey suite of services to provide program and project management of utility and industrial projects from conceptual development, site survey, environmental assessment, detailed engineering and design, project / construction management to post-construction monitoring and project close out. Our experience includes the design of power generation facilities, due diligence review, condition assessment, and many other related modifications and studies.

Sargent & Lundy Approach:

Sargent & Lundy is well positioned to support the evaluation of the Costa Sur Power Plant (Costa Sur) following three major seismic events due to our extensive understanding of PREPA's energy infrastructure, specifically power plants. S&L has been studying PREPA's power generation and electrical grid system for the past year and a half, and from generation condition assessments we have performed, we understand the current state of the system and have the know-how to prioritize and optimize the project work effectively. S&L brings valuable

Sargent & Lundy

technical experience and lessons learned from other similar generation projects executed throughout the main land and other parts of the world. We feel this experience will be of tremendous value that will benefit PREPA in making a final decision on Costa Sur given its current condition post recent earthquakes.

S&L will work together with PREPA's personnel supported by a team of experienced professionals on-island, with many of them Spanish speakers to ensure effective communication. Our on-island staff will be supported by the strength and depth of our home offices and they will be responsible for specific project management along with all technical engineering of the scope. The home office staff will review the work our subcontractors prepare such as surveys, geotechnical investigations, and nondestructive examination results to complete Phase I scope of services. The team will also develop the quality control and inspection protocol requirements that the local subcontractors will follow, along with reviewing all the cost estimates and other documents that the local subcontractors prepare.

On behalf of Sargent & Lundy, we appreciate the opportunity to offer our services for helping to rebuild the Puerto Rico power system. To the best of my knowledge the information submitted for this proposal is true and accurate. If you have any questions, please feel free to call me at +1-312-269-8659.

Best regards,



Christopher L. Woods

Vice President & Project Director

Sargent & Lundy

PROPOSAL

I. Introduction

In response to a request from the Puerto Rico Electric Power Authority (PREPA), Sargent & Lundy (S&L) is pleased to offer consultancy services to assess, analyze, evaluate, and recommend a path forward for addressing damages and lost generation at the 820MW Costa Sur power plant. Our work will be completed in general compliance with the Phase 1 scope identified in the Strategic Action Plan.

This scope of work proposed herein is intended to provide PREPA with a value engineering study in order to make a decision as to repair or replace the plant for restoration of lost generation capacity as noted above. This study will capture all project inputs to develop a consolidated report to serve as the single source of information related to the Costa Sur damages.

Based on the proposed project team's careful review of the action plan and our understanding of the Costa Sur site, S&L is confident that our proposal thoroughly responds to the intent and requirements set forth therein, and includes the following value-added benefits:

- **Demonstrated Industry Leadership in Condition Assessments and RUL Studies,** dating back to 1984 when we were selected by EPRI to help develop pioneering life extension strategies for fossil power plants. This culminated in the development of more than 60 EPRI guidelines covering examination, testing, and evaluating major power cycle and BOP equipment, components, and systems.

- **Unrivaled Experience in Performing This Exact Type of Work.** S&L's extensive experience with plant modifications and refurbishment projects provides for a good understanding of, and sensitivity to, the factors involved in assessing the condition of existing power plants. In addition to completing several hundred fossil betterment and backfit projects each year, S&L has been involved with hundreds of condition assessment programs for well over 150 generating units. Appendix C highlights S&L's comprehensive experience performing condition assessment for multiple station and utilities.

- **Extensive Detailed Design Experience on New Fossil Fueled Plants**, having over 130 units of completed power plant detailed designs since 1990 plays an integral part in our critical review process for these types of assessment projects.

- **Our staff includes key team members that have recently been engaged to perform repairs and condition assessments on utility scale projects.** This staff brings relevant credentials and experience that can add substantial value to our objective results for the Costa Sur condition assessment.

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Our experienced team will provide PREPA with a true third-party approach with a consolidated engineering report that involves methodology and analytics we have developed over the last three decades to best serve long term decisions by your organization.

II. Background

PREPA invited S&L to submit a proposal to provide engineering services to assess, analyze, evaluate and provide a path forward recommendation of damages at the 820MW Costa Sur power plant, following three major earthquakes ranging in magnitude between 5.8 and 6.4 (Richter scale), occurring on January 6th, 2020 and January 7th, 2020.

Costa Sur Power plant is an extremely important facility in PREPA's generating and power distribution system. The restoration or replacement of the facility to generate its potential 820 MW is crucial. For information purposes, Table 1 below shows the operating status of the Costa Sur power plant prior to the seismic events.

Table 1. Costa Sur operating status at the time of the earthquake Jan 06 – 07, 2020

Turbine Generator	COD	MW	Technology	Fuel	Operating status
Steam Turbine #1	1960s	n/a	Steam	Oil #6	This plant was decommissioned on February 2010.
Steam Turbine #2	1960s	n/a	Steam	Oil #6	This plant was decommissioned on February 2010.
Steam Turbine #3	1962	85	Steam	Oil #6	Unit is limited to 55 MW. Last time it was used was on **2016**.
Steam Turbine #4	1963	85	Steam	Oil #6	Unit is limited to 45 MW. Last time it was used was on **2016**.
Steam Turbine #5	1972	410	Steam	Natural Gas	Operating
Steam Turbine #6	1973	410	Steam	Natural Gas	Operating
Combustion Turbine #1	1972	21	GT	Oil #2	Not available due to mechanical repair works.
Combustion Turbine #2	1972	21	GT	Oil #2	Not available due to mechanical repair works.

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Based on the information above, Steam Turbine #5 and #6 represent the greatest and most critical electric output at this site and will be the primary focus of the assessments to be made under this proposed scope of work.

III. Goals & Objectives

The main goal of the project is to conduct an independent engineering assessment, analysis, evaluation and recommendation of the damages sustained at the Costa Sur power plant following three major earthquakes on January 6th and 7th, 2020. The objective is to provide a consolidated report containing all assessment activities and findings to be used as the basis for the decision of how to proceed with providing the lost 820MW of power generation at Costa Sur.

IV. Project Description

As per PREPA's "Strategic Action Plan", the full scope of services is divided into three phases. This proposal outlines the work associated with Phase I and includes the following:

Phase I -- Scope of engineering services:

1. Execute a survey monitoring program for all main structures, tanks and buildings to monitor vertical and horizontal movements, particularly after earthquakes, with the intent of maintaining a safety zone program while all the studies and inspection works are done at the power plant. This scope will utilize approved local sub-contractors and technical information provided by PREPA.

2. Identify and assess through site reviews, structural, mechanical and electrical damages to all the main buildings, power plant equipment such as (but not limited to) boilers, power turbines, generators, condenser, transformers, fuel and water tanks, piping, auxiliary equipment, critical balance of plant equipment, all foundations, internal roads, transmission centers, tanks, natural gas pipeline, communication towers or rooms, and parking lots. Some of this scope will be covered by inspections performed by approved local sub-contractors and/or OEMs, as well as technical information provided by PREPA.

3. Execute any geotechnical or geological survey necessary to assess the present conditions of the foundations of the structures, tanks, transformers, transmission centers, or any other heavy equipment of the power plant. An approved local sub-contractor will be utilized for the performance of the site testing activities(borings) and reports.

4. In necessary, perform non-destructive material testing necessary to assess the condition of any structure, equipment or other type of infrastructure of the power plant to assure a more complete and reliable technical report of the power plant. Areas requiring non-destructive testing will be identified by the S&L team for testing by an approved local sub-contractor.

5. Prepare an Engineering report with recommendations that includes an AACE International Class 4 cost estimate and Level II schedule. An AACE Class 4 cost estimate has an accuracy range of +20 to +50% and -15 to -30%. This level of estimate is typical for 1% to 15% project definition. The Level II schedule will include key task for all scope with durations, major milestones, and logic to define the sequence of activities. All the reports and data from the sub-contractors will be reviewed and incorporated into the Engineering report. The report will evaluate the following alternatives:

   a. **Repair:** If the power plant is to be repaired, design shall be based on current industry and local Puerto Rico code and standards to the extent practical.
   b. **Replace***: If a new power plant must be built at the existing site (brownfield project), it shall be designed to all current industry and Puerto Rico codes and standards.
   c. **Relocate***: If a new power plant must be built at a new greenfield site outside Costa Sur in accordance to all current industry and Puerto Rico codes and standards

      **Costs for the replace and relocate alternatives will be obtained from the existing S&L PREPA deliverables that provide costs for new combined cycle generation.*

6. Prepare and present a summary presentation to review the Engineering report with all project stakeholders.

V. Project Execution

Our experienced team of engineers and specialist will be focused on the plant systems, structures, equipment, and components that may have sustained damage during the earthquakes. The overall team will have individual areas of focus with key project activities. The activities are summarized in the following text to allow a general understanding of the work the teams will be performing to complete the assessments. All teams will begin project activities by reviewing all available Costa Sur drawings and data. A listing of requested Costa Sur information will be provided prior to award. All teams will have the option to review additional inspection and testing utilizing local sub-contractors. These inspection and testing scopes will be finalized during the initial site visits and provided to the sub-contractors for bidding purposes.

Mechanical Assessment:

A team consisting of a Boiler, Turbine and Piping specialist will attend the kickoff meeting and initial site walkdown. The initial walkdown is intended to gain a working knowledge of the overall condition of the major systems and equipment associated with plant. This will facilitate the resource planning of future inspections and coordination of subcontractors and OEM specialists to evaluate the critical plant equipment and systems. Subsequent walkdowns will be performed by a team of mechanical engineers to address the damage associated with the balance of plant systems and other areas that were not previously inspected and/or inaccessible during the initial walkdown. The balance of plant systems would include, but would not be limited to: Cooling systems, water treatment systems, compressed air systems, general service water systems. The walkdown would also include a more in depth walkdown and investigation of the critical systems, which include; Steam Turbine, Boiler, Condensate System, Boiler Feedwater System and associated piping systems.

High Energy Piping Assessment:

The assessment would start with a detailed walkdown of each high energy system to observe the pipe, pipe supports, pipe support auxiliary steel and connections of auxiliary steel to main steel framing members. This assumes that safe access to the areas where the pipe is located can be provided. Otherwise, observations with binoculars from a safe distance will be made.

The pipe would be observed for evidence of distortion due to loss of support or impact damage due to movement of the pipe or projectile impact. Impact damage on the pipe would be first noticed by insulation damage, and/or distortion of nearby steel or equipment due to contact with the pipe. If such insulation damage is found, material integrity verification by nondestructive examination (NDE) of the pipe will be required by removing the insulation in the area to determine whether dents or cracking of the pipe has occurred. Minor dents may be evaluated using the methods of API-579/ASME FFS-1 to determine if the pipe needs to be repaired or may be used "as-is". Dented areas should also be NDE examined using magnetic particle (MT) or dye penetrant (PT) methods to find surface cracks. If welds are in the dented area, a volumetric examination of the weld using ultrasonic (UT) or radiographic (RT) methods should be used to detect subsurface damage. NDE testing would be performed by a qualified testing sub-contractor.

Pipe supports would be observed for distortion (bent hanger rods or struts) or loss of function (such as rod/strut failure, spring failures, pipe clamp separation or load plate rod pull-out).

Structural Assessment:

Prior to mobilizing a site team, S&L will review the available foundation, structural steel, flue gas ductwork drawings, and any previous technical report submitted by PREPA, if available. This review will determine the seismic force-resisting system and the critical members required for resistance to seismic forces and the elements most likely to be damaged during a seismic event.

A structural engineer with expertise in concrete foundations, structural steel, and flue gas ductwork will attend the kickoff meeting and perform the Phase 1A walkdown. The initial walkdown will be conducted to gain knowledge of the overall condition of the structures and to perform a general condition assessment of the critical seismic force resisting members to determine if there is an immediate safety concern or a significant structural deficiency with imminent potential for loss of life, personal injury, property damage or structural collapse. The balance of the Phase 1A assessments will then be completed.

Information obtained during the kickoff meeting and the Phase 1A walkdown will assist in planning the subsequent plant-wide walkdown performed by structural engineering specialists. During this walkdown the concrete foundations will be inspected for spalling, settlement, and any leaning of the foundation from tilting in the two orthogonal directions. The structural steel and flue gas ductwork will be inspected for cracking, buckling, and local yielding with special emphasis on the vertical brace members, the columns, and the flue gas ductwork supports which are of critical importance to the overall stability of the structure and the structural integrity during future seismic events.

In addition, a Krautkramer ultrasonic thickness gauge will determine the post-seismic material thickness in regions where the structural engineering condition assessment team suspects thinning of the steel material may have occurred and could potentially jeopardize the seismic resistance from the original design condition. All observations will be captured on field notes taken on printouts of the design drawings and with photographs. The extent of damage will be assigned a damage class ranging from 1

to 4 depending if the damage represents an immediate safety concern or significant structural deficiency to a minor structural or non-structural deficiency which does not pose any threat to loss of life or structural integrity and the condition and should be closely monitored in the future for evidence of further deterioration.

After conclusion of the walkdown, a detailed report of the on-site findings will be generated in a tabular format and this table would dictate the repair work based on the extent of damage observed. The repairs will generally incorporate the latest seismic recommendations as presented in the AISC Seismic Design Manual and ASCE 7 Minimum Design Loads and Associated Criteria for Buildings and Other Structures to the greatest extent possible provided that the repair does not adversely impact the non-repaired portions of the existing structure. The repairs would ensure a more ideal structural performance and resistance during future seismic events.

Civil and Geotech Assessment:

The initial walkdown will be completed to gain a working knowledge of the overall condition and to assist in planning the geotechnical exploration, survey work, and a more thorough second walkdown.

During this walkdown, consideration will also be given to ongoing seismic activity and the potential for continued near term soil movement. These considerations will include, possibly, recommendations regarding areas that may warrant immediate shoring, stabilizing, or other remediation. The recommendations may also include areas where restricted access is prudent to minimize loading of such elements as retaining walls, seawalls, or other structures.

The second walkdown will consist of more in depth walkdown and investigation of foundations, retaining walls, roads, parking lots, storm sewers, plant fencing, containment berms, and other geotechnical and civil related structures. Additionally, this site time will include on-site supervision of subcontract geotechnical exploration and survey subcontractors.

Low Voltage Electrical Assessment:

One Lead Electrical Assessor will attend the initial site walkdown to review the damages to the main power transformer and the associated equipment. The balance of the assessments will be complete in a subsequent phase. The investigative walkdown for the subsequent phase will consist of a walkdown and investigation of the following within the plant:

- Essential electrical equipment (e.g. unit auxiliary transformers, medium/low voltage switchgear, low voltage motor control centers, motors, etc.)
- Protective electrical relay cabinets and DCS cabinets
- Major electrical raceway (tray, conduit, bus duct, etc.)

After the investigative walkdown, our electrical engineers will prepare technical specifications for local firms to perform various electrical testing as determined from the initial walkdown. Investigation program to document the electrical conditions.

A final engineering report with recommendations shall be prepared by our electrical engineers, including a value engineering cost & time analysis.

The report will include any essential electrical equipment that will need to be replaced or refurbished. A procurement plan shall also be included for estimated costs and lead-times for the equipment.

Additionally, the report will include an assessment and recommendations on the electrical relay cabinets, DCS cabinets, electrical raceway, and findings from the data collected by the local firms.

High Voltage Station Assessment:

This assessment will evaluate if visual damage occurred and estimate repairs for the following:

- The structures, foundations, equipment and cable systems from the Main Power Transformers to the Transmission Center
- The structures, foundations, equipment and cable systems from the Emergency Station Service Transformer to the Transmission Center
- The structures, foundations, equipment and cable systems of the 38kV, 115kV & 230kV Transmission Center(s)
- The Transmission Center control and relaying panels and equipment located in the Costa Sur Plant Control Room(s).

All damage observations will be documented by photos and sketches. If drawings are available, these will be marked up to indicate the areas of damage that were found. If drawings are not available, a hand drawn sketch of each system will be made to indicate the approximate location of the damaged areas. All repairs for damages areas will be sketched to show required extent of repair and allow for the development of the repair costs and schedule.

VI. Project Team

Our team members have proven their ability to meet difficult schedules, produce high quality deliverables and be flexible in order to execute the project work in the manner best tailored to PREPA's requirements.

These personnel have a wide variety of skills covering all areas of power plant engineering and design. All appropriate technical resources of S&L will be available to support the project team as required.

Our proposed core team members to execute the Phase I scope of work are the following:

Title	Name
Project Director	Christopher Woods
High Voltage Project Director	Vince Heinz
Project Manager (local in Puerto Rico)	Felipe Mazzini
Costa Sur Site Manager	J. Morales
Project Manager (S&L Offices)	Chester Radek
Structural Lead Assessor	Matthew Rosecrans
Civil Lead Assessor	Marco Galvan
Mechanical Lead Assessor	Brian Klesath

Instrument & Controls Lead Assessor	Elia Sung
Electrical Lead Assessor	Alfredo Osorio
Geotech Lead Assessor	David Nielsen
Materials Engineer and Turbine Inspection (NDE supervision)	Karl Anderson
Steam Turbine Lead Assessor	Ed Giermak
Boiler Lead Assessor	Marc Lemmons
High Energy Piping Systems Lead Assessor	Joe Kinsella
High Voltage Lead Assessor	Raul Morton
High Voltage Station Structural Assessor	Jim Kerkhoven
High Voltage Station Support	Brian Cleary

Resumes of the relevant key personnel and specialists are included in Appendix B. We believe you will agree that the proposed team offers well-rounded backgrounds and a high degree of experience in all aspects of plant services work such as this.

VII. Sub-Contractors

The following are recommended sub-contractors that have been identified as possible options to support the project. Sub-contractors will be engaged as much as possible to provide needed services to execute the work: Before mobilizing any subcontractors, S&L and PREPA shall discuss the subcontractors to be used and the work plan for each of them during the kick-off meeting.

Services	Name of Contractor	Contact information
Power Turbines, Generators, Inspections	General Electric	Eng. Orlando Soto 787-450-7895
Power Turbine and Generator Inspection and Report	MD&A	Alvaro Brussi 787-466-9611 abrussi@mdaturbines.com
Geotechnical Studies	Jaca & Sierra	Eng. Manuel Candelario – 787-238-7771
Geotechnical Studies	Earth Engineers	Eng. Marcos Arocho – 787-922-5579
Concrete Pedestal Inspection, Testing and Report for Power Turbine and Generator Units 3 to 6	Heisen Global Engineering, PSC	Engineer Alan Heisen – 787-528-8911
Overhead Crane Units 5&6 Steel Structure Inspections and Technical Report	Heisen Global Engineering, PSC	Engineer Alan Heisen – 787-528-8911
Surveying Services	Surveyor Julio Soto	Surveyor Julio Soto – 787-614-1296
Surveying Services	Surveyor José Gregorio Pagán	Surveyor José Gregorio Pagán – 787-938-5307
Surveying Services	J. Bidot & Asociados	Ing. Javier Bidot, 787-505-1853
Under Water Diving	Under Water Marine	David Holt – 787-405-7109

Services	Name of Contractor	Contact information
Inspection Work	Services	
Under Water Diving Inspection Work	Marine Divers Contractor	Mr. Jovet – 787-382-1038
Water Channel Intake and Discharge Channel Units 5&6 and Seawater Discharge Channel	Commercial Divers	commdive@ commercialdiversinc.com
DCS Foxboro Control System	Lt Automation	Ing. Jorge Acosta, 787-638-4458
Mark VI Control System	Engineering Services International, ESI	Ing. Citlalin Oliveras 787-598-4421, 787-296-4941

VIII. Proposal Activities, Timeline, and Resources

A draft schedule showing activities for executing the Phase I scope of work is included in Appendix A. The schedule is developed to provide a consolidated report to PREPA in 12 weeks after authorization.

The key activities for execution are:

- Attend Kickoff Meeting and conduct initial site visits to determine testing, investigations, or other services to be provided by third parties.
- Develop scopes of work to send to contractors for bid, or to contactors already engaged, to confirm their scope, pricing, and time frame for completing their work.
- Conduct investigative site visits to perform the condition assessment walkdowns, gather / review documents, interview plant personnel regarding the current condition and operability of plant components.
- Develop engineering deliverables to document the result of the site assessments and the basis of the recommendations.
- Determine recommendations for repair / replacement of components.
- Develop costs for the recommendations.
- Develop schedule for the recommendations.
- Prepare and Issue a Report for PREPA's review / use

We will work with PREPA to further refine the major tasks and durations for the project considering your schedule for providing input to our team. Tis includes the expected procurement durations for any testing activity.

This schedule will be adjusted after the kickoff meeting and initial site visits to best meet PREPA's needs and expectations. The project team will remain flexible to the changing needs of the project and will strive to provide our deliverables in the most efficient manner. We understand the importance of time and the impacts the loss of power has on Puerto Rico. Our team will strive to save as many weeks as possible for the overall duration.

IX. Cost Proposal

1. Cost – Pricing Breakdown

We propose to complete this effort on a time and material basis with an estimated not-to-exceed cost shown in the table below. Our proposal is based on the Phase 1 services detailed in the Strategic Action Plan as noted above.

The proposed base cost is for the completion of the detailed assessment for the Costa Sur site and the technical management of the identified sub-contractors. Travel for the base costs includes trips to complete the Phase 1 activities.

For the commercial management of the sub-contractors we have estimated the optional costs needed to contract and manage the sub-contractors. This includes the addition of a contractor lead at site and the staff required in our commercial and procurement groups. In addition to the S&L costs we will need to include allowances based on our expected scope of work for the sub-contracts and our experience working on similar projects.

	Estimated Hours	Estimated Cost
Sargent & Lundy – Base	5,686	$1,274,000
Travel - Base		$89,000
Total Base Cost		$1,363,000
Optional Procurement Services	512	$117,000
Third party services - Allowance		$250,000
Total Cost	6,198	$1,730,000
Expert Witness Testimony	TBD	$293/hr

2. Terms and Conditions

Sargent & Lundy has an existing Professional Services Contract with the Puerto Rico Electric Power Authority dated July 1, 2019 (2020-P00002). Our proposed services will be completed in accordance with the terms and conditions of that existing Contract. Given the Contract and the provided scope of work document, we would like to note the following clarifications.

a. Sargent Lundy's assessment team will strive to find and detail all the damage at the Costa Sur site. Due to limitations on access and possible limited lines of site there is a chance that some limited amount of damage may go undiscovered. This will be reviewed and discussed during the initial site visit to gain better access provisions for the second visit.
b. Sargent & Lundy reserves the right within our reasonable discretion to assign engineering, design services, as well as the obligation to sign and seal such drawings, design calculations, reports, specifications and like documents to a Puerto Rican affiliate.

c. The scope of work for Sargent & Lundy is the assessment of the Costa Sur site to provide a complete report that details the basis for a decision to repair or replace the 820MW of electrical power generation. Inspections will be performed by sub-contractors under the technical direction of Sargent & Lundy. Optional pricing has been provided for these commercial management of the sub-contractors.

3. Travel

S&L will have trips to the site to complete the assessment activities. There is an initial site trip for the team to finalize scope and plans for the assessment as well as finalize scope for the sub-contractors. We are planning for a team of 13 people to support this initial trip shortly after authorization. There will then be a second set of trips for the completion of S&L's assessment activities. We are planning for a team of 13 people to support this second trip. We are also planning on 4 people staying for a second week as part of this second trip. Our last trip will be for a team of 4 people to present the report to the project stakeholders. The estimated costs are based on reimbursement per the requirements of the existing contract.

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APPENDIX A
Project milestones schedule and resources

	Start Week of: XX/XX/2020												
PHASE I -- ENGINEERING INSPECTION & EVALUATION	1	2	3	4	5	6	7	8	9	10	11	12	13
Authorization to proceed													
Kick-off meeting, Initial Site Visit													
Establish a safety plan during the site inspection													
Planning and Data Collection for site visits													
Develop geotech study scope													
Solicit geotech bids from local contractors													
Evaluate geotech bids and select contractor													
Geotech contract negotiation and award contract													
Conduct geotech site work (supervised by S&L)													
Review geotech results and issue report													
Develop NDE study scope													
Solicit NDE bids from local contractors													
Evaluate NDE bids and select contractor													
NDE contract negotiation and award contract													
Conduct NDE site work (supervised by S&L)													
Review NDE results and issue report													
Second Site Visit at Costa Sur													
Develop enginering and design delvierables													
Prepare Class 4 cost estimate													
Prepare Level II schedule													
Finalize Report													
Issue Report													
Report Presentation													

Staff	Hours per week													Sum
Local Project Manager	32	20	10	10	30	30	8	8	8	8	8	8	16	196
Chicago Work Stream Manager	32	40	40	40	40	40	40	40	40	40	40	40	40	512
Chicago Project Director	32	8	8	8	32	8	8	8	16	16	16	16	16	192
S&L / PREPA Contract Manager	32	2	2	2	2	2	2	2	2	2	2	2	16	70
S&L / PREPA Lead	2	2	2	2	2	2	2	2	2	12	12	2	0	44
Technical Deliverables									20	20	20	20		80
S&L Costa Sur Site Manager	0	0	40	40	40	40	40	40	40	0	0	0	0	280
Structural Lead Assessor	32	24	16	16	40	40	24	24	40	40	40	40	16	392
Structural support	16	0	0	16	40	40	8	8	40	32	8	8	0	216
Geotech Lead Assessor	32	16	8	8	40	32	16	16	16	24	16	8	16	248
Civil Lead Assessor	8	16	8	8	40	16	16	16	16	24	16	8	0	192
LV Electrical Assessor	32	16	16	16	40	40	24	16	40	24	16	8	16	304
Mechanical Lead Assessor	32	16	16	16	40	16	16	16	40	24	24	24	16	296
High Energy Piping / supports Assessor	32	16	16	16	40	16	16	16	24	8	8	8	0	216
Boiler Lead Assessor	8	16	16	8	40	8	0	0	24	8	8	8	0	144
STG Lead Assessor	8	16	16	8	40	8	0	0	24	8	8	8	0	144
Instrument & Controls Lead Assessor	32	16	16	16	40	8	8	8	24	16	16	8	0	208
HV Station Project Director	32	4	4	4	16	4	4	4	4	4	8	8	0	96
HV Station Lead Assessor	32	10	10	8	40	16	16	16	32	24	24	24	16	268
HV Station Structural Assessor	32	0	0	0	0	16	0	0	16	8	0	0	0	72
HV Station Support	32	10	10	8	40	16	16	16	16	16	16	8	0	204
Geotech engineering deliverables	8	16	16	8	8	8	8	8	8	24	24	24	0	160
Civil engineering deliverables	8	16	16	8	8	8	8	8	8	24	24	24	0	160
Mechanical engineering deliverables	16	8	8	8	8	8	8	8	8	24	24	24	16	168
Structural engineering deliverables	16	16	16	8	8	8	8	8	8	24	24	24	16	184
LV Electrical engineering deliverables	8	16	16	8	8	8	8	8	8	24	24	24	0	160
HV Station engineering deliverables	8	8	0	0	16	8	0	0	8	24	24	24	16	136
Design and Drafting deliverables	0	0	0	0	0	40	40	40	40	40	0	0	0	200
Procurement / subcontract activities	8	32	32	32	32	32	32	32	0	0	0	0	0	232
Cost Estimating	0	0	0	0	0	0	16	16	32	32	40	8	0	144
Scheduling	16	0	0	0	0	0	0	16	24	24	24	0	0	104
Admin delvierables	8	8	8	8	8	8	8	16	24	24	24	24	8	176
Subtotal hours														6,198
S&L Travel (# travelers)	13				13	4							4	

HGE

January 31, 2020

Jorge Sanchez
Project Manager / Technical Advisor
Puerto Rico Electrical Power Authority
Engineering and Technical Services
Penuelas, Puerto Rico

Ref.: **Structural Engineering Services**
Project: **Costa Sur Tanks Structural Analysis**
Location: **Penuelas, PR**

PROJECT DESCRIPTION:

Due to the recent earthquake on Jan 07, PREPA decided to perform an structural assessment and visual inspection to 12 tanks located in the Costa Sur facilities including:

- VT to all tanks (12ea)
- API 653 in service inspection to 4ea (see table below)
- Structural Assessment to all (12ea)

SCOPE OF WORK

1.0 External Structural Visual Inspection

The external visual inspection of all tanks will consist in looking into damages due to the earthquake, wear and tear, shell, roof and connections or any other situation visually identified as out of code, as well as foundations. The inspection will be performed by an API 653 certified inspector and a PE structural engineer. All inspections will be external since the tanks are in service. This inspection will determine if the tanks are suitable for continue in service. API 653 in service inspection will be performed to 4 of the 12 tanks. A final report with findings and recommendations will be issued after the assessment completion.

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2.0 Settlement calculation and Report

Settlement readings will be performed as per appendix B of API 653. Level measurements will be obtain around the tank shell, 12" above the foundation ring in the tank shell. The diameters, height and number of tanks are as follows::

Diam / Height	Tank No	Inspection
70 ft / 48 ft	Agua Cruda	(Visual)
48 ft / 42 ft	Agua Demi-5	(Visual)
48 ft / 42 ft	Agua Demi-6	(Visual)
100 ft / 48 ft	Agua Demi-5	(Visual)
100 ft / 48 ft	Agua Demi-6	(Visual)
48 ft / 40 ft	Agua Condensada-5	(Visual)
48 ft / 40 ft	Agua Condensada-6	(Visual)
219 ft / 48 ft	Heavy oil - R-2	(Visual and UT)
219 ft / 48 ft	Heavy oil - R-3	(Visual and UT)
80 ft / 48 ft	S-4	(Visual)
80 ft / 48 ft	S-5	(Visual and UT)
35 ft / 48 ft	Light Oil - LDS-7	(Visual and UT)

Data gathering will take 10 to 12 working days. Report will be submitted 10 working days after the data gathering is completed.

Notes:

1. To perform the above assessment, the contractor will provide us with the following:

   a. Complete access to the areas;

   b. Provide a PO for the total of the engineering fees presented in this proposal

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HGE

Professional services requested by your company will be invoiced as per the following hourly rate:

- Licensed Professional Engineer /Architect - $150/hr
- Professional Surveyor - $125/hr
- Assistant Engineer - $125/hr
- REVIT Designer - $70/hr
- CAD Draftmen - $50/hr
- Clerical / Administrative - $30/hr
-

The project will be billed per phase as follows

Professional Fees and Method of Payment

1. Mobilization fee and Insurance cost	**$18,000.00**
2. API 653 Visual Inspection and UT tests	**$40,000.00**
3. Settlement measurements and drawings	**$18,000.00**
4. Engineering Report	**$10,000.00**
5. CIAPR Special Stamps	**$ 90.00**
TOTAL	**$86,090.00**

A mobilization fee of $18,000.00 will be billed prior work starts. Invoices must be paid in the first 60 days after is submitted. After 60 days, a finance fee of 2% will be applied to the invoice. Cancelation of contract will incur in a cancelation fee of 30% of the unbilled work, plus the work already done.

A PO needs to be issued before work begins.

Cordially

Alan Heinsen, MECE, PE
President
HGE PSC

HGE PSC
PO.BOX 190953, San Juan PR 00919
Tel. 787-528-8911 Fax. 787-765-9764
Email: aheinsen@hglobaleng.com

HGE

PROJECT AUTHORIZATION FORM

Project Name: **Costa Sur Tanks Structural Assessment**

Project Location: *Penuelas, PR*

Proposal Date: January 31, 2020

CLIENT Name: Jorge Sanchez
Project Manager / Technical Advisor
Puerto Rico Electrical Power Authority
Engineering and Technical Services
Penuelas, Puerto Rico

Special Comments_____

PROJECT ACCEPTANCE

The Terms and Conditions of this Project, including the terms and conditions on this and the attached pages are:

Accepted on_____ of 2020

_____
Signature of authorized representative

_____
Print or type name of authorized representative and title

Note: Professional liability shall not exceed the compensation received in this project.

HGE PSC
PO BOX 190953, San Juan PR 00919
Tel. 787-528-8911 Fax. 787-765-9764
Email: aheinsen@hglobaleng.com

Attachment F

Informe Mensual de Eventos Importantes

Enero 2020

SALIDA UNIDAD DIA HORA	UNIDAD AFECTADA / CAUSA SALIDA	PLANTA	GENERACION PERDIDA (MW)	FRECUENCIA MIN (HZ)	FRECUENCIA BAJO 59.2 HZ (SEG)	CARGA INTERRUMPIDA	TIEMPO INTERRUPCION (MIN)	ENTRADA UNIDAD DIA HORA
20-Jan-20 6:32 PM		PRCR 26	0	0.0	Relevo de carga programado por deficiencia en generación. Se relevaron 14 MW, afectándose aproximadamente 8,395 clientes.	ST 0 SD 48	20-Jan-20 7:20 PM	
28-Jan-20 6:49 PM		PRCR 26	0	0.0	Relevo de carga programado por deficiencia en generación. Se relevaron 26 MW, afectándose aproximadamente 20,336 clientes.	ST 0 SD 66	28-Jan-20 7:55 PM	

D = UNIDAD DISPARO CON UNA CARGA DE...
R = UNIDAD REDUJO SU CARGA EN...
T = EVENTOS EN RED DE TRANSMISIÓN...
ST = SISTEMA TRANSMISIÓN...
SD = SISTEMA DISTRIBUCIÓN...
RC = RELEVO POR CONTINGENCIA
PRCR = PLAN RELEVO DE CARGA ROTATIVO...
O = OTRAS CAUSAS AJENAS A LA CENTRAL...

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C., 20460

ASSISTANT ADMINISTRATOR
FOR ENFORCEMENT AND
COMPLIANCE ASSURANCE

JAN 3 1 2020

Adam Kushner
Hogan Lovells US LLP
Columbia Square
555 Thirteenth Street, NW
Washington, D.C. 20004

RE: No Action Assurance for Puerto Rico Power Authority for Fuel Consumption and Analysis

Dear Mr. Kushner:

This letter is in response to your January 14, 2020, request, on behalf of the Puerto Rico Electric Power Authority (PREPA), for No Action Assurance (NAA) regarding the operation of certain electric generating units operated by PREPA in Puerto Rico. More specifically, this letter responds to that portion of PREPA's request that seeks relief for the fuel consumption limits and fuel quality and quality analysis requirements described below. Beginning on or about December 28, 2019, and continuing through at least January 7, 2020, Puerto Rico has experienced multiple earthquakes and aftershocks that have caused extreme damage to its power grid. Among other things, the earthquakes have rendered the Costa Sur power station, a critical baseload station, inoperable. On January 7, 2020, the Governor of Puerto Rico signed an Executive Order delaring a state of emergency throughout Puerto Rico; on January 16, 2020, the President signed a major disaster declaration for Puerto Rico.

The U.S. Environmental Protection Agency has determined that issuance of this NAA is necessary to enable PREPA to supply electricity to residential and business customers. Because the request for an NAA covers multiple units in varying operating circumstances, after discussions with counsel for PREPA the EPA has determined that the most appropriate way to timely address the requested action is to issue this NAA covering a subset of the units identified in the January 14, 2020 request. To that end, as set forth below, this NAA addresses the generating units identified in Table 1 below for the permit provisions and requirements of law specifically identified in the Table.

The EPA has determined that issuing an NAA, as detailed below, is in the public interest given the conditions in Puerto Rico. Through the issuance of this NAA, the EPA is continuing its commitment to address the very difficult circumstances caused by recent earthquakes.

Nothing in this exercise of enforcement discretion relieves any person of the obligation under law, if any, to report emissions from the operation of equipment covered by this action. Pursuant to this NAA, the EPA will not enforce violations of the following requirements that occur during the period of this NAA:

- The fuel consumption limits identified in Table 1 for the identified Generating Unit; and
- The fuel quality and quality analysis requirements identified in Table 1 for the identified Generating Unit, to the extent that the requirements mandate that the analysis of the fuel sample must be completed prior to firing of the fuel in the Generating Unit.

This NAA is subject to the following conditions:

1. Fuel consumption limits: Once the NAA terminates, in calculating the 365-day rolling total fuel consumption, PREPA may exclude fuel consumption data from days it operated pursuant to this NAA and instead calculate the 365-day rolling total fuel consumption by including 365 days of fuel consumption data from consecutive days immediately prior to the effective date and immediately after the termination date of this NAA, but excluding each day that PREPA operated a covered Generating Unit pursuant to this NAA. PREPA must, however, also provide the Puerto Rico Department of Natural and Environmental Resources with the 365-day rolling total fuel consumption calculation using the total fuel consumption data during the time it operated pursuant to this NAA;
2. Fuel quality and quality analysis: Where results of the fuel quality analysis are not available prior to the need to burn the fuel, PREPA will rely on bulk analysis documentation from the fuel supplier regarding the content of the fuel to show that the fuel is compliant with the required standard. PREPA will also not blend the newly received fuel with other fuel not known to be compliant prior to receipt of its own fuel quality analysis results. In the event PREPA becomes aware that it is burning noncompliant fuel, through receiving lab results or otherwise, PREPA will notify the EPA immediately and timely take any actions required by EPA to address the noncompliant fuel;
3. To the best of its ability, while the NAA is in effect PREPA will report on fuel consumption for the 365 days prior to this NAA in accordance with any reporting requirement in an applicable permit or regulation;
4. PREPA informs the EPA within 48 hours that it has obtained sufficient generation from units compliant with the Clean Air Act and all applicable permits to allow discontinuation of operation of covered Generating Units under this NAA; and
5. PREPA complies with all conditions imposed by territory or local authorities on these emergency operations.

PREPA must submit a report to the EPA within thirty (30) days of the termination of the NAA containing the following information:

1. The name, address, and contact information for the person submitting the report;
2. A description of the amount of fuel used for each covered Generating Unit during the period this NAA is in effect;
3. A description of how the energy was used, including any benefits provided to the public; and
4. A description of any instances in which fuel quality analysis results received after PREPA began burning newly-received fuel indicated that the fuel was not compliant.

The report referenced above must be sent by email to Gregory Fried, Chief, Stationary Source Enforcement Branch, within EPA's Air Enforcement Division, at fried.gregory@epa.gov. The report

must be in portable document format (PDF) and be clearly labeled as "Report for PREPA Generators Operated Pursuant to the No Action Assurance First Issued (insert date of issuance of this NAA)." Where the information for these reports is not available due to the emergency circumstances, the EPA would accept instead an explanation of those circumstances and specifically how they prevented the collection or transmission of that information.

This NAA terminates at 11:59 PM Atlantic Standard Time, April 30, 2020. The EPA will assess whether an extension to or revision of this NAA is necessary and appropriate. The EPA reserves the right to revoke or modify the NAA if the EPA believes that such action is necessary to protect public health and the environment. This NAA does not apply to any other federal requirements that may apply to regulated activities at this facility other than those listed above. The EPA intends to use the period of the NAA to evaluate the appropriate longer-term approach for addressing this situation.

The issuance of an NAA for this period of time is in the public interest. Through today's NAA, the EPA is continuing its commitment to address the very difficult circumstances caused by the recent earthquakes. Nothing in this NAA is intended to over-ride Puerto Rico or local authorities.

Please contact Gregory Fried, Chief, Stationary Source Enforcement Branch, with questions. Mr. Fried can be reached at (202) 564-7016 or fried.gregory@epa.gov.

Sincerely,

Susan Parker Bodine

cc: Peter D. Lopez, Regional Administrator, EPA Region 2

TABLE 1: Covered Generating Units and Associated Clean Air Act Permit Requirements

Facility	Generating Unit	Clean Air Act Permit Requirements
Palo Seco	GT 1-1 (21MW)	Palo Seco Title V permit No. PFE-TV-4911-70-1196-0015 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B) and V(B)(c)–(d).
Palo Seco	GT 1-2 (21MW)	Palo Seco Title V permit No. PFE-TV-4911-70-1196-0015 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B) and V(B)(c)–(d).
Palo Seco	GT 3-1 (21MW)	Palo Seco Title V permit No. PFE-TV-4911-70-1196-0015 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B) and V(B)(c)–(d).
Aguirre	Combined cycle gas turbine "CCGT" 1-1 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B), V(B)(c)–(d), and V(C).
Aguirre	CCGT 1-2 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B), V(B)(c)–(d), and V(C).
Aguirre	CCGT 1-3 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B), V(B)(c)–(d), and V(C).
Aguirre	CCGT 1-4 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B), V(B)(c)–(d), and V(C).
Aguirre	CCGT 2-1 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B),

Facility	Generating Unit	Clean Air Act Permit Requirements
		V(B)(c)–(d), and V(C).
Aguirre	CCGT 2-3 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B), V(B)(c)–(d), and V(C).
Aguirre	CCGT 2-4 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B), V(B)(c)–(d), and V(C).
Mayaguez	GT-5 (54MW)	Mayaguez construction permit no. PFE-50-0307-0286-I-II-C for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions II; and III(A)(31)–(33) and (37).
Mayaguez	GT-6 (54MW)	Mayaguez construction permit no. PFE-50-0307-0286-I-II-C for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions II; and III(A)(31)–(33) and (37).
Mayaguez	GT-7 (54MW)	Mayaguez construction permit no. PFE-50-0307-0286-I-II-C for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions II; and III(A)(31)–(33) and (37).
Mayaguez	GT-8 (54MW)	Mayaguez construction permit no. PFE-50-0307-0286-I-II-C for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions II; and III(A)(31)–(33) and (37).
Cambalache Peakers	2 (83MW)	Cambalache PSD Permit Modification for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Attachment I (general description); and Attachment II, Conditions VII(1), (2), (5), and X.
Cambalache Peakers	3 (83MW)	Cambalache PSD Permit Modification for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Attachment I (general description); and Attachment II, Conditions VII(1), (2), (5), and X.

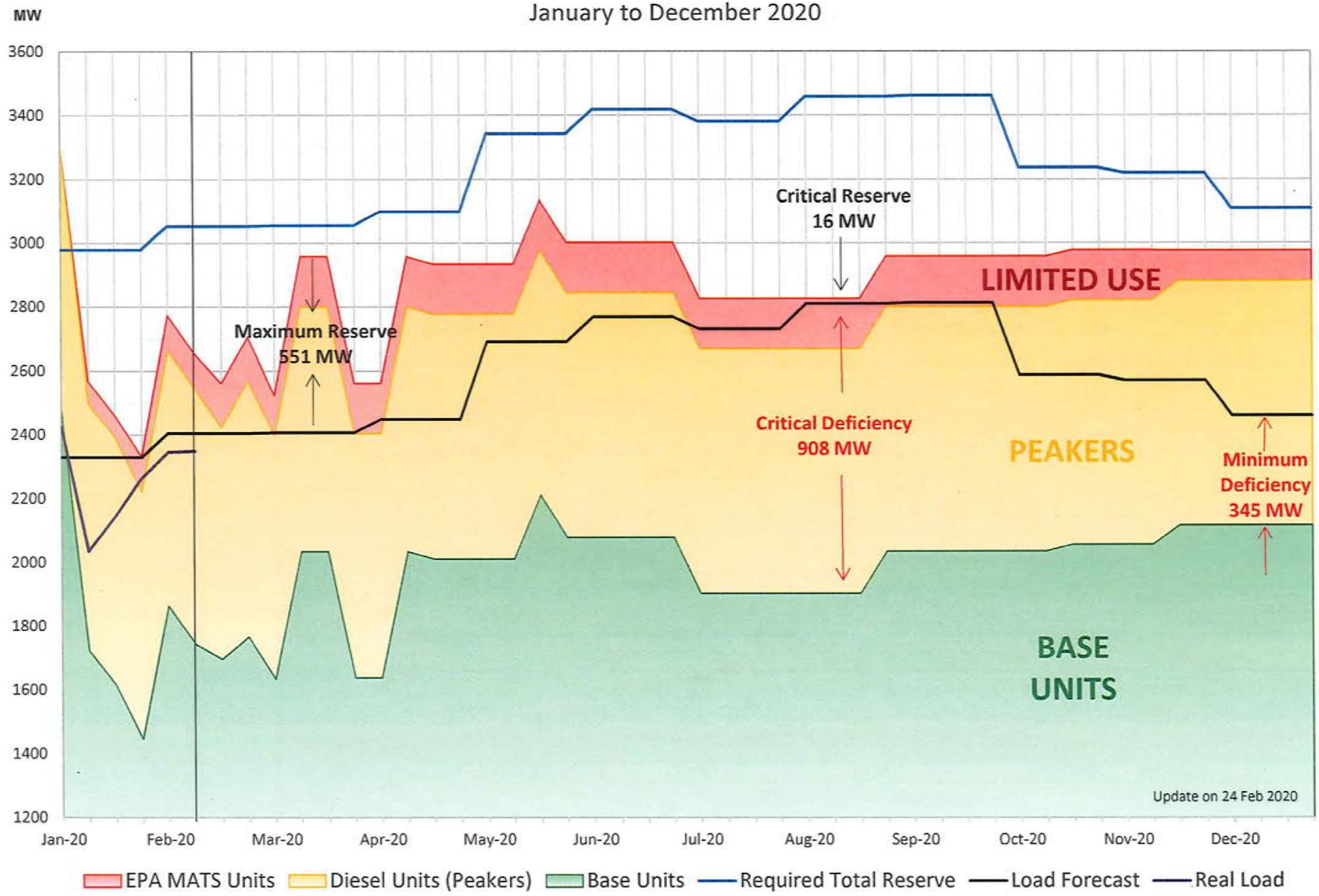
Facility	Generating Unit	Clean Air Act Permit Requirements
Daguao Peakers	GT 1-1 (21MW)	Daguao Title V permit No. PFE-TV-4911-63-0212-0447 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(A)(1) and V(A)(1)(c)–(d).
Daguao Peakers	GT 1-2 (21MW)	Daguao Title V permit No. PFE-TV-4911-63-0212-0447 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(A)(1) and V(A)(1)(c)–(d).
Yabucoa Peakers	GT 1-1 (21MW)	Yabucoa Title V permit No. PFE-TV-4911-77-0707-0759 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(A)(1) and V(A)(1)(c)–(d).
Jobos Peakers	GT 1-2 (21MW)	Jobos Title V permit No. PFE-TV-4911-30-1107-0991 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(A)(1) and V(A)(1)(c)–(d).

Attachment H

Load Forecast vs Generation Availability

Generation Availability without Costa Sur

January to December 2020



Attachment I

GOVERNMENT OF PUERTO RICO
Puerto Rico Electric Power Authority
Governing Board

RESOLUTION 4759
REQUEST FOR PROPOSAL TEMPORARY EMERGENCY GENERATION

WHEREAS: The Puerto Rico Electric Power Authority (PREPA) is a public corporation and an instrumentality of the Government of Puerto Rico created by Act No. 83 of May 2, 1941, as amended (Act 83). PREPA was created to provide electrical energy in a reliable way, contributing to the general welfare and sustainable future of the people of Puerto Rico, maximizing benefits and minimizing social, environmental and economic impacts. In addition, PREPA provides a service based on affordable, fair, reasonable, and non-discriminatory cost that is consistent with environmental protection, non-profit, focused on citizen participation and its clients.

WHEREAS: Act 83 authorizes PREPA, in the management of its purposes, to grant contracts and formalize all the instruments that are necessary or convenient in the exercise of any of its powers.

WHEREAS: Section 15(1)(a) of Act 83 states that all purchases made and contracts for supplies or services, except professional services, entered into by PREPA, including its capital construction contracts, shall follow a bid process.

WHEREAS: According to Section 15 (2)(f) of Act 83, a competitive bidding process shall not be necessary, when in the judgment of the Governing Board, a competitive request for proposal (RFP) process for the acquisition of goods, equipment, materials or services must be carried out to encourage greater competition, reduce the risk of collusion, and promote the best possible terms and conditions in benefit of greater savings and reduction of costs and the operational expenses of PREPA.

WHEREAS: On January 7, 2020, a 6.4 magnitude earthquake with its epicenter near Tallaboa, Guayanilla, shook the Island and caused damage to part of the infrastructure of the southwest region, including considerable damages to the Costa Sur Power Plant. The event caused the units' shutdown, which triggered a general blackout across the Island. Privately owned and operated EcoEléctrica suffered damages to its ancillary equipment, water tanks, and roads, which prevented its two combined cycle units, with a 507 MW capacity, to be dispatched for eight (8) days. These natural gas-powered units were started-up again and connected to the grid on January 15, 2020.

"We are an equal opportunity employer and do not discriminate on the basis of race, color, gender, age, national or social origin, social status, political ideas or affiliation, religion; for being or perceived to be a victim of domestic violence, sexual aggression or harassment, regardless of marital status, sexual orientation, gender identity or immigration status; for physical or mental disability, for veteran status or genetic information."

WHEREAS: As indicated by the Generation Director, engineer Daniel Hernández Morales, Costa Sur had the most significant damages of PREPA's power plant fleet. The boiler and generator structures, water and fuel tanks, steam and natural gas piping, console room, buildings, and roads, were all affected by the 6.4 magnitude earthquake and other subsequent earthquakes and aftershocks. PREPA is still working with the damage assessment of the 820 MW capacity power plant, which is expected to cost tens of millions to be brought back to operational shape, if that were to be a feasible option.

WHEREAS: The loss of Costa Sur's 820 MW for an undetermined time because of current damages, due to the continuous aftershocks and seismic activity, creates concerns of another blackout on the Island. PREPA has provided power to its clients since the major event with all available units, but this situation leaves us with an almost non-existent power reserve. At present, the preliminary determination is that temporary generation will be required for at least twelve (12) months, with PREPA's option to extend for an additional six (6) months.

WHEREAS: The solution to this unforeseen emergency situation requires up to 500 MW generation units that are fast, cost-effective, and reliable and can be installed in a short term, at various locations identified or accepted by PREPA, to be available before summer, which is our high-power-demand season and also coincides with Puerto Rico's hurricane season. Units shall be able to synchronize to PREPA's electrical system and be available to be dispatched from PREPA's Control Center. Generating units shall have the latest technology to maximize its efficiency and compliance with all environmental requirements. All equipment shall be able to comply with local and federal environmental requirements.

WHEREAS: Based on the emergency situation, PREPA is seeking federal funds managed by the Federal Emergency Management Agency (FEMA) to help with the lease and operations and maintenance (O&M) costs, while a permanent generation solution is available. PREPA will seek the necessary guidance to comply with all federal regulations required for federal funding assistance.

WHEREAS: On February 4, 2020, Mr. Nelson Morales-Rivera, Finance Director, certified that the budget for Fiscal Year 2019-20 includes the funds for this contract, with the amount of $30,000,000 under account 01-1748-17596-555-287. These funds are from the emergency account of PREPA's Generation Directorate.

WHEREAS: PREPA's General Counsel considered Mr. Fernando Padilla-Padilla's memorandum and concluded that, with the Governing Board's approval, the temporary generation for the Costa Sur steam units' loss may be procured through a request for proposals (RFP) competitive procurement process, since it will provide PREPA with the opportunity to negotiate the best possible terms and conditions with the interested participants, to obtain the required temporary generation.

THEREFORE: In accordance with Act 83, PREPA's Governing Board resolves to:

1. Authorize an RFP process that may result in a contract or contracts for temporary generation to compensate for Costa Sur Power Plant's steam units' loss generation due to the emergency caused by the earthquakes.

2. Approve and appoint the members of the Evaluation Committee of the RFP, as recommended by PREPA's Chief Executive Officer. The members of the Evaluation Committee responsible for the evaluation and selection of the best alternative(s) are: engineer Daniel Hernández, engineer Efran Paredes, Mr. Neftalí González-Cruz, Mr. Fernando Padilla-Padilla, and attorney Astrid Rodríguez-Cruz.

3. Appoint Mr. Fernando Padilla-Padilla as the Chairman of the Evaluation Committee.

4. The Evaluation Committee will select an independent party to advice the Committee in the evaluation and ranking of the proposals, in order to make the selection based on the scoring criteria set forth in the RFP.

5. The Chief Executive Officer will inform the Governing Board of the result of the procurement process before the award of the contract(s) resulting from the RFP.

6. The General Counsel will review the terms and conditions of the contract(s) to ensure that they meet the legal requirements regarding government contracting to address the emergency situation.

7. PREPA will submit the RFP documents for the approval of the Puerto Rico Energy Bureau prior to launching the RFP.

Approved in San Juan, Puerto Rico, this sixth day of February, two thousand and twenty.

Eduardo Arosemena-Muñoz
Secretary of the Board

U.S. Department of Homeland Security
Federal Emergency Management Agency
FEMA-4473-DR-PR
Joint Field Office (JFO)
2050 Ponce By Pass
Space D-1
Ponce, Puerto Rico 00716

FEMA

MAR 13 2020

Ottmar J. Chávez Piñero
Executive Director, COR3
Governor's Authorized Representative
P.O. Box 195014
San Juan Puerto Rico 00918-5014

RE: FEMA-4473-DR-PR
PR Electric and Power Authority
Request for Information

Dear Mr. Chávez Piñero:

This letter is in response to March 2, 2020 request for Public Assistance (PA) funding or for Direct Federal Assistance (DFA) for emergency power generation needed as a result of the earthquake damage to Costa Sur Power Plant. The information submitted by the Applicant is insufficient to complete the review of the request.

Currently, FEMA is evaluating the Applicant's request for eligibility. If deemed eligible, funding will be made available thru the PA Program; FEMA will not be considering the provision of temporary generation via DFA. FEMA is requesting the following additional information or clarification to complete its evaluation:

1. Has PREPA identified any other alternate power generation sources to mitigate the shortage in base generation? If so, list those alternate sources.
2. Provide clarification on the period for the use of the emergency generators.
   PREPA's letter indicates the estimated cost per month to be $71M, then discusses that the "high demand season forthcoming that will commence in next May and extend until end of next October" which is 6 months. However, in Attachment I – *Resolution 4759 Request for Proposal Temporary Emergency Generation*, it indicates "At present, the preliminary determination is that temporary generation will be required for at least twelve (12) months, with PREPA's option to extend for an additional six (6) months".
3. Provide the timeline to get Units #5 and #6 operational.
   PREPA's letter mentions the timeline to do safety and structural assessments of the facility, but there is no indication on the timeline to make Units #5 and #6 operational. All other units in Costa Sur Power Plant were out of service or not operational before the earthquakes.
4. Provide the benefit cost analysis.
   PREPA's letter (page 5), indicates: "a benefit cost analysis will be performed to ultimately maximize the use of the funds and limit excess cost while still achieving the desired outcome."
5. PREPA has indicated potential insurance coverage for repairs to the facility and the emergency protective measures. Provide a copy of both insurance policies.

6. Provide additional details of plan or processes that PREPA will put in place to ensure that no costs associated with federal reimbursements be passed on to the clients.
7. Provide specific location(s) where PREPA plans to place the generator(s).
8. Provide specific geographic area(s) that will receive the power that is generated.
9. Provide a report showing the actual power generated by Units #5 and #6 of CSPP during the last 12 months.

FEMA asks that the information is provided within two weeks of receiving this letter and the response be mailed to dr-4473-pa@fema.dhs.gov; afterward FEMA will review the documentation and take appropriate action.

Should you have any questions or require further assistance, please contact Sidney Melton, Infrastructure Director for FEMA-4473-DR-PR at sidney.melton@fema.dhs.gov.

Sincerely,

Alex Amparo
Federal Coordinating Officer
FEMA-4473-DR-PR

CN 078-04495
Rev. 11/17

GOVERNMENT OF PUERTO RICO

Puerto Rico Electric Power Authority

March 28, 2020

Mr. Ottmar J. Chávez Piñero
Executive Director
Central Office for Recovery and Reconstruction, COR3
Governor's Authorized Representative
Commonwealth of Puerto Rico
P.O. Box 42001
San Juan, PR, 00940-2001

Dear Mr. Chávez:

RE: FEMA-4473-DR-PR
PR Electric and Power Authority
Request for Information

In response to FEMA's Request for Information dated March 13, 2020, the Puerto Rico Electric Power Authority ("PREPA") hereby provides the following information to complete our request for Temporary Generation submitted on March 2, 2020. However, please note that recent events experienced within the last two weeks has led management to realign its repair strategy on Costa Sur Power Plant and thus request for an extension for certain items originally requested.

1. *Has PREPA identified any other alternate power generation sources to mitigate the shortage in base generation? If so, list those alternate sources.*

   PREPA is constantly searching for alternate sources to ultimately reduce or eliminate the need to lease temporary generators. The Authority is currently facing a very restricted scenario considering that generating units owned are not currently in use due to their obsolescence, to be decommissioned, or damaged beyond repairs. For those units that may be repaired PREPA performed a cost reasonableness analysis to determine if dollar investment will return higher value generation against potentially leasing new units. Such analysis greatly factors that units are old, less efficient and more likely to break-down.

   We hereby request and extension for an additional two weeks to incorporate changes currently being contemplated.

"We are an equal opportunity employer and do not discriminate on the basis of race, color, gender, age, national or social origin, social status, political ideas or affiliation, religion; for being or perceived to be a victim of domestic violence, sexual aggression or harassment, regardless of marital status, sexual orientation, gender identity or immigration status; for physical or mental disability, for veteran status or genetic information."

GOVERNMENT OF PUERTO RICO
Puerto Rico Electric Power Authority

2. *Provide clarification on the period for the use of the emergency generators. PREPA's letter indicates the estimated cost per month to be $71M, then discusses that the "high demand season forthcoming that will commence in next May and extend until end of next October" which is 6 months. However, in Attachment I - Resolution 4759 Request for Proposal Temporary Emergency Generation, it indicates "At present, the preliminary determination is that temporary generation will be required for at least twelve (12) months, with PREPA's option to extend for an additional six (6) months".*

   The Request for Proposal addresses the need to replace loss base generation caused by the shut-down of Costa Sur. Therefore, the need will ultimately cover the period for which Costa Sur Power Plant is under repair. However, considering that such period may be limited in nature PREPA's published RFP provides for new terms under the proposed Lease Operating Agreement ("LOA") reducing term periods to three-month intervals. Such provides management with the flexibility to cease the LOA if and when new or alternate source of base generation is achieved. Please refer to **Attachment A for PREPA's RFP 102750 Temporary Emergency Generation.**

3. *Provide the timeline to get Units #5 and #6 operational. PREPA's letter mentions the timeline to do safety and structural assessments of the facility, but there is no indication on the timeline to make Units #5 and #6 operational. All other units in Costa Sur Power Plant were out of service or not operational before the earthquakes.*

   Due to recent events PREPA is currently revising its repair timeline to Costa Sur Power Plant, specifically expediting certain repairs that will ultimately expediate base generation. We expect to provide the revise timeline within the following two weeks.

4. *Provide the benefit cost analysis. PREPA's letter (page 5), indicates: "a benefit cost analysis will be performed to ultimately maximize the use of the funds and limit excess cost while still achieving the desired outcome."*

   A benefit cost analysis will be performed once all proposals subject to review are received. Once such analysis is completed PREPA will provide the related documentation to COR3 and FEMA for review. Please refer to **Attachment A** for proposal timelines included within the RFP.

5. *PREPA has indicated potential insurance coverage for repairs to the facility and the emergency protective measures. Provide a copy of both insurance policies.*

"We are an equal opportunity employer and do not discriminate on the basis of race, color, gender, age, national or social origin, social status, political ideas or affiliation, religion; for being or perceived to be a victim of domestic violence, sexual aggression or harassment, regardless of marital status, sexual orientation, gender identity or immigration status; for physical or mental disability, for veteran status or genetic information."

PREPA maintains 2 insurance policies that may pay for earthquake related losses: (1) a policy issued by MAPFRE and various other multinational insurers that provides up to $275 million in coverage, above a $25 million retention, for property damage, business interruption, and extra expense losses; and (2) a policy issued by OIL Limited, which provides up to $250 million in coverage for property damage losses, after PREPA establishes $300 million in underlying property damage loss. The OIL policy does not cover business interruption or extra expense related losses.

The insurers were notified of the claim shortly after the January 7, 2020 earthquake. The MAPFRE/Multinational insurers have appointed RTS as their loss adjuster, and OIL has appointed Lloyd Warwick International as its adjuster.

RTS attended two site inspections at the Costa Sur plant in January, and RTS and Lloyd Warwick and their experts also attended site inspections and briefings at Costa Sur on March 10-11. In addition, RTS and PREPA have participated in multiple meetings and calls concerning the claim.

Following the March 10-11 inspections, RTS expressed a willingness to recommend a $25 million advance payment toward PREPA's property damage loss. We are awaiting confirmation that certain London-based insurers agree with this recommendation. Once confirmed in writing, PREPA, FOMB, and the insurers will file a motion in the Title III court to inform PREPA's creditors about this payment, and assuming there are no objections from creditors, the funds will be paid to PREPA. PREPA and RTS will discuss additional advance payments in upcoming months as PREPA continues to document its losses and repair cost estimates.

RTS and MAPFRE also have expressed an interest in funding efforts by PREPA to restore generation capacity at locations that were not damaged in the earthquake to minimize PREPA's extra expense losses during peak demand months later this year. It remains unclear whether this option is viable for the insurers. The parties continue to discuss this issue and PREPA anticipates receiving a position from the insurers on this issue on or about March 24, 2020.

Please refer to **Attachment B** for Insurance Policy Documentation.

6. *Provide additional details of plan or processes that PREPA will put in place to ensure that no costs associated with federal reimbursements be passed on to the clients.*

PREPA's rate structure establishes the billing mechanism for services that PREPA provides to all its customers. Its rate structure is built through formulas and charges

"We are an equal opportunity employer and do not discriminate on the basis of race, color, gender, age, national or social origin, social status, political ideas or affiliation, religion; for being or perceived to be a victim of domestic violence, sexual aggression or harassment, regardless of marital status, sexual orientation, gender identity or immigration status; for physical or mental disability, for veteran status or genetic information."

that ultimately recover operational costs leaving PREPA without any profit. PREPA's biggest operational expense, Fuel and Energy Purchase, is billed directly to costumers through an Adjustment Clause and distributed within its base through an allocation consumption methodology. All other main costs are billed to clients through a charge per KWh rate limited to recoup operational expenses incurred.

Therefore, any costs reimbursed to PREPA, that being FEMA or other Federal Agencies, is ultimately reduced and netted off within the adjustment clause to effectively limit such charges to the clients.

PREPA through its Organic Law is only allowed to bill its clients all necessary expenses to generate, transmit and distribute the electric power served to the customers. Therefore, PREPA does not bill its customers for expenses already covered by any third party and, in case of receiving a reimbursement for an expense already been billed, it will reconcile such reimbursement within its Adjustment Clause in the next billing period.

Please refer to **Attachment C *Billing of Fuel and Purchased Power Expenses*** provided by the Head of Planning and Research Division outlining PREPA's effort and methodology for third party contributed expenses and reimbursement.

7. *Provide specific location(s) where PREPA plans to place the generator(s).*

Refer to **Attachment D for Sites for Temporary Generation**. As previously explained, such list identifies **possible** sites for which the generation will be placed. Final determination will be subject to proposals received. Sites are limited to certain specifications, thus not all generators will be suited to all sites. Once proposals are received PREPA will perform an analysis to determine which generator or generators will ultimately meet their needs.

8. *Provide specific geographic area(s) that will receive the power that is generated.*

PREPA is a Government owned public utility corporation that provides power to over 1 million clients island-wide. All generation units are integrated into the system, thus providing power to all clients not to specific areas. The Authority's transmission and distribution system is interconnected island-wide and not limited by geographical areas, thus if one generation unit fails another long-distance generation unit can be powered on to replace such generation loss.

"We are an equal opportunity employer and do not discriminate on the basis of race, color, gender, age, national or social origin, social status, political ideas or affiliation, religion; for being or perceived to be a victim of domestic violence, sexual aggression or harassment, regardless of marital status, sexual orientation, gender identity or immigration status; for physical or mental disability, for veteran status or genetic information."

Therefore, the whole island will benefit from the power generated through these temporary generators.

9. *Provide a report showing the actual power generated by Units #5 and #6 of CSPP during the last 12 months.*

Please refer below for data regarding Costa Sur Generation Units 12 Month historical performance. Also, please refer to Attachment E for Hourly generation report supporting documentation.

Puerto Rico Power Authority
Costa Sur Generation Unit 5 & 6 - 12 Month Historical Report

Amounts detailed herein is generation produced for the whole month period specified. Such were obtained from the Month end Hourly generation report referenced below.

	Unit 5	Unit 6	Report
January	177,890	153,330	20190131 Hourly Generation Report
February	171,140	139,980	20190228 Hourly Generation Report
March	200,180	193,550	20190331 Hourly Generation Report
April	161,450	185,270	20190430 Hourly Generation Report
May	157,850	198,310	20190531 Hourly Generation Report
June	202,670	192,020	20190630 Hourly Generation Report
July	193,580	153,540	20190731 Hourly Generation Report
August	5,460	221,470	20190831 Hourly Generation Report
September	116,750	210,720	20190930 Hourly Generation Report
October	150,720	202,690	20191031 Hourly Generation Report
November	191,170	190,740	20191130 Hourly Generation Report
December	197,700	193,320	20191231 Hourly Generation Report
January	37,795	37,355	20200131 Hourly Generation Report
February	-	-	20200229 Hourly Generation Report

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As previously mentioned, PREPA is realigning repairs schedule to Costa Sur Power Plant, specifically expediting certain repairs to generation units. We expect to provide and complete the requested information within a two week timeframe.

Therefore, we hereby respectfully request that FEMA grant a two week extension to items one and three.

Regards,

Arturo Deliz
DFMO Administrator

C, Alex Amparo - FEMA

GOVERNMENT OF PUERTO RICO
Puerto Rico Electric Power Authority

Request for Proposals

RFP 102750
Temporary Emergency Generation
March 12, 2020

Issued by the Puerto Rico Electric Power Authority

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1. Statement of Requirements

This Request for Proposal (RFP) contains confidential and proprietary information that is the property of the Puerto Rico Electric Power Authority (PREPA), which is provided for the sole purpose of permitting the recipient to respond to the RFP. The recipient agrees to maintain such information as confidential and not to copy nor disclose the RFP information to any person outside the group directly responsible for responding to its contents. The contents of this document may not be used for any purpose other than preparation of a response or proposal to this RFP.

2. Abbreviations, Acronyms and Definitions

Words and terms defined in this Section shall have the same meaning throughout all parts of this RFP and the LOA.

Addenda/Addendum means a supplemental document with additions, deletions, and **modifications** to the provisions of the RFP, after the release date of the RFP.

Contractor or Selected Proponent means a proponent awarded the LOA resulting from this RFP.

EPA means Environmental Protection Agency.

Evaluation Committee means a committee designated by PREPA's Governing Board Officer, which will evaluate all complete proposals pursuant to the criteria listed in this RFP.

Final Acceptance means the written approval by PREPA that the entire work has been completed and the final cleaning up of the site has been performed and all Punch List items have been rectified.

Government Entity means any department, agency, board, commission, body, bureau, office, public corporation, or instrumentality of the Executive Branch of the Government of Puerto Rico, whether existing or to be created in the future.

Inspection means a periodic action comprising a careful scrutiny of an item, carried out without dismantling and using all the senses as required, to detect anything that causes the item to fail to meet unacceptable condition. Note: An inspection may be followed by an operational review.

Key Individuals means an individual who will play an important role in the engagement or LOA on behalf of a Team Member resulting from this RFP.

LOA has the meaning defined in Section 4.

Local Parties means local subcontractors or professionals (which may include architects and consulting engineers) and relevant service providers who are based in or have a significant on-going business presence in Puerto Rico.

Notice to Proceed or **NTP** means a letter from an authorized PREPA representative to the **contractor**(s) stating the date the contractor(s) can begin work subject to the conditions of the LOA. The performance time of the LOA commences on the NTP date.

PREPA means the Puerto Rico Electric Power Authority.

Proponent means a (i) natural person, (ii) legal person, (iii) joint venture, or (iv) partnership, or (v) consortium of individuals, and/or partnerships, and/or companies or other entities that submit a response to this RFP that is not currently debarred.

Public Interest means any government action directed to protecting and benefiting citizens at large, whereby essential goods and services are provided for the welfare of the population.

Team Member means a member of a Proponent. Team Members shall be identified in Proponent' submissions and not be changed without the consent of PREPA.

Redacted copy means a version/copy of the proposal with the information considered confidential and/or proprietary "blacked out" or "edited" as defined Section 22 of this RFP.

Team Member means a member of a Proponent. Team Members shall be identified in the proposals and must not be changed without the prior consent of PREPA.

Unit (or unit) means a module composed of a generator and turbine for power generation **purposes**. The technology proposed by the Proponents capable of provided the capacity and energy required under this RFP.

3. Introduction

3.1 About PREPA

The Puerto Rico Electric Power Authority (PREPA) is a public corporation and governmental entity of the Commonwealth of Puerto Rico, created pursuant to Act 83 of May 2, 1941, as amended, with the duty of providing electric power in a reliable manner, contributing to the general welfare and the sustainable future of Puerto Rico, maximizing the benefits and minimizing the social, environmental and economic impacts.

PREPA is empowered to make contracts, sell, and buy assets and real estate, borrow money and issue bonds.

PREPA's objectives:

- Reduce energy cost
- Promote smart energy consumption
- Protect the environment, lives, public health and safety

Strategies to achieve these objectives:

- Reduce operating expenses
- Increase efficiency
- Minimize energy theft

- Diversify energy sources
- Establish smart grid for energy control and consumption monitoring
- Maximize use of advanced technology

3.2 Background

On January 6, 2020, a magnitude 5.8 earthquake struck the southwest region of Puerto Rico causing considerable damage to homes and other private and public structures and a partial electric power blackout. Then, on January 7, 2020, Puerto Rico's most destructive earthquake in a century, a magnitude 6.4 earthquake that jolted residents, caused major damage to private and public structures and infrastructure, including mechanical and structural damage to PREPA's Costa Sur power plant, an 820 MW power plant providing nearly 25% of the electric power on the island. The island suffered a complete electric power blackout as a result of the earthquake and the Costa Sur power plant failure. On January 11, 2020, a magnitude 5.9 earthquake once again rattled Puerto Rico's southwestern coast.

Since late December 2019, there have been more than 100 earthquakes or aftershocks of magnitude 3 or higher, which were strong enough for residents near the epicenters to feel, according to the U.S. Geological Survey (USGS). Various earthquakes of magnitude 5 or higher have also struck the island.

3.3 Project Need

At present and with the information available to date, the time to repair the Costa Sur power plant has been estimated at approximately twelve (12) months. The damage assessments are still underway as damages are significant and this is the first event of this magnitude affecting a large power plant in PREPA's fleet. However, a full inspection has not been completed due to the continuing earthquakes/aftershocks affecting the power plant structure. Some experts have preliminarily indicated that the plant may not be viable for use due to safety concerns. The temporary or permanent loss of Costa Sur's 820 MW generation has caused the following:

- Immediate shortage of reserve capacity
- Conditions that threaten lives, public health and safety
- Possible significant damage to improved public or private property Shortage of operating capacity to serve the peak demand months (June onwards)
- Shortage of Primary and Secondary frequency regulation
- Extensive use of less efficient and less flexible generating units using higher cost fuels
- Reduced power system inertia and dynamic and transient stability margins
- Alteration of PREPA's generation fleet maintenance schedules

3.4 Purpose and Intent

Pursuant to the stated objectives and strategies, PREPA publishes this RFP to solicit submittals from interested and qualified firms that can provide the scope of work detailed herein (the Project). The purpose of this RFP is to award qualified firms which shall provide time-critical, dual fuel, low sulfur diesel, liquefied natural gas (LNG), or renewable generation to temporarily power existing switchyards substations in Puerto Rico as part of disaster recovery in response to the Governor of Puerto Rico's Executive Order 2020-01 and the United States' President's Disaster Declaration of January 16, 2020, and to provide capacity

and energy to replace the loss of the 820 MW Costa Sur power plant in Guayanilla until it can be repaired, replaced or alternate solutions have been secured.

LOAs may be awarded to those qualified persons or legal entities whose proposals conform to this RFP and are most advantageous to PREPA. Proponents shall demonstrate in their proposals their capacity to conduct all works in compliance with the Scope of Services indicated herein. PREPA will evaluate and analyze the information provided in the proposals and will determine which companies meet the minimum requirements.

This Project seeks reputable and experienced firms (contractors) that can enter into a lease, installation, operation and maintenance agreement with PREPA for dispatchable generation capacity. Under the LOA, the Contractor(s) shall lease, transport, place/install, test, commission, operate and maintain up to 500 MW of continuous total net generator output capacity at different locations and divided by generation blocks per site. The Contractor(s) shall be responsible for all equipment, delivery, installation, interconnection, testing, commissioning, operation and maintenance of this generation infrastructure, as well as for its eventual retirement, per PREPA's requirements, all applicable industry codes and standards (latest revisions), and federal and local regulations.

PREPA may consider all non-variable, dispatchable generation, dual fuel, low sulfur diesel, liquefied natural gas, or renewable technologies, in-land based or barge-mounted configurations, including single-cycle aeroderivative gas turbines, RICEs, combined cycles, Battery Energy Storage Systems (BESS) or other renewable sources.

Proponents can propose a combination of these resources (with a required generation of up to approximately 500 MW) to be installed at various locations, described in Appendix A. Additional or alternate sites may be proposed (including Vieques), and will be evaluated by PREPA to determine the interconnection viability to the grid and compliance with the requirements outlined in Appendix A. These additional or alternate sites will be subject to PREPA's approval.

The required generation of up to approximately 500 MW shall be installed at various locations identified by PREPA (see Appendix A).

PREPA reserves the right to award LOA(s) to one or more Contractors.

Due to the emergency circumstances, PREPA expects that the Proponent will not be responsible for the units' operation permitting processes for the sites described in Appendix A. The proposal shall include design emission parameters for required fuels of the units, with and without water injection. See Appendix B for Fuel Specifications. Proponents must clearly identify all environmental requirements and all process inputs. Proposals that do not comply with this requirement will be rejected. Selected Proponents shall be responsible for any other permit required for the installation of the unit. For additional or alternate sites not mentioned in Appendix A and suggested by the Proponents, the Proponent(s) shall be responsible for all permits, all infrastructure, fuel supply, and any other applicable requirement for the successful operation of the units.

PREPA expects to award LOAs per site to the best offers that substantially meet the established requirements and the intent of the RFP. As such, if PREPA does not receive proposals that meet the minimum requirements of this RFP for one or more sites mentioned in Appendix A, PREPA reserves the right to resolicit proposals for said sites to proponents

whose offers complied with this RFP's minimum requirements and that proposed for other sites, per the Evaluation Committee's determination.

The Proponent shall assume a capacity factor of 90%, and all technologies proposed must be capable of providing energy at a 90% capacity factor.

PREPA prefers that the generating units may actively participate in primary and secondary frequency regulation.

PREPA expects the temporary generation units to be installed at existing PREPA facilities except at Costa Sur (see Appendix A). PREPA will be responsible for the fuel supply.

Although the Costa Sur power plant cannot be used to install generation units, its switchyard 230 kV can be used as a transmission center and interconnection point. This site will be considered an alternate site and fuel supply will be the responsibility of the Contractor.

PREPA has preliminarily discussed the Project with FEMA, who has agreed to move forward with a procurement process for temporary generation, in compliance with the appropriate sections of the Stafford Act, for reimbursement of the Project's costs.

The Contractor shall fully comply with Puerto Rico (local) and federal laws and regulations and shall conform to FEMA documentation and audit requirements.

For locations described in Appendix A, there is sufficient space for placing temporary generation units per site of no less than 20 MW each. Although PREPA prefers units of 20 MW or more for these locations, PREPA may consider proposals with units of smaller capacity. Appendix A describes the actual capacity of the output transformers of each possible site, but if a new transformer, breaker and BOP equipment are furnished with the unit, the generator's output could be more. Proposals shall include a top-view layout of the arrangement of all equipment included in it for each proposed site.

PREPA will consider new and used generation units. Used units must be able to meet the operational requirements during the term of the agreement. Proponents shall include in the proposal evidence of all maintenance records which demonstrate the actual conditions of the units. The units will be subject to PREPA's inspection prior to acceptance. Proponents shall include in the proposal the emissions profile of the required units for the following criteria pollutants – sulfur dioxide (SO2), oxides of nitrogen (NOx), particular matter (PM), particular matter less than 10 microns (PM10), particular matter less than 2.5 microns (PM2.5), volatile organic compounds (VOC), sulfuric acid mist (H2SO4), carbon monoxide (CO) and Formaldehyde, hazardous or toxic air pollutant emissions (HAPS & TAPS), water requirements, wastewater discharge, solid or hazardous waste. Proponents shall also identify whether the units have inherent emission controls and whether they can be retrofitted with emission controls.

The Proponent shall include in their proposals the necessary components for the BOP, as the output transformers, breakers and BOP, if they are available for immediate delivery. If not, the temporary generation units shall have the capacity to be connected to the existing transformers per site. The bus voltages to connect the transformers are 38 kV, 115 kV and 230 kV, as described in Appendix A.

In addition to transporting, providing and installing the units, the work requirement includes commissioning of the system(s), operation and maintenance of the unit(s) for the period of time required to adequately respond to the emergency situation, and that the Contractor(s) uninstall and demobilize the units. If the need for temporary generation of power remains after an initial period, PREPA may exercise an option to extend for an additional period(s).

The Contractor shall incorporate necessary and authorized resources to perform this work to applicable engineering, safety, construction standards, and local and federal regulations, in the timeliest manner possible (no later than June 1, 2020), and with optimal cost containment.

4. Form of LOA & Contract Term

As a result of this RFP process and contingent upon the necessary authorizations for current contracting processes, PREPA expects to award the Selected Proponent(s) one or more Lease & Operating Agreements (each, an "**LOA**"). Exhibit 1 sets forth a form of Lease & Operating Agreement for Dual-Fuel Generation and Exhibit 2 sets forth a form of Lease & Operating Agreement for Renewable Energy and Battery Storage Generation. The contract term is not to exceed eighteen (18) months and is subject to the availability of funds, and the requirements of the Puerto Rico Energy Bureau. The contract term proposals shall be presented as follows:

1. Initial term of twelve- (12) months with PREPA's option to extend the contract for six (6) additional months,
2. Initial term of nine- (9) months, with PREPA's option to extend in three- (3) month terms (up to eighteen months),
3. Initial term of six- (6) months, with PREPA's option to extend in two- (2) month terms (up to eighteen months),
4. Initial term of three-(3) months with PREPA's option to extend in three- (3) month terms (up to eighteen months),
5. Proponent may offer alternative initial contract terms and extension options (not to exceed eighteen months).

PREPA reserves the right to re-bid the LOA after the expiration of the original term or under several LOA breach circumstances from the Selected Proponent.

PREPA reserves the right to cancel or modify this RFP process at any time and is not obligated to enter into an LOA even upon its completion, after the selection of the Selected Proponent, or during LOA negotiations.

Proponent must review the form of LOAs set forth in Exhibits 1 and 2, and state any exceptions to its clause(s) and may suggest proposed modifications to the contract language with which the Proponent disagrees or for which Proponent is unable to satisfy the condition or requirement, including an explanation of the review (if any), unless Proponent agrees and can comply with all of the conditions and requirements of the contract. PREPA will evaluate the proposed modifications to the LOA and may, at PREPA's discretion, affect overall scoring of the proposals. PREPA reserves the right to reject any or all proposed modifications.

5. RFP Timeline

The following are the key dates of the RFP process. Please note that the RFP timeline includes target dates that may change. The Proponents are responsible for monitoring the PowerAdvocate© website for updates to the RFP timeline and other important information.

Milestone	Date Due
Request for Proposal issued	March 12, 2020
Kickoff meeting	March 18, 2020
Site Visits	March 18-20, 2020
Proponents Request for Clarifications	March 26,2020
PREPA response to Request for Clarification	March 31, 2020
Proposal submittal deadline (RFP Closing Date)	April 7, 2020
Interviews/Presentations with Proponents*	April 16-20, 2020
Selection announcement	April 22, 2020

**May not be required, yet, per PREPA's RFP Guide, the Evaluation Committee may request interviews with proponents in the competitive range.*

Submittals that have not been completely uploaded by April 7, 2020, 8:00 PM AST will not be considered. Proponents shall allow themselves enough time to completely upload their proposals and to confirm that the files are available for PREPA's review.

6. Request for Proposal Submission

Proponents shall submit their proposals through the Upload Documents tab of the RFP **102750** event on the PowerAdvocate© Platform. A Redacted Copy as required in Section 22 (*Confidentiality of Responses and Proprietary Information must also be uploaded*). All RFP submissions, inclusive of the pricing, technical information, discounts and other requested details are to be submitted via PowerAdvocate© on or before 8:00 pm AST, April 7, 2020. Proposals must be signed by the Proponent's authorized representative or by the authorized person whose name appears (or will appear) in PREPA's Supplier Registry Office. The signature must be shown along with the name in print and the capacity or position held.

Proponents must also provide hard copies of (i) the uploaded proposal in PowerAdvocate and (ii) the Redacted Copy on or before 3:30 pm AST, April 8, 2020, to the following address:

Postal Address:

Puerto Rico Electric Power Authority
Supplier Registry Office
PO Box 3670151
San Juan, Puerto Rico 00936

or

Physical Address:

Supplier Registry Office
1110 Ponce de Leon Avenue
Third Floor, Office 305
NEOS Building, Santurce, PR

6.1 Proposal Requests for Clarification

A Proponent may submit a Request for Clarification (RFC) to PREPA for explanation or interpretation of any matter contained in this RFP no later than 8:00 p.m. AST, March 26, 2020, via PowerAdvocate© through the Messaging Tab of the event *RFP 102750.* If responses to the RFC constitute a modification or additional information to the original RFP, PREPA will provide such clarification through Addenda posted on PowerAdvocate no later

than March 31, 2020. Questions should NOT contain proprietary information, as answers may be published in the public domain to all participants. PREPA does not guarantee answers for all questions or comments received. PREPA will NOT accept or address any questions that are not submitted as stated in this section.

Proponents must submit their questions in the Request for Clarification form included as Annex F. This document must be submitted in Word format and each question must reference the page number, section of the RFP document, attachment or article of the LOA. PREPA will respond to the requests for clarification in the column labeled 'Clarification Response'.

Proponent is solely responsible for monitoring this site for additional information, updates and Addenda concerning the RFP. Any changes or modifications to the RFP terms, conditions or specification will be made through Addenda posted on PowerAdvocate.

The PowerAdvocate Guide is included as part of this RFP as Exhibit 3. For technical assistance with this sourcing platform please contact PowerAdvocate's technical support at (857) 453-5800 or via email at support@poweradvocate.com. Proponent shall be responsible for ensuring that all of their proposal documents are fully uploaded before the closing date and time of the event.

6.2 Communications

Verbal questions will NOT be accepted. All communications must be through the Messaging Tab of PowerAdvocate, and addressed to the following PREPA Procurement Representatives for this RFP:

Delis T. Zambrana
Natalia Martínez Lugo

Neither the Proponents nor the Team Members or any of their respective advisors, employees or representatives shall contact or attempt to contact, either directly or indirectly, at any time during the RFP process, any of the following persons on matters related to the RFP: (a) any member of the Evaluation Committee; (b) any advisor of PREPA for this RFP process; (c) any employee or representative, directors, officers or consultants of PREPA. Proponents Team Members are prohibited from directly or indirectly contacting other Proponents, such as directors, officials, employees, consultants, advisers, agents or representatives, in matters related to its proposal preparation, content, or presentation. Proposals shall be submitted with no connection to, knowledge, information comparison, or arrangement, with other proponents such their directors, officials, employees, consultants, advisers, agents or representatives.

Communications with PREPA representatives, other than the abovementioned procurement representatives, or with relevant entities of the Federal Government or local government, regarding any matter related to the contents of this RFP are prohibited during this RFP process.

Failure to comply with these communications restrictions will result in rejection of the firm's proposal.

6.3 Proposal Modification

PREPA may allow for proposal modifications if they are submitted by the closing date and time established in Section 5 of this RFP, and submitted in accordance with this RFP's proposal submission instructions.

6.4 Expenses and Rejections

Neither PREPA, the Government of Puerto Rico nor any of its instrumentalities, will be responsible for any expenses in the preparation and/or presentation of the proposals, oral interviews or disclosure of any information or material received in connection with this RFP.

PREPA reserves the right to reject any and all proposals received in response to this RFP, when determined to be in PREPA's best interest, and to waive minor noncompliance in a proposal. PREPA further reserves the right to make such investigations as it deems necessary as to the qualifications or perceived conflicts of interest of any and all firms submitting proposals in response to this RFP. The mere appearance of a conflict of interest must constitute sufficient cause for the outright rejection of a proposal(s). In the event that any or all proposals are rejected, PREPA reserves the right to re-solicit proposals.

7. Prohibited Communications

During this RFP, the only communications allowed are with the designated procurement representatives indicated in Section 6 of this RFP. Communications with other PREPA representatives or other persons from the State or Federal Government regarding any matter related to the contents of this RFP are prohibited during the submission, evaluation and selection processes. **Failure to comply with these communications restrictions will result in rejection of the firm's proposal.**

8. Scope of Work

PREPA is pursuing temporary generation at different sites to respond to the current emergency situation due to the aftermath of several earthquakes experienced in January 2020. The temporary generation is to respond to conditions that threaten lives, public health and safety. Through this RFP process, PREPA is seeking temporary generation from qualified firms for the different sites via the LOAs. The Proponents shall maximize the use of the existing systems in place located at each different site as time is of the essence for this Project.

As PREPA recovers from the earthquakes, temporary replacement generation is required to create a more resilient system to enable quicker, more effective recovery. PREPA expects Proponents to consider the latest and most reliable technology which can provide flexible generation while minimizing environmental impacts. A flexible generation resource with fast response to changing conditions would address the current emergency situation.

Upon the preliminary evaluation of the current and foreseen generation capacity, this RFP requires the supply of temporary power generation of up to 500 MW size range based on equivalent operating characteristics (start times, ramp rates, heat rate curves, etc.), designed and capable of operating at a capacity factor of 90% for at least twelve (12) months. The units shall be capable of burning low sulfur diesel and natural gas fuels if shown to be available and acceptable under all local and federal laws and regulations, and compatible with the proposed solution. Solutions may be land-based or floating. BESS using renewable sources may also be

considered. The generating units included in the proposal are required to be compliant with all applicable environmental and land use or maritime (if applicable) laws and regulations, including but not limited to, the Clean Air Act and Clean Water Act, the regulations promulgated thereunder, with future permits' required modifications according with state and federal plans. The generating units shall include appropriate emission controls.

The units must have the capability to start from standby to full load in no more than thirty (30) minutes, shall have black-start capability, and must operate at an all-in cost that is as low as possible. The units shall be equipped with modern environmental control equipment to meet all current state and federal environmental compliance requirements.

The following items are requirements for this scope of work:

a. The power generation facilities shall be located in different locations and shall be connected to the 38 kV, 115 kV or 230 kV (locations described in Appendix A), able to operate in islanded mode in case of an outage and an isolated operation is required. In islanded mode, units shall be black-start capable and be able to provide services such as frequency, voltage control, and be able to respond to deviations in generation.

b. Units shall be operational, ready to export energy to PREPA on June 1, 2020.

c. The units shall be compliant with the EPA and Puerto Rico Department of Natural Resources (formerly under the Environmental Quality Board) requirements, that include but are not limited to, New Source Performance Standards and Hazardous Air Pollutant Standards. If the Project has any impact on local marine environment, the Selected Proponent shall ensure compliance with all federal and local marine permitting requirements.

d. Units shall be equipped with modern environmental control equipment to meet all current state and federal environmental compliance requirements.

e. Proposals shall include the maintenance schedule for each unit for the next eighteen (18) months of the power generation units offered as a solution must be included in the proposal.

f. The Proponent shall furnish documentation showing that the proposed equipment has been commercially demonstrated/successful and provide an experience list of similar model projects with similar delivery schedules.

g. The units must be individually and collectively capable of being dispatched from standby to full load in no more than thirty (30) minutes. PREPA prefers minimal time from dispatch from standby to full load.

h. The Project will be connected to the existing transformer. The Proponent shall include in its proposal breakers and all necessary BOP equipment with the existing capacity. If the proposed unit(s) exceeds the capacity of the existing transformer, the Contractor shall supply a new step-up transformer, breaker and BOP equipment, per site.

i. All units must be capable of synchronizing to the current electrical system and provide automatic load following services.

j. The units shall be designed and capable of operating at an annual average equivalent availability factor of at least 90 percent (90%) for the contract term.

k. Proposed solutions shall be a complete and grid connected generating facility including

everything required for the operation of the units. The proposal shall include detailed plans for operation during inclement weather and emergency situations.

l. Time is of the essence for this RFP. PREPA is seeking a complete solution that complies with all requirements of this RFP, including, but not limited to, permitting, installation, interconnection, testing, and commissioning in the shortest possible time (see Scoring Criteria).

m. Power units shall have the capability of remote operation.

n. Units shall communicate to PREPA system through SCADA.

o. Dispatch of the units shall be at PREPA's sole discretion and electric system needs.

p. All proposed solutions must also be black-start capable.

q. Operation and maintenance (O&M) portion of the services shall be all-inclusive, including furnishing and maintaining an adequate inventory of all spare parts throughout the contract term. The O&M services shall be designed to meet the high availability target and expected capacity factor of the units.

r. The Contractor shall arrange for storage of all spare parts during the term of the O&M services in an appropriate environment to maintain the spare parts in a new condition.

s. Installation of the units shall be provisional, not permanent.

t. The units shall be capable of synchronizing with the existing units in each location, if applicable.

The Contractor shall develop and submit the following documents for PREPA evaluation and approval.

Table 1 Submittal Register

Submittal Description
Work Plan, QCP, Safety Plan, Security Plan, Facility Response Plan (FRP); Spill Prevention, Control and Counter-measures Plan (SPCCP)
Barge/Airplane Plan
Transportation Plan to the project site
Emergency Notification Plan for shut down
Life Support Plan, if necessary
Emergency Evacuation Plan
Site Preparation Plan
Fueling Plan (e.g. transfer, storage, line, valves, pressure testing)
Line clearance to connect GT to an operational transformer
Black Start Generator Mfn Commissioning
Installation Plan
Pre-Commissioning Plan
Commissioning plan

AVR and Generator Protection
Operation and Maintenance Plan
Final Report

8.1 Deliverables

Proponents shall outline the types of deliverables and timelines they produce, in performing the services being procured through this RFP. At a minimum, the key deliverables to be provided shall include such items as:

a. A description of the project scope, generation units, control system and electrical interconnection

b. Schedule for scope of work to support delivery of electric power to the grid including required time for engineering/design, interconnection tie-in, and startup/commissioning, as appropriate

c. Permitting plans and schedule

d. Schematic drawings for the interconnection

e. Ownership structure

f. Typical units' characteristics including energy and mass-balance, minimum load, maximum load, ramp rates, start times, minimum down times, and any part load changes in energy cost. Performance curves, including environmental, shall be provided for part and full-load operation of the units.

g. The price proposals shall include all costs associated with the complete installation of the units including design, procurement, construction, testing, commissioning, consumables, and operation and maintenance of the facility. The pricing proposals shall include a fixed component, as well as the O&M cost. All pricing shall be based on achieving a net equivalent availability factor of at least ninety percent (90%) for the contract term. Proponent shall include any energy cost deviations at part load operation. Costs shall be provided over the range from minimum load to maximum load. Any additional impact to cost due to starting and stopping units shall also be specified.

h. A list of spare parts with pricing (price paid by the Contractor).

i. PREPA will apply a penalty of 100% of the proposed daily rate for up to sixty (60) days of delays in the project schedule. Delays of more than sixty (60) days shall result in termination of the LOA.

The selected Proponent shall be required to negotiate an LOA with PREPA. The Contractor shall be responsible for all applicable taxes.

8.2 Mobilization/Demobilization

a. Mobilize/demobilize materials, equipment, supplies, controls, instruments, generator(s), personnel, etc., to the site.

b. Door-to-door transportation of the units, materials, supplies, instruments, gas, etc., to embarkation location via barge/airplane

c. Transport materials, supplies, equipment, personnel, etc., from port/air terminal to the project site.

d. Remove and transport the same, once the project is complete, back to stateside or original locations.

e. Moore equipment barge, as needed.

f. Coordinate with the port and/or airport for timely passage.

9. Site Preparation

a. Photographic documentation of pre-installation condition of the critical facility, transport vehicles, life support, generator, units, etc.

b. Coordinate with, and/or notify appropriate jurisdictions concerning permits, clearances, etc.

c. Coordinate with PREPA to verify operational status of the substation and location of the units. PREPA point of contact (POC) to be indicated post-award.

d. Install command posts (trailers, offices, work areas, etc.) for the Contractor and, PREPA and/or government personnel and must include phone and internet connectivity, during the contract term.

10. Temporary Power Installation

a. Place units per PREPA requirements.

b. If applicable for the technology proposed, cut, fabricate the temporary fuel line from the storage tank to the generation units and from the tank to the operational generator.

c. Install flow meters on the generation units' fuel line.

d. Install the temporary pump station.

e. Construct medium voltage cable chase at least two (2) feet above ground to mitigate flooding concerns and associated damage to the terminals and other operation to the system.

f. Install emergency notification system in the event of a shutdown

g. Perform pre-commission of the system to verify system function as the generation units are being installed

A. Pre-Commissioning

Perform and report completion of the following pre-commissioning tasks, as applicable to:

a. Battery systems
b. Control & vibration systems
c. Ventilation and combustion air systems
d. Turbine and hydraulic start lubrication systems

e. Generator lubrication oil system
f. Fuel system
g. Fire system
h. Turbine auxiliaries
i. Water injection system
j. Any other pre-commissioning tasks based on new or used units' factory requirements

B. Commissioning

PREPA will accept invoices for the project upon completion of the commissioning of the units and once the units are in successful operation. PREPA will pay on a monthly, leasing basis, and will not prepay costs associated with mobilization or demobilization.

a. Perform commissioning on the installed system per manufacturers' requirements to include:
    1. Manual start-up and stop
    2. Emergency notifications sent to Site Management Team in the event of shut down mode
    3. Verify voltage, wattage, frequency per the following:
        - net power output of not less than 20 MW
        - Frequency 60 Hz
        - Low voltage connection for transformers at PREPA sites of 13.8 kV
b. Revisit unit functional needs until criteria is met.
c. Provide the following information to PREPA regarding protective relays:
    1. Copy of the Protective Relay Study and its settings for the proposed mobile power system.
    2. Mobile power system protective relay settings criteria.
    3. Grant access to PREPA to protective relay events.
    4. Access to mobile power system proprietary software/program to allow communication with relays.
    5. Mobile power system unit data sheet.
    6. Protective relay single line diagram for the integration to PREPA's protection system. Such single line diagram shall be discussed with and approved by PREPA's Electrical Maintenance and Electric System Protection Division.
    7. The Contractor shall be responsible for the entire wiring and testing of their protective relay system. PREPA shall be responsible for their protective relay system within its transformer and substation.
    8. The Contractor shall share the temporary generation units' technical information (and any other applicable information) with PREPA to determine fit of protective relays and install per PREPA requirements.

9. The Contractor shall provide a generation demand multifunction meter. The generation demand multifunction meter can be installed or provided in the mobile power unit's control room.
10. The Contractor shall provide PI server data and capability of transmission to PREPA of actual Megawatts, Megavars, Frequency, RPM, turbine operation mode.
11. The Contractor shall provide a power unit operation procedure, specific to each site operations, including all start-up, synchronizing and black start sequences for interconnection to PREPA's grid.
12. Protective Systems Specifications are included as Appendix C.

11. Final Walk Through

Once Commissioning is complete, [PREPA/Contractor] shall perform a final walk through with applicable stakeholders to verify completions of system per scope requirements.

12. Operation and Maintenance (O&M)

a. The Contractor shall ensure spare parts are on hands and the system operates without interruption
b. The Contractor shall be prepared to provide the following real time data to PREPA's Monacillo Dispatch for the duration of O&M.
    1. Power output
    2. MVAR
    3. Gas turbine and generator RPM o Other parameters determined appropriate

13. Site Restoration

Restore site to pre-existing conditions to include the following:

a. Remove unit, barriers, emergency notification system from the site and transport back to the place of leasing
b. Remove signs and posts

14. Final Report

Provide Final Report, including executive summary, chronology and descriptions for work completed, etc.

15. Proposal Assumptions

The Proponent shall incorporate the following assumptions into their proposals to maintain consistency. Actual quantities/criteria may vary during the construction and verification of assumptions will be made throughout project execution.

Any existing fuel storage tank can be used as a temporary power fuel storage tank and it meets API standards. It can be used as is and no repairs are needed.

a. Medium voltage and control wiring will be installed over head and not on the ground due to safety concerns

b. The Contractor shall provide pricing for leasing the units, including control systems, wiring, appurtenant devices, etc.

c. For fuel burning generation, cutting the existing fuel line to create passage to the temporary generation unit site is needed and fabricating fuel conveyance piping to the generation unit and operational PREPA generator is required.

d. The Contractor shall provide a first aid competent representative to support basic health needs (e.g. small cuts, surficial burns).

e. Assume unarmed security at the sites power station is required twelve (12) hours per day during installation. During O&M, assume ten (10) hours of operator on-site time and 14 hours of unarmed security. The Contractor will respond to resolve any operating issues is required within two (2) hours of outage.

f. No utilities will be identified within the described work zones or will be impacted throughout this work.

g. No temporary access road improvements will be needed for the execution of this work.

h. The Evacuation Plan will include required protocols once understood in the submittal item post-award.

Assume the connection point is the 13.8 kV side of these transformers and the Contractor will have to provide a line connection plan to integrate with a transformer that currently operational.

16. Proposal Requirements, Evaluation and Selection Process

The intent of the RFP is to encourage responses to fulfill PREPA's requirements and clearly communicate its approach to successfully provide the services. PREPA will examine all proposals in a proper and timely manner to determine if they meet the proposal submission requirements. Proposals that do not meet the submission requirements or have omitted material documents must be rejected. All proposals submitted before the closing date and time of the RFP will be evaluated.

During each proposal meeting, the Evaluation Committee will independently evaluate all submission requirements. The Evaluation Committee will assign a score for each evaluation criterion listed below in this Section up to the maximum points, unless they are determined to be non-responsive according to the intent of the RFP.

PREPA reserves the right to require additional information or clarifications after the proposals' due date to assist the Evaluation Committee in gaining additional understanding of the proposal.

16.1 Proposal Requirements

All proposals shall address the following items in the exact order listed below. Proponents must upload the requirements requested herein with a section table of contents containing the titles of the following subsections and the page numbers

where the subsections are located. Proponent is responsible for including evidence or information of all the submission requirements of this RFP. The Evaluation Committee will only take into consideration for the evaluation process the information provided by the Proponents in their proposal.

Minimum Requirements:

1. **Project Delivery Schedule:**

    a. Shall provide a proposed project schedule (Critical Path Method) based on continuous work with key and critical tasks for the proposed due date.

    b. Shall submit a description of the proposed working plan, including working methods, logistics, list of resources (manpower and equipment), permitting process, and subcontractors, if any.

2. **Offeror's Experience:**

    a. Shall submit a brief description of the firm, including firm name, address, phone number, email address and authorized primary contact person; brief firm history, including the current permanent staff size as well as local organization structure.

    b. Shall provide evidence of applicable past experience and performance related scope projects for the principal firm and any subcontractors. The subcontractor's role on the project shall be clearly established.

3. **Financial Capacity: Proponent must provide the following for the entity that is proposed to guaranty the transaction on an initial and on-going basis:**

    a. The Proponent shall provide the latest documentation or reports from any rating agencies or debt analysis entities on the contracting entity (or guarantor). PREPA reserves the right to use its available credit evaluation tools to evaluate financial capacity of the proponent.

    b. Provide information regarding the firm's financial stability, capacity and resources.

    c. Provide a statement confirming awareness of PREPA's standard payment term of net sixty (60) days upon approval of invoice and supporting documents.

    d. Shall provide a Surety Bond-ability Letter establishing that the Proponent has been underwritten with sufficient bonding capacity and approved by a surety company to perform this project. This letter shall include a power of attorney. Proponent must ensure that their bonding company provides the bonds required endorsed in Puerto Rico.

4. **Price and Performance Proposal**

A. Required Data

Fixed Capacity Price (stand by; price for lease, operation and maintenance)	$	Per month for a 12-month LOA
Fixed Capacity Price (stand by; price for lease, operation and maintenance)	$	Per month for a 9-month LOA
Fixed Capacity Price (stand by; price for lease, operation and maintenance)	$	Per month for a 6-month LOA
Fixed Capacity Price (stand by; price for lease, operation and maintenance)	$	Per month for a 3-month LOA
Unit Dispatch Cost Price (full load)	$	Per MWh for a 12-month LOA
Unit Dispatch Cost Price (full load)	$	Per MWh for a 9-month LOA
Unit Dispatch Cost Price (full load)	$	Per MWh for a 6-month LOA
Unit Dispatch Cost Price (full load)	$	Per MWh for a 3-month LOA
Guaranteed net output per unit		MW
Heat Rate (LHV)		BTU/kW-hr
Guaranteed annual units equivalent availability factor		%
Units minimum load		MW
Ramp Rate		Minutes/MW
Price of the Generation Unit*	$	Per Unit

**This information is required for cost reasonableness analysis pursuant to 2 CFR § 200.404*

PREPA reserves the right to require additional (supplemental) information after the proposals' due date, for evaluation purposes. Proponents shall provide such information within three (3) calendar days after PREPA's notification and request.

B. Delivery and installation time (30 points)

Proposals must include a high-level project schedule and timeline identifying equipment delivery date, construction of needed local infrastructure, commissioning and commercial operation date starting from the Notice to Proceed issuance. Assume construction permits and environmental permits/waivers are available for the purposes of the requested schedule. Proposals with a shorter delivery and installation time will be favored compared to those who need more time or whose responses are vague.

PREPA will score the proposals based on a weighted percentage, up to a maximum of thirty (30) points for the soonest availability for dispatch of the proposed generation.

C. Price Proposal (30 points)

PREPA will evaluate the proposals' price based on a Levelized Cost of Energy (LCOE) formula using the net present value. Proposed units' performance parameters such as low heat rate (LHV) and net capacity shall be included in the proposal to be used for the LCOE calculation, along with the term of the initial LOA and a 90% capacity factor. Price proposals must include a monthly fixed capacity price, including only lease and fixed operation and maintenance, and unit dispatch price (per MWh) for variable O&M (and fuel if self-supplying) as separate line items.

For the LCOE, the price component will be based on the following combination: 90% unit dispatch price and 10% fixed capacity.

PREPA will score the proposals based on a weighted percentage, up to a maximum of thirty (30) points for the lowest LCOE.

D. Experience and Capacity (20 points)

Proponents must demonstrate experience and success installing and maintaining fast-track utility power generation unit(s) projects of at least five (5) years. Proponents shall demonstrate experience and success in fabricating, installing, testing, and commissioning the proposed solution. Proponents that demonstrate that the proposed solution can be dispatched in the required times than specified be favored compared to those who need more time, or whose responses are vague.

As proof of the Proponent's experience, it:

1. Shall submit an abbreviated history of firm.
2. Shall provide evidence of applicable experience and performance in at least two related scope projects within the past five years. Proposals shall include letters of recommendation and references from past projects where the proponent successfully completed within the required time of installation.
3. Shall provide qualifications and resumes of experienced key personnel (project manager, engineers, supervisors, etc.) of the proponent with at least ten (10) years of experience in similar projects.
4. Shall provide qualifications and resumes of experienced key personnel (project manager, engineers, supervisors, etc.) of the installation and/or operation and maintenance subcontractors (if any) with at least five (5) years of experience in similar projects.

E. Approach and Methodology (20 points)

Proposals that outline a clear and straightforward approach to providing fast track generation projects will receive higher scores (PREPA's expected timeline for execution of the project). Proponents shall identify key goals and objectives, and methods for providing the facilities

described herein or exceeding these goals. Proponents shall explain how they will be organized to effectively deploy support for this project and clearly identify key personnel responsible for implementing the project.

Proposals will explain the approach to completing the project within the given construction dates and site constraints, include a summary-level Critical Path Method (CPM) schedule detailing all aspects of the project, and include a detailed assessment and response to the site condition restraints.

Proponents shall outline a clear and straightforward approach and demonstrated commitment to accomplishing the schedule goal of completing the project in the least possible time. Proponents shall identify key goals and objectives, and methods for achieving high standards for the delivery of services, in expectation of meeting or exceeding these goals.

Proponents shall describe in detail the methods it will utilize to accomplish the duties at the site, and provide sketches or illustrations to explain the approaches, if necessary. This approach will include:

1. Demonstrating a clear and thorough interpretation and acknowledged assimilation of the project work scope as described herein and that are part of this RFP.
2. Satisfactorily demonstrating how the duties will be staged to minimize impacts to PREPA operations.
3. Presenting a clear and logical approach for the efficient performance of all work tasks across the proponent's entire project team.
4. Describing how the proponent's submitted milestone schedule demonstrates a clear understanding and integration of all the interrelated duties.
5. Describing how the proponent intends to address and mitigate adverse environmental materials.
6. Providing a specific and project-proven approach and plan for effective Quality Assurance/Quality Control across the Proposer's Project Team.
7. The Proposer's outline plan and commitment to safety.

F. Commitment to Complying with all Applicable Federal, and Puerto Rico Regulations

The Proponent shall submit a detailed written description of the Federal and Local process, with specific plans for permitting success. The Proponent must demonstrate an understanding of Federal and local requirements.

G. Proposal Additional Content

Proponents must upload the requirements requested in this section in the exact order (consecutive) established herein and provide a section table of contents with the following subsection titles and the page numbers where the subsections are located.

a. Cover Letter and Table of Contents

The Proponent must provide a cover letter that includes a certification that the information submitted and the Proposal is true and accurate, and that the person signing the cover letter is authorized to submit the Proposal on behalf of the Proponent. The cover letter must clearly identify the designated contact person for the engagement and provide the telephone number and email address of the contact person.

The Proposal must contain a table of contents that clearly identifies the location of all material within the proposal by section and page number.

b. Local Parties

Explain how the Local Party(ies) will add value to the team and their expected role. Identify the Key Individuals from the Local Party(ies) and provide an indication of the expected level of involvement on the day-to-day activities and interaction with PREPA.

c. Commitment to Complying with all Applicable Federal and Puerto Rico Local Regulations

Proponents shall explain their adherence to complying with all applicable Federal and Puerto Rico regulations, including those related to Public Assistance and 2 CFR Part 200 and required LOA provisions, and shall indicate what characteristics of the team set them apart in terms of commitment to comply with all laws and requirements. Proponents must also indicate what specific trainings and expertise reside within the team that reinforces the commitment to compliance. Adherence to strong ethical and integrity practices and unequivocal commitment to solid administrative practices is essential for PREPA.

d. Draft LOA

Proponents must upload a copy of the LOA in Word format and identify (redline), if any, exceptions to the terms and conditions and suggest proposed modifications to the specific LOA language with which the proponent disagrees or for which proponent is unable to satisfy the condition or requirement, including an explanation of the revision. If Proponent agrees with all terms and conditions of the LOA and understands that it can comply with all of the conditions and requirements of the LOA, a written acknowledgement of the acceptance must be included as a cover letter to the uploaded LOA.

e. Supplementary Information

Proponents may provide supplementary facts as they consider may be of assistance in the evaluation of their proposals.

f. Requirement of Legal Entities

Proponents that are corporations, partnerships, or any other legal entity, U.S. or Puerto Rico based, shall be properly registered or capable to be registered or capable and willing to registered to do business in Puerto Rico and the U.S. at the time of the submission of their proposals, and comply with all applicable Puerto Rico or U.S. laws and/or requirements. The Selected Proponent must be part of PREPA's Supplier Registry in order to execute an LOA.

Proponent must submit evidence that the firm is duly and properly organized and is qualified to conduct business in Puerto Rico or provide a statement confirming that the Proponent will be duly organized and qualified prior to LOA award, if selected.

Additionally, the Proponent must provide a sworn statement per Act 2-2018, regarding the Anti-Corruption Code for Puerto Rico. See Appendix D.

g. Required Qualifications of Proponents

Proponents shall provide information in their proposals that demonstrates the following qualifications:

i. Proponent has evidence of satisfactory performance record.

ii. Proponent has a satisfactory record of integrity and business ethics.

iii. Proponent has the necessary organization, experience, accounting and operational controls, and technical skills.

iv. Neither Proponent nor any person or entity associated who is partnering with Proponents has been the subject of any adverse findings that would prevent PREPA from selecting Proponent. Such adverse findings include, but are not limited to, the following:

1. Negative findings from a Federal Inspector General or from the U.S. Government Accountability Office, or from an Inspector General in another state.
2. Pending or unresolved legal action from the U.S. Attorney General or from the U.S an attorney general in Puerto Rico or another state.
3. Arson conviction or pending case.
4. Harassment conviction or pending case.
5. Puerto Rico and Federal or private mortgage arrears, default, or foreclosure proceedings.
6. In rem foreclosure.
7. Sale tax lien or substantial tax arrears.
8. Fair Housing violations or current litigation.
9. Defaults under any Federal and Puerto Rico-sponsored program.

10. A record of substantial building code violations or litigation against properties owned and/or managed by Proponents or by any entity or individual that comprises Proponents.
11. Past or pending voluntary or involuntary bankruptcy proceeding.
12. Conviction for fraud, bribery, or grand larceny.

17. Proposal Format and Submission Requirements

Proponents must upload their entire proposal on the tab Number 2. Upload Documents of Power Advocate©. The Proposal must include a summary table, indicating the section and page number where the proposal meets the criteria stated below. In addition, Proponents must upload the requirements in the indicated tab in each section. Non-compliance may affect the score of the proponents.

Proponents must format their proposal as follows:

1. Cover Letter and Table of Contents
2. Local Parties
3. Commitment to Complying with all Applicable Federal and Puerto Rico Local Regulations
4. Draft LOA
5. Supplementary Information
6. Requirement of Legal Entities
7. Required Qualifications of Proponents

18. Scoring Criteria

The Evaluation Committee will independently evaluate each proposal meeting all submission requirements stated above, and will assign a score for each evaluation criterion listed, up to the maximum points.

Criteria	Percentage of Total
Delivery and installation time	*30%*
Price Proposal	*30%*
Experience and Capacity	*20%*
Approach and Methodology	*20%*
Total	**100%**

The LOA will be awarded to those qualified and experienced companies whose proposals, conforming to this RFP, are in accordance with its intent and substantially comply with the established requirements herein.

The Evaluation Committee may choose to reconsider proposals with marginal scores.

The criteria will be graded using a score of 0 to 5:

0 = Information in the proposal was not applicable to the criteria, or was omitted.
1 = Poor. For example, representing that the criteria presented in the proposal does not meet PREPA requirements.
2 = Below Average, negative or disagree. For example, representing that the criteria presented in the proposal is judged to meet most of the requirements.
3 = Average, or neutral. For example, criteria judged as meeting all the minimum requirements set by PREPA.
4 = Good, positive, or agree. For example, all criteria met and improved when compared to PREPA expectations
5 = Excellent, very positive, or strongly agree. For example, representing that the criteria in the proposal best meets the requirements set by PREPA, above all other proposals.

Proponents must clearly describe how they best comply with the standards set, as the Evaluation Committee will judge how a proposal specifically answers the criteria stated in this RFP. Scores shall be higher for specific compliance findings and be lower for general or ambiguous answers.

19. Sites Visits Schedule

PREPA has scheduled visits to the locations included in Appendix A to show the available spaces, access, and electrical and mechanical interconnection points. These are the only visits programmed for this phase of the RFP process as this project is time-sensitive. Access will not be granted to these PREPA facilities on any other dates and times than those established below. Proponents are not required to join the site visits in order to submit a proposal for any specific site, but participation in these visits are strongly recommended.

Participants interested in visiting more than one of the sites shall make arrangements with their own personnel since visits to some of the locations are scheduled for the same date and time. Participants shall present a government issued identification (such as a driver's license) and wear all required safety gear to be granted access to these locations, including, but not limited to, hard hat, safety shoes, safety glasses, hearing protection, and reflective vest. Access to the sites will be denied to those not fully complying with the safety gear requirements. TWIC card holders are encouraged to bring their cards, although these are not required for access.

Location	Date	Time
Palo Seco Power Plant	March 18, 2020	1:00pm
San Juan Power Plant	March 18, 2020	3:00pm
Cambalache Power Plant	March 19, 2020	9:00am
Vega Baja Power Station	March 19, 2020	12:30pm
Aguirre Power Plant	March 19, 2020	8:30am
Jobos Power Station	March 19, 2020	10:30am
Daguao Power Station	March 20, 2020	8:30am

Yabucoa Power Station	March 20, 2020	10:30am

Those interested in joining the site visits shall be at the access gate 20 minutes before the scheduled time. No access shall be allowed after the facility walkaround begins.

20. Local Participation

Pursuant to Law Number 42 of January 21, 2018, as amended, PREPA requires Proponents to engage local contractors, professionals and relevant service providers headquartered in Puerto Rico ("Local Parties") as Team Members and Key Individuals to the greatest extent possible.

Proponents are strongly encouraged as part of this RFP to provide descriptions of their current and/or anticipated business arrangements with Local Parties and, in particular, Local Parties who are Team Members and Key Individuals for the Project, as applicable.

21. Interview

PREPA reserves the right, at its sole discretion, to require Proponents to participate in interviews with the Evaluation Committee. If PREPA elects to conduct interviews, each qualified Proponent will be required to give a strictly timed 30-minute presentation. This presentation shall highlight expertise and prior qualifications provided to similar organizations. The presentation shall also clearly explain the Proponent's approach and entire team composition. The Evaluation Committee may alter the scoring of corresponding criteria of a qualified Proponent's proposal based upon the presentation. Proponents are solely responsible for all costs or expenses incurred to attend and participate in the interview process.

22. Confidentiality of Responses & Proprietary Information

Upon completion of the RFP process, PREPA will make public its report regarding the procurement and selection process, which shall contain certain information related to this RFP process, except trade secrets and proprietary or privileged information of the Proponents. Information considered trade secrets or non-published financial data might be classified as proprietary by the Proponents. In order to ensure that documents identified by Proponents as confidential or proprietary will not be subject to disclosure by PREPA, Proponents are required to submit a Redacted Copy of their proposal. The Redacted Copy must include a written explanation of why such labeled documents are confidential or proprietary, including why the disclosure of the information would be commercial harmful, specifically refer to any legal protection currently enjoyed by such information and why the disclosure of such information would not be necessary for the protection of the public interest, and request that the documents so labeled be treated as confidential by PREPA. PREPA reserves the right to make public the redacted copies of the proposals at the conclusion of the RFP process. If a Redacted Copy is not submitted by a Proponent, PREPA will assume that the original copy of the proposal can be made public. Proposals containing substantial contents marked as confidential or proprietary may be rejected by PREPA. Provision of any information marked as confidential or proprietary shall not prevent PREPA from disclosing such information if required by law. The ultimately awarded LOA(s) and all prices set forth therein shall not be considered confidential or proprietary and such information may be made publicly available.

23. Conflicts of Interest

The award by PREPA of each LOA under this RFP shall preclude the Selected Proponent (or if a consortium, each member of the Selected Proponent consortium) from participating in the procurement by PREPA of new generation under any other RFP issued by PREPA during the LOA Term of such LOA.

Proponents are required to provide a list of any other current or former advisory LOAs the firm has/had with any Government Entity, or which bear any direct or indirect relation to the activities of the Government of Puerto Rico. Further, Proponents must provide a description of any recent historical or ongoing legal proceedings, interviews or investigations being conducted by any U.S. law enforcement agencies involving their firm or team that are related to transactions executed in or on behalf of the Government of Puerto and/or its public corporations. In addition, Proponents must provide a brief description of any work it has performed for any creditors or guarantors of the Government of Puerto Rico or any public corporation debt about their positions in Puerto Rico debt obligations. The Proponent must indicate whether this activity is ongoing, and if not, when the prior assignment concluded.

At some point in the selection process, PREPA may request information on any perceived conflict of interests. Also, PREPA may in the future request a list of direct or indirect relationships the firm or its professionals have to members of the Puerto Rico Public-Private Partnerships Authority (PPPA) or board members or executives of other Public Corporations.

The mere appearance of a conflict of interest shall constitute sufficient cause for the outright rejection of a proposal(s). PREPA reserves the right to cancel any LOA awarded pursuant to this RFP with thirty (30) days' notice in the event that an actual conflict of interest, or the appearance of such conflict, is not cured to PREPA's satisfaction.

24. Rejection of Submittals; Cancellation of RFP; Waiver Informalities and Withdrawal of Response

Issuance of this RFP, or selection of a Proponent for LOA negotiations, does not constitute a commitment by PREPA to award the LOA. PREPA reserves the right to accept or reject, in whole or in part, and without further explanation, any or all responses submitted and/or cancel this solicitation and reissue this RFP or another version of it, if it deems that doing so is in the best interest of the impacted communities or the Government of Puerto Rico.

PREPA reserves the right to waive any informalities and/or irregularities in a response if it deems that doing so is in the best interest of the impacted communities or the Government of Puerto Rico.

A Proponent may withdraw a proposal at any time up to the closing date and time of the RFP by deleting the documents they have uploaded to PowerAdvocate, or by submitting their intent to withdraw, in writing and addressed to PREPA's Head of Supply Chain (Chief of Procurement), Neftalí González Cruz, through the Messaging Tab before the closing date and time of the RFP.

25. Ownership of Submittal

All materials submitted in response to this RFP shall become the property of PREPA. Selection or rejection of a submittal does not affect this provision.

26. Cost of Preparing Responses

All costs associated with the response to this proposal are the sole responsibility of the Proponent.

27. Errors and Omissions In Responses

PREPA reserves the right to reject a response that contains an error or omission. PREPA also reserves the right to request correction of any errors or omissions and/or to request any clarification or additional information from any Proponent, without opening up clarifications for all Proponents.

28. Insurance – Proof of Coverage

28.1 Insurance

Proponent shall submit along with its Proposal, a Bid Bond, included as Appendix E, of not less than ten percent (10%) of the total price of the Proposal. This Bond will be issued in favor of PREPA by an insurance company that is authorized to do business in Puerto Rico. The Bond may not have a duration of less that ninety days (90) days, securing the validity of the proposal for such term. Proposals that do not include this security will be rejected. If there is an extension of the ninety (90) day term, Proponent will be responsible for keeping the Bid Bond in effect. Proposals that fail to meet this requirement will be rejected outright and the bid will be deemed to be non-responsive.

The Selected Proponent shall obtain and maintain in full force and effect during the contract term and thereafter as provided herein, policies of insurance covering all operations engaged in by the LOA, which shall be formally agreed with insurance companies authorized to do business in Puerto Rico, and to that effect it shall provide in original certificates of insurance and endorsements, as follows:

a. Workmen's Compensation Insurance: Proponent shall provide and maintain Workmen's Compensation Insurance as required by the Workmen's Compensation Act of the Commonwealth of Puerto Rico. Proponent shall also be responsible for the compliance with said Workmen's Compensation Act by all his subcontractors, agents, and invitees. Proponent shall furnish PREPA with a certificate from the State Insurance Fund showing that all personnel employed in the works under the LOA are covered.

b. Employer's Liability Insurance: Proponent shall provide and maintain Employer's Liability Insurance with minimum bodily injury limits of at least $1,000,000 for each employee and $1,000,000 for each accident covering against the liability imposed by law upon the Proponent as a result of body injury, by accident or disease, including death arising out of and in the course of his/her employment outside of and distinct from any claim for Workmen's Compensation Act of the Commonwealth of Puerto Rico.

c. Commercial General Liability: Proponent shall provide and maintain a Commercial

General Liability Insurance with minimum limits of at least $10,000,000 per occurrence and $10,000,000 aggregate. Such insurance shall include specific coverage for contractual liability, "XCU" explosion, collapse and undergrounds damages coverage, products and completed operations liability.

d. Automobile Liability Insurance: Proponent shall provide and maintain Automobile Liability Insurance with bodily injury and property damage combined single limits of at least $1,000,000 per accident covering all owned or schedule autos, non-owned or hired autos.

e. Professional Liability Insurance: Proponent shall provide and maintain a Professional Liability Insurance with minimum limits of at least $1,000,000 per claim and $1,000,000 aggregate.

f. All Risk Physical Damage Property Insurance: Proponent shall maintain an All Risk Physical Damages Property Insurance, including machinery coverage, to cover all real and personal property of the Proponent (including earthquake and hurricane occurrence) to one hundred percent (100%) of replacement cost. This policy shall include a Business Interruption and Contingent Business Interruption coverage. This insurance shall cover work at the site and shall also cover portions of the work located away from the site and portions of the work in transit. The policy shall include as insured property scaffolding, false work, and temporary buildings located at the site.

g. Equipment Breakdown Policy (Boiler & Machinery): Proponent shall maintain an Equipment Breakdown Policy to cover all equipment and machinery property of the Proponent. PREPA shall be named Additional Insured under this Policy.

h. Builder's All Risk Insurance: Proponent shall provide and maintain a Builder's All Risk Insurance which shall cover the full replacement cost of all work and all equipment used in the course of installation, testing and commissioning at the site, and all equipment and materials delivered and stored at the site, and all equipment and materials delivered and stored at the Job Site which hare to be used in the work or incorporated into the Facility. PREPA shall be named Additional Insured under this Policy.

28.2 Requirements under the Policies

The Commercial General Liability Insurance and Automobile Liability Insurance required under the LOA shall be endorsed to include:

a. As additional insured:

Puerto Rico Electric Power Authority
Risk Management Office
PO Box 362467
San Juan, PR 00936-4267

b. A thirty (30)-days cancellation or nonrenewable notice to be sent by certified mail with return receipt to the above address.

c. An endorsement including the LOA under contractual liability coverage and identifying

it by number, date and the Parties.

d. Waiver of Subrogation in favor of PREPA.

e. The Breach of any of the Warranties or Conditions in these policies by the Proponent shall not prejudice PREPA's rights under this policy.

Bonds

Proponent shall furnish at any time before the execution of the Contract:

A Performance Bond in the amount of one hundred percent (100%) of the contract price, with good and sufficient surety satisfactory to the Authority guaranteeing that the contractor will well and faithfully perform the contract work within the time specified.

A Payment Bond in the amount of one hundred percent (100%) of the contract price, with good and sufficient surety satisfactory to PREPA to guarantee the prompt payment of all labor, supervision, equipment and materials required in the performance of the work.

All bonds shall be presented to PREPA before commencement of any work and shall be executed in the required official form of PREPA.

Work shall not commence until all insurance requirements have been met and certificates thereof have been filed with the Chief Procurement Officer.
Proponent must ensure that their Bonding Company provides the bonds required herein endorsed in Puerto Rico.

29. Payment Terms & Method Of Payments

The payment provisions will be defined in the LOA which PREPA expects will be negotiated and executed with the Selected Proponent(s). Notwithstanding the foregoing, PREPA's standard payment term is net sixty (60) days upon approval of invoices and supporting documents. Invoicing for this Project will commence upon the commissioning and successful operation of the units.

30. Process Rules & PREPA's General Instruction RFP Guide

This process will be regulated and executed according to Exhibit B "GUIAS PARA PROCESOS DE ADQUISICIONES DE BIENES Y SERVICIOS A TRAVES DE RFP EN LA AEE V006032016 (Request for Proposals)". Please see the Download Documents tab for this Guide.

Proponents shall certify compliance with Section 4.17 of the "GUIAS PARA PROCESOS DE ADQUISICIONES DE BIENES Y SERVICIOS A TRAVES DE RFP EN LA AEE V006032016".

31. Attachments and Appendices

Appendix A – Sites for Temporary Generation

Appendix B – Low Sulfur Fuel (diesel) Specifications

Appendix C – GT Protection Requirements

Appendix D – Act 2-2018 Sworn Statement Anti-Corruption Code

Appendix E – PREPA Bid Bond Form

Appendix F – Request for Clarification Form

Exhibit 1 - Lease & Operating Agreement for Dual-Fuel Generation

Exhibit 2 - Lease & Operating Agreement for Renewable Energy and Battery Storage Generation

Exhibit 3 – PREPA's RFP Guide

CN 078-04495
Rev. 11/17

GOVERNMENT OF PUERTO RICO
Puerto Rico Electric Power Authority

July 6, 2018

Arturo Deliz Vélez
Disaster Funds Management Officer

Mary C. Zapata Acosta
Head, Planning and Research Division

Billing of Fuel and Purchased Power Expenses

After the collapse of the electrical system due to the impact of hurricanes Irma and María, a question arose on how the Puerto Rico Electric Power Authority (PREPA) will bill all its customers for electricity service, especially the charges for fuel and purchased power. In general, the billing process is and will be carried out through the current rate structure. The book Electric Service Rates contains the description of the different current rates, their application and the corresponding charges, whose English version can be accessed through the following link:

https://www.aeepr.com/Documentos/Ley57/Electric%20Service%20Rates.pdf

PREPA's rate structure consists mainly of the Basic Rate plus the charge of the Adjustment Clause. The Basic Rate is composed of the Fixed Charge, Monthly Energy Charge and Monthly Demand Charge. The latter only applies to customers connected to primary distribution and transmission voltages. The purpose of these charges is to recover the expenses incurred by PREPA in the activities necessary to generate, transmit and distribute the electric power that is provided to the customers. The Basic Rate excludes the fuel and purchased power, which are recovered through the charge of the Adjustment Clause.

The Adjustment Clause is intended to recover the costs of the fuel used in PREPA's generating units and the purchased power from cogeneration plants (EcoEléctrica and AES) and bulk renewable energy plants. These costs are distributed among all customers in proportion to their consumption, according to current regulations. It is noted that PREPA's fuel and purchased power expenses can only be billed through the Adjustment Clause, which consists of the sum of a Fuel Purchase Factor and a Purchased Power Factor. As the calculation of these factors is done by estimating PREPA's fuel and purchased power expenses for a next billing period, they need to be adjusted monthly considering the actual expenses of two months before the billing month. For example, at the end of July, PREPA calculates the factors for August's billing, making the reconciliation of the actual expenses occurred in June.

"We are an equal opportunity employer and do not discriminate on the basis of race, color, gender, age, national or social origin, social status, political ideas or affiliation, religion; for being or perceived to be a victim of domestic violence, sexual aggression or harassment, regardless of marital status, sexual orientation, gender identity or immigration status; for physical or mental disability, for veteran status or genetic information."

As part of Puerto Rico recovery efforts, the Federal Emergency Management Agency (FEMA) collaborates in the electric service restoration by providing, among other things, generators to power different areas of Puerto Rico, as well as the fuel that they use. The installation of generators in several municipalities is an example of temporary emergency services supplied by FEMA to PREPA, while reestablishing the necessary infrastructure to continue providing the electric power service permanently to all customers. The cost of the fuel paid by FEMA for operating these generators is not included in the calculation of the Fuel Purchase Factor, since it is not an expense incurred by PREPA. This factor only includes the expenses paid by PREPA for the purchase of the fuel used in its generating units.

In the event that, as part of the recovery of the electricity system, FEMA decides to reimburse expenses to cover any fuel cost paid by PREPA, the reimbursed amount cannot be billed to the customers in compliance with the current rate structure. If the fuel expenses have already been billed to the customers when FEMA reimburse such expenses, the amount covered by FEMA will be applied to all PREPA's customers through the monthly adjustment made to reconcile the Fuel Purchase Factor with the actual expenses. In this case, the actual fuel expenses would be reduced by the reimbursement amount by FEMA.

In summary, PREPA's rate structure establishes the billing method of the electric service that it provides to all its customers. The formulas and charges defined within this structure have the main purpose of recovering the necessary expenses incurred by PREPA to provide the service, including the purchase of fuel and purchase of energy. In compliance with this rate structure, PREPA is only allowed to bill its necessary expenses to generate, transmit and distribute the electric power served to the customers. Therefore, PREPA does not bill its customers for expenses already covered by any third party and, in case of receiving a reimbursement for an expense already been billed, it will reconcile such reimbursement in a next billing period.

If you need more information regarding PREPA's billing process, you can contact us at 787-521-4891.

MCZA

Facility	Location	MPT Capacity	Aproximate Allowable Capacity (MW)	Transfomer	Transformer Primary Voltage /Available Bus	Number of Allowable Generators per Site (MW)
Cambalache 1 Power Plant	Arecibo, PR	100 MVA	85	MPT 1	230 kV	2-3
Aguirre Power Plant	Salinas, PR	50 MVA	42	ESST 1-2	115 kV	1-2
Jobos Power Station	Salinas, PR	55 MVA	46	PU MPT	38kV	1-2
Yabucoa Power Station	Humacao, PR	56 MVA	47	PU MPT	115 kV	1-2
Daguao Power Station	Ceiba, PR	62 MVA	52	PU MPT	115 kV	1-2
Vega Baja Power Station	Vega Baja, PR	56 MVA	47	PU MPT	38 kV	1-2
Palo Seco Power Plant	Toa Baja, PR	93 MVA (two transformers)	79	PU MPT 2-1 2-1 MPT 3-2	115 kV	2-3
San Juan Power Plant	San Juan, PR	140 MVA	119	MPT 10	115 kV	3-4
Vieques Power Station	Vieques, PR	14 MVA	10	MPT 1-2	38kV	1-5

Notes:

1. Expected net output does not consider any water injection.
2. As an exception for this RFP, on the Vieques site, PREPA will accept units of less than 20 MW capacity. For this site, PREPA will only accept units with a capacity up to 10 MW.
3. PREPA reserves the right to decrease number of units per site and/or eliminate sites for temporary generation location.

PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Thursday, January 31, 2019

UNITS	MAXIMUM CAPACITY	HOUR 0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400	TOTAL	WEEK	MONTH
HYDROELECTRICS																															
Toro Negro 1	8.64																														
Toro Negro 2	1.92																														
Caonillas 1	18.00																														
Caonillas 2	3.60																														
Dos Bocas	15.00																					3	6	9	6	3			**18**	**42**	**673**
Yauco 1	25.00																														
Yauco 2	9.00																														**117**
Garzas 1	7.20																														**356**
Garzas 2	5.04																														**21**
Río Blanco	5.00																														
TOTAL HYDROELECTRICS																						**3**	**6**	**9**	**6**	**3**			**18**	**42**	**1167**
THERMOELECTRICS																															
San Juan 7	100.00																														
San Juan 8	100.00																														
San Juan 9	100.00																														
San Juan 10	100.00																														
Palo Seco 1	85.00																														
Palo Seco 2	85.00																														
Palo Seco 3	216.00	159	121	121	121	121	643	121	121	121	128	170	170	170	1644	170	170	170	170	170	170	170	170	3004	170	170	170	170	**3684**	**7420**	**90631**
Palo Seco 4	216.00																														
Costa Sur 3	85.00																														
Costa Sur 4	85.00																														
Costa Sur 5	410.00	270	270	270	260	260	1330	280	280	280	270	280	280	290	3290	260	270	270	280	310	300	300	270	5550	270	270	270	220	**6580**	**13020**	**177890**
Costa Sur 6	410.00	190	200	200	190	200	980	190	200	200	190	200	200	190	2350	200	190	200	190	200	190	200	190	3910	200	200	190	200	**4700**	**9410**	**153330**
Aguirre 1	450.00																														
Aguirre 2	450.00	230	230	230	230	230	1150	235	240	235	235	235	240	235	2805	235	235	235	240	260	260	285	310	4865	325	330	335	320	**6175**	**12380**	**182390**
TOTAL THERMOELECTRICS		**849**	**821**	**821**	**801**	**811**	**4103**	**826**	**841**	**836**	**823**	**885**	**890**	**885**	**10089**	**865**	**865**	**875**	**880**	**940**	**920**	**955**	**940**	**17329**	**965**	**970**	**965**	**910**	**21139**	**42230**	**604241**
COMBINED CYCLES																															
Aguirre C.C. 1	200.00													19	19	11	31						123	184	105	104	16		**409**	**858**	**7245**
Aguirre C.C. 2	200.00																			6	10	29	62	107	62	44	36		**249**	**673**	**2589**
TOTAL AGUIRRE GAS C.C.														**19**	**19**	**11**	**31**			**6**	**10**	**29**	**185**	**291**	**167**	**148**	**52**		**658**	**1531**	**9834**
Aguirre C.C. 1-5	96.00																														**1040**
Aguirre C.C. 2-5	96.00																														
TOTAL AGUIRRE STEAM C.C.																															**1040**
TOTAL AGUIRRE C.C. STAG 1														**19**	19	**11**	**31**						**123**	184	**105**	**104**	**16**		**409**	**858**	**8285**
TOTAL AGUIRRE C.C. STAG 2																				**6**	**10**	**29**	**62**	107	**62**	**44**	**36**		**249**	**673**	**2589**
TOTAL AGUIRRE C.C.														**19**	**19**	**11**	**31**			**6**	**10**	**29**	**185**	**291**	**167**	**148**	**52**		**658**	**1531**	**10874**
San Juan GT 5	172.00	120	120	119	119	119	597	120	120	120	120	120	119	119	1435	119	119	119	119	120	120	120	120	2391	120	120	120	119	**2870**	**5740**	**60578**
San Juan GT 6	172.00																													**18**	**44042**
TOTAL SAN JUAN GAS C.C.		**120**	**120**	**119**	**119**	**119**	**597**	**120**	**120**	**120**	**120**	**120**	**119**	**119**	**1435**	**119**	**119**	**119**	**119**	**120**	**120**	**120**	**120**	**2391**	**120**	**120**	**120**	**119**	**2870**	**5758**	**104620**
San Juan STM 5	60.00	41	41	41	41	41	205	42	42	40	40	41	41	41	492	42	42	42	43	43	43	42	40	829	42	41	41	40	**993**	**1997**	**20939**
San Juan STM 6	60.00																														**14736**
TOTAL SAN JUAN STEAM C.C.		**41**	**41**	**41**	**41**	**41**	**205**	**42**	**42**	**40**	**40**	**41**	**41**	**41**	**492**	**42**	**42**	**42**	**43**	**43**	**43**	**42**	**40**	**829**	**42**	**41**	**41**	**40**	**993**	**1997**	**35675**
TOTAL SAN JUAN C.C. 5		**161**	**161**	**160**	**160**	**160**	802	**162**	**162**	**160**	**160**	**161**	**160**	**160**	1927	**161**	**161**	**161**	**162**	**163**	**163**	**162**	**160**	3220	**162**	**161**	**161**	**159**	**3863**	**7737**	**81517**
TOTAL SAN JUAN C.C. 6																														**18**	**58778**
TOTAL SAN JUAN C.C.		**161**	**161**	**160**	**160**	**160**	**802**	**162**	**162**	**160**	**160**	**161**	**160**	**160**	**1927**	**161**	**161**	**161**	**162**	**163**	**163**	**162**	**160**	**3220**	**162**	**161**	**161**	**159**	**3863**	**7755**	**140295**
DIESEL																															
Cambalache 1	82.50																														
Cambalache 2	82.50																														**1099**
Cambalache 3	82.50																														
TOTAL CAMBALACHE G.P.																															**1099**
Mayagüez 1	55.00																														**86**
Mayagüez 2	55.00																														
Mayagüez 3	55.00																														**51**
Mayagüez 4	55.00																														
TOTAL MAYAGUEZ G.P.																															**137**
Palo Seco	126.00																														
Costa Sur	42.00																														
Aguirre	42.00																														
Daguao	42.00																														
Yabucoa	42.00																														
Vega Baja	42.00																														
Jobos	42.00																														
TOTAL GAS TURBINES																															
Culebra	1.83	1	1	1	1	2	6	1	1	1	1	1	1	2	14	1	1	1	1	1	1	2	2	24	2	1	1	1	**29**	**59**	**990**
Vieques	6.00																														
TOTAL DIESEL GENERATORS		**1**	**1**	**1**	**1**	**2**	**6**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**14**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**24**	**2**	**1**	**1**	**1**	**29**	**59**	**990**
Palo Seco	56.00	52	52	52	52	52	260	52	52	53	53	53	53	52	628	52	52	53	52	52	53	53	53	1048	51	51	51	52	**1253**	**2480**	**35840**
Yabucoa	28.00																														
TOTAL APR GAS TURBINES		**52**	**52**	**52**	**52**	**52**	**260**	**52**	**52**	**53**	**53**	**53**	**53**	**52**	**628**	**52**	**52**	**53**	**52**	**52**	**53**	**53**	**53**	**1048**	**51**	**51**	**51**	**52**	1253	2480	35840
TOTAL DIESEL		**53**	**53**	**53**	**53**	**54**	**266**	**53**	**53**	**54**	**54**	**54**	**54**	**54**	**642**	**53**	**53**	**54**	**53**	**53**	**54**	**55**	**55**	**1072**	**53**	**52**	**52**	**53**	1282	2539	38066
COGENERATION																															
AES 1	227.15	214	203	190	190	189	986	192	205	210	212	212	213	213	2443	213	213	213	213	214	214	213	214	4150	219	221	221	221	**5032**	**9940**	**144457**
AES 2	227.15	230	220	207	207	207	1071	217	228	228	230	230	230	230	2664	230	230	230	230	230	230	230	230	4504	229	230	230	229	**5422**	**10723**	**152887**
TOTAL AES		**444**	**423**	**397**	**397**	**396**	**2057**	**409**	**433**	**438**	**442**	**442**	**443**	**443**	**5107**	**443**	**443**	**443**	**443**	**444**	**444**	**443**	**444**	**8654**	**448**	**451**	**451**	**450**	**10454**	**20663**	**297344**
EcoEléctrica	507.00	335	314	294	279	282	1504	364	462	454	466	466	468	463	4647	445	427	440	454	466	467	465	406	8217	389	324	328	295	**9553**	**19570**	**285432**
TOTAL COGENERATION		**779**	**737**	**691**	**676**	**678**	**3561**	**773**	**895**	**892**	**908**	**908**	**911**	**906**	**9754**	**888**	**870**	**883**	**897**	**910**	**911**	**908**	**850**	**16871**	**837**	**775**	**779**	**745**	**20007**	**40233**	**582776**
RENEWABLE SYSTEMS																															
Solar	147.10									5	24	41	58	76	204	75	74	61	53	31	13			511					**511**	**1121**	**16320**
Eólica	102.00					2	2	2	2	1	13	1	3	4	28	43	74	72	53	22	15	12	4	323	1		2	1	**327**	**843**	**12508**
LandFill Gas	4.80	3	2	3	2	3	13	3	2	2	2	1	2	3	28	2	3	2	2	2	2	2	3	46	2	2	2	2	**54**	**106**	**1424**
TOTAL RENEWABLE		**3**	**2**	**3**	**2**	**5**	**15**	**5**	**4**	**8**	**39**	**43**	**63**	**83**	**260**	**120**	**151**	**135**	**108**	**55**	**30**	**14**	**7**	**880**	**3**	**2**	**4**	**3**	**892**	**2070**	**30252**
TOTAL HOURLY GENERATION		**1845**	**1774**	**1728**	**1692**	**1708**	**8747**	**1819**	**1955**	**1950**	**1984**	**2051**	**2078**	**2107**	**22691**	**2098**	**2131**	**2108**	**2100**	**2127**	**2088**	**2126**	**2203**	**39672**	**2193**	**2111**	**2013**	**1870**	**47859**	**96400**	**1407671**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2203	**1692**	**1994**	**90.52%**	**76.80%**	**47859**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Thursday, February 28, 2019

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	WEEK	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400			
HYDROELECTRICS																													
Toro Negro 1	8.64																												
Toro Negro 2	1.92																												
Caonillas 1	18.00																												
Caonillas 2	3.60																												
Dos Bocas	15.00																										**114**	**746**	
Yauco 1	25.00																												
Yauco 2	9.00											2	2	2	6	2	2	2	1					13				**13**	**95**	**444**
Garzas 1	7.20										1	2	2	2	7	2	2	2	1					14				**14**	**60**	**301**
Garzas 2	5.04																												
Río Blanco	5.00																												
TOTAL HYDROELECTRICS											**1**	**4**	**4**	**4**	**13**	**4**	**4**	**4**	**2**					**27**				**27**	**269**	**1491**
THERMOELECTRICS																													
San Juan 7	100.00																												
San Juan 8	100.00																												
San Juan 9	100.00																												
San Juan 10	100.00																												
Palo Seco 1	85.00																												
Palo Seco 2	85.00																												
Palo Seco 3	216.00	120	120	120	120	120	600	120	120	120	140	168	169	169	1606	168	143	152	165	165	143	157	165	2864	134	130	120	118	**3366**	**19653**	**85295**
Palo Seco 4	216.00																												
Costa Sur 3	85.00																												
Costa Sur 4	85.00																												
Costa Sur 5	410.00	200	200	210	200	210	1020	200	200	200	200	220	240	250	2530	250	260	230	240	240	250	240	240	4480	240	230	210	200	**5360**	**35330**	**171140**
Costa Sur 6	410.00	240	250	250	250	270	1260	260	290	290	290	290	260	260	3200	280	250	220	240	240	270	240	230	5170	240	250	270	240	**6170**	**37980**	**139980**
Aguirre 1	450.00	110	115	110	115	110	560	115	105	115	115	110	115	115	1350	110	150	190	190	180	180	180	180	2710	220	290	320	285	**3825**	**13210**	**28950**
Aguirre 2	450.00	230	245	230	240	235	1180	275	300	255	255	245	235	225	2970	235	270	260	245	265	295	305	320	5165	280	240	220	225	**6130**	**36175**	**165165**
TOTAL THERMOELECTRICS		**900**	**930**	**920**	**925**	**945**	**4620**	**970**	**1015**	**980**	**1000**	**1033**	**1019**	**1019**	**11656**	**1043**	**1073**	**1052**	**1080**	**1090**	**1138**	**1122**	**1135**	**20389**	**1114**	**1140**	**1140**	**1068**	**24851**	**142348**	**590530**
COMBINED CYCLES																													
Aguirre C.C. 1	200.00																					10	89	99	89	32	2		**222**	**1392**	**8202**
Aguirre C.C. 2	200.00																													**843**	**4839**
TOTAL AGUIRRE GAS C.C.																						**10**	**89**	**99**	**89**	**32**	**2**		**222**	**2235**	**13041**
Aguirre C.C. 1-5	96.00																														
Aguirre C.C. 2-5	96.00																														
TOTAL AGUIRRE STEAM C.C.																															
TOTAL AGUIRRE C.C. STAG 1																						**10**	**89**	99	**89**	**32**	**2**		**222**	**1392**	**8202**
TOTAL AGUIRRE C.C. STAG 2																														**843**	**4839**
TOTAL AGUIRRE C.C.																						**10**	**89**	**99**	**89**	**32**	**2**		**222**	**2235**	**13041**
San Juan GT 5	172.00																														**48763**
San Juan GT 6	172.00	120	120	120	120	119	599	119	119	120	120	120	119	120	1436	121	119	120	120	119	120	120	119	2394	120	120	119	119	**2872**	**17240**	**38752**
TOTAL SAN JUAN GAS C.C.		**120**	**120**	**120**	**120**	**119**	**599**	**119**	**119**	**120**	**120**	**120**	**119**	**120**	**1436**	**121**	**119**	**120**	**120**	**119**	**120**	**120**	**119**	**2394**	**120**	**120**	**119**	**119**	**2872**	**17240**	**87515**
San Juan STM 5	60.00																														**16881**
San Juan STM 6	60.00	39	39	39	39	39	195	39	39	39	40	40	40	40	472	39	40	40	39	40	39	40	39	788	39	39	40	40	**946**	**5722**	**12099**
TOTAL SAN JUAN STEAM C.C.		**39**	**39**	**39**	**39**	**39**	**195**	**39**	**39**	**39**	**40**	**40**	**40**	**40**	**472**	**39**	**40**	**40**	**39**	**40**	**39**	**40**	**39**	**788**	**39**	**39**	**40**	**40**	**946**	**5722**	**28980**
TOTAL SAN JUAN C.C. 5																															**65644**
TOTAL SAN JUAN C.C. 6		**159**	**159**	**159**	**159**	**158**	794	**158**	**158**	**159**	**160**	**160**	**159**	**160**	1908	**160**	**159**	**160**	**159**	**159**	**159**	**160**	**158**	3182	**159**	**159**	**159**	**159**	**3818**	**22962**	**50851**
TOTAL SAN JUAN C.C.		**159**	**159**	**159**	**159**	**158**	**794**	**158**	**158**	**159**	**160**	**160**	**159**	**160**	**1908**	**160**	**159**	**160**	**159**	**159**	**159**	**160**	**158**	**3182**	**159**	**159**	**159**	**159**	**3818**	**22962**	**116495**
DIESEL																															
Cambalache 1	82.50																														
Cambalache 2	82.50																														**263**
Cambalache 3	82.50																					18	73	91	79	63	18		**251**	**552**	**1320**
TOTAL CAMBALACHE G.P.																						**18**	**73**	**91**	**79**	**63**	**18**		**251**	**552**	**1583**
Mayagüez 1	55.00																														**179**
Mayagüez 2	55.00																														
Mayagüez 3	55.00																														**455**
Mayagüez 4	55.00																														**417**
TOTAL MAYAGUEZ G.P.																															**1051**
Palo Seco	126.00																														**56**
Costa Sur	42.00																														
Aguirre	42.00																													**25**	**25**
Daguao	42.00																														**2**
Yabucoa	42.00																														
Vega Baja	42.00																														
Jobos	42.00																														
TOTAL GAS TURBINES																														**25**	**83**
Culebra	1.83	2	1	1	1	1	6	1	1	1	1	1	1	2	14	1	1	1	1	1	2	2	2	25	2	2	1	1	**31**	**186**	**878**
Vieques	6.00																														
TOTAL DIESEL GENERATORS		**2**	**1**	**1**	**1**	**1**	**6**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**14**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**2**	**25**	**2**	**2**	**1**	**1**	**31**	**186**	**878**
Palo Seco	56.00	55	55	20	20	20	170	55	55	55	54	54	56	55	554	54	55	55	55	56	56	55	54	994	55	54	20	20	**1143**	**6879**	**30339**
Yabucoa	28.00																														
TOTAL APR GAS TURBINES		**55**	**55**	**20**	**20**	**20**	**170**	**55**	**55**	**55**	**54**	**54**	**56**	**55**	**554**	**54**	**55**	**55**	**55**	**56**	**56**	**55**	**54**	**994**	**55**	**54**	**20**	**20**	**1143**	**6879**	**30339**
TOTAL DIESEL		**57**	**56**	**21**	**21**	**21**	**176**	**56**	**56**	**56**	**55**	**55**	**57**	**57**	**568**	**55**	**56**	**56**	**56**	**57**	**58**	**75**	**129**	**1110**	**136**	**119**	**39**	**21**	**1425**	**7642**	**33934**
COGENERATION																															
AES 1	227.15	203	159	151	151	151	815	152	190	215	219	223	227	227	2268	227	227	227	227	227	227	227	226	4083	227	227	227	227	**4991**	**29901**	**135331**
AES 2	227.15	219	172	165	164	164	884	166	198	228	235	235	236	231	2413	230	230	230	230	230	230	229	230	4252	229	229	229	229	**5168**	**31730**	**144677**
TOTAL AES		**422**	**331**	**316**	**315**	**315**	**1699**	**318**	**388**	**443**	**454**	**458**	**463**	**458**	**4681**	**457**	**457**	**457**	**457**	**457**	**457**	**456**	**456**	**8335**	**456**	**456**	**456**	**456**	**10159**	**61631**	**280008**
EcoEléctrica	507.00	255	246	248	248	246	1243	258	275	275	274	274	273	271	3143	271	270	270	270	271	271	272	274	5312	274	273	254	253	**6366**	**37895**	**244956**
TOTAL COGENERATION		**677**	**577**	**564**	**563**	**561**	**2942**	**576**	**663**	**718**	**728**	**732**	**736**	**729**	**7824**	**728**	**727**	**727**	**727**	**728**	**728**	**728**	**730**	**13647**	**730**	**729**	**710**	**709**	**16525**	**99526**	**524964**
RENEWABLE SYSTEMS																															
Solar	147.10									8	33	55	65	73	234	73	71	58	44	30	13			523					**523**	**3188**	**15599**
Eólica	102.00	2	3	6	3	2	16	4	2	1	16	33	65	54	191	62	64	66	57	47	43	47	27	604	19	30	13	2	**668**	**3964**	**13989**
LandFill Gas	4.80	3	3	2	2	2	12	1					1	1	15	1	1	1	1	1	1	1	1	23	2	1	2		**28**	**291**	**1268**
TOTAL RENEWABLE		**5**	**6**	**8**	**5**	**4**	**28**	**5**	**2**	**9**	**49**	**88**	**131**	**128**	**440**	**136**	**136**	**125**	**102**	**78**	**57**	**48**	**28**	**1150**	**21**	**31**	**15**	**2**	**1219**	**7443**	**30856**
															-																
TOTAL HOURLY GENERATION		**1798**	**1728**	**1672**	**1673**	**1689**	**8560**	**1765**	**1894**	**1922**	**1993**	**2072**	**2106**	**2097**	**22409**	**2126**	**2155**	**2124**	**2126**	**2112**	**2140**	**2143**	**2269**	**39604**	**2249**	**2210**	**2065**	**1959**	**48087**	**282425**	**1311311**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2269	**1672**	**2004**	**88.30%**	**73.69%**	**48087**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Sunday, March 31, 2019

UNITS	MAXIMUM CAPACITY	HOUR 0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400	TOTAL	MONTH
HYDROELECTRICS																														
Toro Negro 1	8.64																													
Toro Negro 2	1.92																													
Caonillas 1	18.00																													
Caonillas 2	3.60																													
Dos Bocas	15.00									4	6	6	6	6	28	6	6	6	6	6	6	6	6	76	6	3			**85**	**582**
Yauco 1	25.00																													
Yauco 2	9.00																													**437**
Garzas 1	7.20																													**316**
Garzas 2	5.04																													**14**
Río Blanco	5.00																													
TOTAL HYDROELECTRICS										**4**	**6**	**6**	**6**	**6**	**28**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**76**	**6**	**3**			**85**	**1349**
THERMOELECTRICS																														
San Juan 7	100.00																													
San Juan 8	100.00																													
San Juan 9	100.00																													
San Juan 10	100.00																													
Palo Seco 1	85.00																													
Palo Seco 2	85.00																													
Palo Seco 3	216.00	121	121	121	121	121	605	121	121	121	121	121	121	121	1452	121	121	121	121	121	121	121	121	2420	121	124	150	150	**2965**	**81420**
Palo Seco 4	216.00																													
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00	260	260	260	250	250	1280	240	240	240	250	250	250	250	3000	250	250	250	280	280	260	300	300	5170	290	280	290	290	**6320**	**200180**
Costa Sur 6	410.00	270	260	260	260	260	1310	240	250	250	240	250	240	250	3030	250	250	260	290	290	290	280	280	5220	280	280	260	250	**6290**	**193550**
Aguirre 1	450.00																								20	80	150	160	**410**	**186645**
Aguirre 2	450.00	280	245	260	275	275	1335	280	280	280	290	300	295	310	3370	305	310	300	310	310	305	305	310	5825	320	300	310	300	**7055**	**26845**
TOTAL THERMOELECTRICS		**931**	**886**	**901**	**906**	**906**	**4530**	**881**	**891**	**891**	**901**	**921**	**906**	**931**	**10852**	**926**	**931**	**931**	**1001**	**1001**	**976**	**1006**	**1011**	**18635**	**1031**	**1064**	**1160**	**1150**	**23040**	**688640**
COMBINED CYCLES																														
Aguirre C.C. 1	200.00																			20	30	49	85	184	80	76	32		**372**	**9327**
Aguirre C.C. 2	200.00	94	47	3			144							5	149	30	30	30	30	51	60	77	127	584	120	112	107	28	**951**	**7107**
Aguirre C.C. 1-5	96.00																													
Aguirre C.C. 2-5	96.00																													
TOTAL AGUIRRE C.C.		**94**	**47**	**3**			**144**							**5**	**149**	**30**	**30**	**30**	**30**	**71**	**90**	**126**	**212**	**768**	**200**	**188**	**139**	**28**	**1323**	**16434**
San Juan GT 5	172.00																													**24420**
San Juan GT 6	172.00	150	150	150	149	149	748	150	150	150	150	150	149	149	1796	149	150	149	150	149	150	150	149	2992	150	150	150	150	**3592**	**94605**
San Juan STM 5	60.00																													**8534**
San Juan STM 6	60.00	47	47	47	47	46	234	47	47	47	48	48	49	49	569	49	49	49	48	48	47	47	47	953	46	51	47	47	**1144**	**30739**
TOTAL SAN JUAN C.C.		**197**	**197**	**197**	**196**	**195**	**982**	**197**	**197**	**197**	**198**	**198**	**198**	**198**	**2365**	**198**	**199**	**198**	**198**	**197**	**197**	**197**	**196**	**3945**	**196**	**201**	**197**	**197**	**4736**	**158298**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																					9	45	54	50	49	2		**155**	**2569**
Cambalache 3	82.50																													**1722**
TOTAL CAMBALACHE G.P.																						**9**	**45**	**54**	**50**	**49**	**2**		**155**	**4291**
Mayagüez 1	55.00																													**1682**
Mayagüez 2	55.00																													
Mayagüez 3	55.00																													**5146**
Mayagüez 4	55.00																						20	20	24	8			**52**	**3965**
TOTAL MAYAGUEZ G.P.																							**20**	**20**	**24**	**8**			**52**	**10793**
Palo Seco	126.00																													**1224**
Costa Sur	42.00																													
Aguirre	42.00																													
Daguao	42.00																													**82**
Yabucoa	42.00																													
Vega Baja	42.00																													**199**
Jobos	42.00																													
TOTAL GAS TURBINES																														**1505**
Culebra	1.83																													**608**
Vieques	6.00																													
TOTAL DIESEL GENERATORS																														**608**
Palo Seco	56.00																													**10165**
Yabucoa	28.00																													
TOTAL APR GAS TURBINES																														**10165**
TOTAL DIESEL																						**9**	**65**	**74**	**74**	**57**	**2**		**207**	**27362**
COGENERATION																														
AES 1	227.15																													**128736**
AES 2	227.15	213	210	212	214	214	1063	215	215	215	215	216	222	222	2583	223	223	223	223	223	223	223	223	4367	224	223	224	224	**5262**	**162246**
TOTAL AES		**213**	**210**	**212**	**214**	**214**	**1063**	**215**	**215**	**215**	**215**	**216**	**222**	**222**	**2583**	**223**	**223**	**223**	**223**	**223**	**223**	**223**	**223**	**4367**	**224**	**223**	**224**	**224**	**5262**	**290982**
EcoEléctrica	507.00	441	467	453	412	388	2161	385	353	376	401	425	438	457	4996	444	451	465	468	470	469	466	469	8698	470	424	493	385	**10470**	**263131**
TOTAL COGENERATION		**654**	**677**	**665**	**626**	**602**	**3224**	**600**	**568**	**591**	**616**	**641**	**660**	**679**	**7579**	**667**	**674**	**688**	**691**	**693**	**692**	**689**	**692**	**13065**	**694**	**647**	**717**	**609**	**15732**	**554113**
RENEWABLE SYSTEMS																														
Solar	147.10								1	19	52	79	88	92	331	93	86	80	52	30	13	1		686					**686**	**18749**
Eólica	102.00										2	6	15	28	51	28	18	9	2	1	27	9	2	147	2				**149**	**14553**
LandFill Gas	4.80	1	1	1	2	1	6	1	2	1	1	2	1	2	16	1	1	2	2	1	1	1	2	27	1	1	1	1	**31**	**815**
TOTAL RENEWABLE		**1**	**1**	**1**	**2**	**1**	**6**	**1**	**3**	**20**	**55**	**87**	**104**	**122**	**398**	**122**	**105**	**91**	**56**	**32**	**41**	**11**	**4**	**860**	**3**	**1**	**1**	**1**	**866**	**34117**
TOTAL HOURLY GENERATION		**1877**	**1808**	**1767**	**1730**	**1704**	**8886**	**1679**	**1659**	**1703**	**1776**	**1853**	**1874**	**1941**	**21371**	**1949**	**1945**	**1944**	**1982**	**2000**	**2002**	**2044**	**2186**	**37423**	**2204**	**2161**	**2216**	**1985**	**45989**	**1480313**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2216	**1659**	**1916**	**86.47%**	**74.86%**	**45989**

PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Tuesday, April 30, 2019

UNITS	MAXIMUM CAPACITY	HOUR 0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400	TOTAL	WEEK	MONTH
HYDROELECTRICS																															
Toro Negro 1	8.64																					1		1					**1**	**1**	**1**
Toro Negro 2	1.92																														
Caonillas 1	18.00																														
Caonillas 2	3.60																														
Dos Bocas	15.00																				6	12	12	30	12	6			**48**	**48**	**651**
Yauco 1	25.00																														
Yauco 2	9.00															1	2	2	2	2	2	1		12					**12**	**12**	**403**
Garzas 1	7.20																														**138**
Garzas 2	5.04																														
Río Blanco	5.00																														
TOTAL HYDROELECTRICS																**1**	**2**	**2**	**2**	**2**	**8**	**14**	**12**	**43**	**12**	**6**			**61**	**61**	**1193**
THERMOELECTRICS																															
San Juan 7	100.00																														
San Juan 8	100.00																														
San Juan 9	100.00																														
San Juan 10	100.00																														
Palo Seco 1	85.00																														
Palo Seco 2	85.00																														
Palo Seco 3	216.00	155	151	151	150	150	757	150	150	150	150	150	150	150	1807	150	150	150	150	150	150	149	148	3004	151	151	151	151	**3608**	**3608**	**102213**
Palo Seco 4	216.00																														
Costa Sur 3	85.00																														
Costa Sur 4	85.00																														
Costa Sur 5	410.00	180	170	170	170	180	870	170	170	180	170	170	170	170	2070	170	170	180	170	170	170	170	180	3450	170	170	180	170	**4140**	**4140**	**161450**
Costa Sur 6	410.00	250	260	240	250	260	1260	250	250	260	260	290	280	280	3130	280	280	290	280	280	250	260	250	5300	250	260	250	260	**6320**	**6320**	**185270**
Aguirre 1	450.00	290	240	230	230	240	1230	245	235	245	240	255	245	250	2945	265	255	260	265	300	300	300	335	5225	335	335	325	315	**6535**	**6535**	**190490**
Aguirre 2	450.00																														**46470**
TOTAL THERMOELECTRICS		**875**	**821**	**791**	**800**	**830**	**4117**	**815**	**805**	**835**	**820**	**865**	**845**	**850**	**9952**	**865**	**855**	**880**	**865**	**900**	**870**	**879**	**913**	**16979**	**906**	**916**	**906**	**896**	**20603**	**20603**	**685893**
COMBINED CYCLES																															
Aguirre C.C. 1	200.00	103	103	103	103	103	515	103	104	104	104	105	99	99	1233	100	101	101	101	101	101	102	136	2076	137	132	133	134	**2612**	**2612**	**38332**
Aguirre C.C. 2	200.00																			8	30	40	110	188	90	84	85	81	**528**	**528**	**14784**
TOTAL AGUIRRE GAS C.C.		**103**	**103**	**103**	**103**	**103**	**515**	**103**	**104**	**104**	**104**	**105**	**99**	**99**	**1233**	**100**	**101**	**101**	**101**	**109**	**131**	**142**	**246**	**2264**	**227**	**216**	**218**	**215**	**3140**	**3140**	**53116**
Aguirre C.C. 1-5	96.00	40	40	41	41	41	203	40	40	40	40	40	40	40	483	40	40	40	40	39	40	40	40	802	41	40	40	41	**964**	**964**	**11409**
Aguirre C.C. 2-5	96.00																														
TOTAL AGUIRRE STEAM C.C.		**40**	**40**	**41**	**41**	**41**	**203**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**483**	**40**	**40**	**40**	**40**	**39**	**40**	**40**	**40**	**802**	**41**	**40**	**40**	**41**	**964**	**964**	**11409**
TOTAL AGUIRRE C.C. STAG 1		**143**	**143**	**144**	**144**	**144**	718	**143**	**144**	**144**	**144**	**145**	**139**	**139**	1716	**140**	**141**	**141**	**141**	**140**	**141**	**142**	**176**	2878	**178**	**172**	**173**	**175**	**3576**	**3576**	**49741**
TOTAL AGUIRRE C.C. STAG 2																				**8**	**30**	**40**	**110**	188	**90**	**84**	**85**	**81**	**528**	**528**	**14784**
TOTAL AGUIRRE C.C.		**143**	**143**	**144**	**144**	**144**	**718**	**143**	**144**	**144**	**144**	**145**	**139**	**139**	**1716**	**140**	**141**	**141**	**141**	**148**	**171**	**182**	**286**	**3066**	**268**	**256**	**258**	**256**	**4104**	**4104**	**64525**
San Juan GT 5	172.00	119	119	120	120	120	598	119	120	120	119	120	119	120	1435	119	120	120	119	120	119	120	120	2392	120	119	119	119	**2869**	**2869**	**61382**
San Juan GT 6	172.00																														**83496**
TOTAL SAN JUAN GAS C.C.		**119**	**119**	**120**	**120**	**120**	**598**	**119**	**120**	**120**	**119**	**120**	**119**	**120**	**1435**	**119**	**120**	**120**	**119**	**120**	**119**	**120**	**120**	**2392**	**120**	**119**	**119**	**119**	**2869**	**2869**	**144878**
San Juan STM 5	60.00	40	41	41	41	41	204	41	41	41	41	42	42	42	494	43	42	42	42	42	42	41	42	830	41	41	41	41	**994**	**994**	**19560**
San Juan STM 6	60.00																														**26928**
TOTAL SAN JUAN STEAM C.C.		**40**	**41**	**41**	**41**	**41**	**204**	**41**	**41**	**41**	**41**	**42**	**42**	**42**	**494**	**43**	**42**	**42**	**42**	**42**	**42**	**41**	**42**	**830**	**41**	**41**	**41**	**41**	**994**	**994**	**46488**
TOTAL SAN JUAN C.C. 5		**159**	**160**	**161**	**161**	**161**	802	**160**	**161**	**161**	**160**	**162**	**161**	**162**	1929	**162**	**162**	**162**	**161**	**162**	**161**	**161**	**162**	3222	**161**	**160**	**160**	**160**	**3863**	**3863**	**80942**
TOTAL SAN JUAN C.C. 6																															**110424**
TOTAL SAN JUAN C.C.		**159**	**160**	**161**	**161**	**161**	**802**	**160**	**161**	**161**	**160**	**162**	**161**	**162**	**1929**	**162**	**162**	**162**	**161**	**162**	**161**	**161**	**162**	**3222**	**161**	**160**	**160**	**160**	**3863**	**3863**	**191366**
DIESEL																															
Cambalache 1	82.50																														
Cambalache 2	82.50										4	37	50	50	141	50	50	50	50	50	50	50	50	541	50	50	50	21	**712**	**712**	**4479**
Cambalache 3	82.50																														**435**
TOTAL CAMBALACHE G.P.											**4**	**37**	**50**	**50**	**141**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**541**	**50**	**50**	**50**	**21**	**712**	**712**	**4914**
Mayagüez 1	55.00																														**355**
Mayagüez 2	55.00																														
Mayagüez 3	55.00																														**657**
Mayagüez 4	55.00																														**554**
TOTAL MAYAGUEZ G.P.																															**1566**
Palo Seco	126.00																				27	82	85	194	86	84	6		**370**	**370**	**2168**
Costa Sur	42.00																														
Aguirre	42.00																														
Daguao	42.00																														**98**
Yabucoa	42.00																														**37**
Vega Baja	42.00																														**112**
Jobos	42.00																														**63**
TOTAL GAS TURBINES																					**27**	**82**	**85**	**194**	**86**	**84**	**6**		**370**	**370**	**2478**
Culebra	1.83																														
Vieques	6.00																														
TOTAL DIESEL GENERATORS																															
Palo Seco	56.00																														
Yabucoa	28.00																														
TOTAL APR GAS TURBINES																															
TOTAL DIESEL											**4**	**37**	**50**	**50**	**141**	**50**	**50**	**50**	**50**	**50**	**77**	**132**	**135**	**735**	**136**	**134**	**56**	**21**	**1082**	**1082**	**8958**
COGENERATION																															
AES 1	227.15	155	154	154	154	154	771	154	154	154	154	154	154	154	1849	154	154	154	154	154	154	154	154	3081	154	154	154	154	**3697**	**3697**	**15417**
AES 2	227.15	229	229	227	187	173	1045	172	181	220	227	224	225	230	2524	230	230	230	230	230	230	230	230	4364	230	229	229	229	**5281**	**5281**	**162043**
TOTAL AES		**384**	**383**	**381**	**341**	**327**	**1816**	**326**	**335**	**374**	**381**	**378**	**379**	**384**	**4373**	**384**	**384**	**384**	**384**	**384**	**384**	**384**	**384**	**7445**	**384**	**383**	**383**	**383**	**8978**	**8978**	**177460**
EcoEléctrica	507.00	359	331	279	280	304	1553	378	439	434	475	476	476	476	4707	476	476	476	478	477	430	395	436	8351	472	439	457	380	**10099**	**10099**	**300982**
TOTAL COGENERATION		**743**	**714**	**660**	**621**	**631**	**3369**	**704**	**774**	**808**	**856**	**854**	**855**	**860**	**9080**	**860**	**860**	**860**	**862**	**861**	**814**	**779**	**820**	**15796**	**856**	**822**	**840**	**763**	**19077**	**19077**	**478442**
RENEWABLE SYSTEMS																															
Solar	147.10								4	26	57	70	73	83	313	81	91	84	71	38	14	1		693					**693**	**693**	**21287**
Eólica	102.00	11	9	19	16	4	59	4	9	10	30	36	63	74	285	75	74	75	74	74	74	66	22	819	14	5	3	3	**844**	**844**	**18364**
LandFill Gas	4.80	2	3	2	3	2	12	2	3	2	3	2	2	3	29	2	3	2	3	2	3	2	2	48	2	3	2	3	**58**	**58**	**1315**
TOTAL RENEWABLE		**13**	**12**	**21**	**19**	**6**	**71**	**6**	**16**	**38**	**90**	**108**	**138**	**160**	**627**	**158**	**168**	**161**	**148**	**114**	**91**	**69**	**24**	**1560**	**16**	**8**	**5**	**6**	**1595**	**1595**	**40966**
TOTAL HOURLY GENERATION		**1933**	**1850**	**1777**	**1745**	**1772**	**9077**	**1828**	**1900**	**1986**	**2074**	**2171**	**2188**	**2221**	**23445**	**2236**	**2238**	**2256**	**2229**	**2237**	**2192**	**2216**	**2352**	**41401**	**2355**	**2302**	**2225**	**2102**	**50385**	**50385**	**1471343**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2355	**1745**	**2099**	**89.15%**	**74.10%**	**50385**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Friday, May 31, 2019

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	WEEK	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400			
HYDROELECTRICS																													
Toro Negro 1	8.64									3	3	3	3	3	15	3	3	3	3	3	4	5	4	43	4				**47**	**94**	**729**
Toro Negro 2	1.92																														
Caonillas 1	18.00																														
Caonillas 2	3.60																														
Dos Bocas	15.00																				3	6	6	15	6	3			**24**	**153**	**980**
Yauco 1	25.00																														
Yauco 2	9.00											1	1	2	4	2	2	2	2	2	2	2	2	20	2	2			**24**	**54**	**546**
Garzas 1	7.20													2	2	2	2	2	2					10					**10**	**24**	**180**
Garzas 2	5.04																														
Río Blanco	5.00																														
TOTAL HYDROELECTRICS										**3**	**3**	**4**	**4**	**7**	**21**	**7**	**7**	**7**	**7**	**5**	**9**	**13**	**12**	**88**	**12**	**5**			**105**	**325**	**2435**
THERMOELECTRICS																													
San Juan 7	100.00																		18	58	69	70	70	285	71	71	71	71	**569**	**569**	**906**
San Juan 8	100.00																														
San Juan 9	100.00																														
San Juan 10	100.00																														
Palo Seco 1	85.00																													**473**	**12071**
Palo Seco 2	85.00																														
Palo Seco 3	216.00	125	125	125	125	125	625	125	125	125	125	125	125	125	1500	125	110	72	118	125	125	125	125	2425	125	125	125	125	**2925**	**5892**	**101409**
Palo Seco 4	216.00																											10	**10**	**10**	**2405**
Costa Sur 3	85.00																														
Costa Sur 4	85.00																														
Costa Sur 5	410.00	280	280	280	270	270	1380	290	290	320	320	320	320	320	3560	310	320	320	320	300	300	300	330	6060	320	320	310	250	**7260**	**13970**	**157850**
Costa Sur 6	410.00	300	270	240	250	250	1310	250	250	260	270	310	290	300	3240	300	310	310	330	330	330	330	340	5820	320	330	330	320	**7120**	**13950**	**198310**
Aguirre 1	450.00	235	245	235	265	215	1195	240	240	250	305	305	325	325	3185	320	315	340	300	250	245	250	300	5505	295	280	260	240	**6580**	**12720**	**200850**
Aguirre 2	450.00																														
TOTAL THERMOELECTRICS		**940**	**920**	**880**	**910**	**860**	**4510**	**905**	**905**	**955**	**1020**	**1060**	**1060**	**1070**	**11485**	**1055**	**1055**	**1042**	**1086**	**1063**	**1069**	**1075**	**1165**	**20095**	**1131**	**1126**	**1096**	**1016**	**24464**	**47584**	**673801**
COMBINED CYCLES																															
Aguirre C.C. 1	200.00																						3	3	30	30	2		**65**	**159**	**72292**
Aguirre C.C. 2	200.00																						6	6	30	30	15		**81**	**81**	**37601**
TOTAL AGUIRRE GAS C.C.																							**9**	**9**	**60**	**60**	**17**		**146**	**240**	**109893**
Aguirre C.C. 1-5	96.00																														**18663**
Aguirre C.C. 2-5	96.00																														
TOTAL AGUIRRE STEAM C.C.																															**18663**
TOTAL AGUIRRE C.C. STAG 1																							**3**	3	**30**	**30**	**2**		**65**	**159**	**90955**
TOTAL AGUIRRE C.C. STAG 2																							**6**	6	**30**	**30**	**15**		**81**	**81**	**37601**
TOTAL AGUIRRE C.C.																							**9**	**9**	**60**	**60**	**17**		**146**	**240**	**128556**
San Juan GT 5	172.00																						9	9	1				**10**	**2756**	**84940**
San Juan GT 6	172.00	120	120	120	119	120	599	120	120	119	125	134	135	135	1487	135	135	134	135	135	135	134	135	2565	135	135	135	134	**3104**	**5861**	**8215**
TOTAL SAN JUAN GAS C.C.		**120**	**120**	**120**	**119**	**120**	**599**	**120**	**120**	**119**	**125**	**134**	**135**	**135**	**1487**	**135**	**135**	**134**	**135**	**135**	**135**	**134**	**144**	**2574**	**136**	**135**	**135**	**134**	**3114**	**8617**	**93155**
San Juan STM 5	60.00																														**2578**
San Juan STM 6	60.00	42	41	41	41	41	206	41	41	42	42	45	45	45	507	44	46	45	45	44	44	44	43	862	43	43	43	43	**1034**	**1106**	**1106**
TOTAL SAN JUAN STEAM C.C.		**42**	**41**	**41**	**41**	**41**	**206**	**41**	**41**	**42**	**42**	**45**	**45**	**45**	**507**	**44**	**46**	**45**	**45**	**44**	**44**	**44**	**43**	**862**	**43**	**43**	**43**	**43**	**1034**	**1106**	**3684**
TOTAL SAN JUAN C.C. 5																							**9**	9	**1**				**10**	**2756**	**87518**
TOTAL SAN JUAN C.C. 6		**162**	**161**	**161**	**160**	**161**	805	**161**	**161**	**161**	**167**	**179**	**180**	**180**	1994	**179**	**181**	**179**	**180**	**179**	**179**	**178**	**178**	3427	**178**	**178**	**178**	**177**	**4138**	**6967**	**9321**
TOTAL SAN JUAN C.C.		**162**	**161**	**161**	**160**	**161**	**805**	**161**	**161**	**161**	**167**	**179**	**180**	**180**	**1994**	**179**	**181**	**179**	**180**	**179**	**179**	**178**	**187**	**3436**	**179**	**178**	**178**	**177**	**4148**	**9723**	**96839**
DIESEL																															
Cambalache 1	82.50																														
Cambalache 2	82.50																														**8427**
Cambalache 3	82.50																														**16455**
TOTAL CAMBALACHE G.P.																															**24882**
Mayagüez 1	55.00																														**835**
Mayagüez 2	55.00																														
Mayagüez 3	55.00																														**2151**
Mayagüez 4	55.00																														**1874**
TOTAL MAYAGUEZ G.P.																															**4860**
Palo Seco	126.00																													**124**	**18143**
Costa Sur	42.00																														
Aguirre	42.00																														
Daguao	42.00																														**306**
Yabucoa	42.00																														
Vega Baja	42.00																													**47**	**3218**
Jobos	42.00																														**1474**
TOTAL GAS TURBINES																														**171**	**23141**
Culebra	1.83																														
Vieques	6.00																														
TOTAL DIESEL GENERATORS																															
Palo Seco	56.00																														
Yabucoa	28.00																														
TOTAL APR GAS TURBINES																															
TOTAL DIESEL																														**171**	**52883**
COGENERATION																															
AES 1	227.15	234	227	217	223	223	1124	222	222	222	222	221	221	221	2675	223	223	223	224	231	232	232	233	4496	232	226	226	225	**5405**	**10634**	**154603**
AES 2	227.15	231	231	231	231	231	1155	231	231	229	222	219	221	224	2732	226	228	229	229	229	229	229	229	4560	226	219	219	219	**5443**	**10633**	**145273**
TOTAL AES		**465**	**458**	**448**	**454**	**454**	**2279**	**453**	**453**	**451**	**444**	**440**	**442**	**445**	**5407**	**449**	**451**	**452**	**453**	**460**	**461**	**461**	**462**	**9056**	**458**	**445**	**445**	**444**	**10848**	**21267**	**299876**
EcoEléctrica	507.00	371	337	305	295	295	1603	338	403	467	470	468	468	469	4686	470	470	472	470	470	468	468	477	8451	486	486	486	486	**10395**	**19958**	**318115**
TOTAL COGENERATION		**836**	**795**	**753**	**749**	**749**	**3882**	**791**	**856**	**918**	**914**	**908**	**910**	**914**	**10093**	**919**	**921**	**924**	**923**	**930**	**929**	**929**	**939**	**17507**	**944**	**931**	**931**	**930**	**21243**	**41225**	**617991**
RENEWABLE SYSTEMS																															
Solar	147.10								4	22	51	80	79	80	316	84	85	78	66	46	25	3		703					**703**	**1027**	**19816**
Eólica	102.00		2	13	2	2	19				5	34	46	54	158	74	74	74	74	67	42	43	13	619	12	9	7	6	**653**	**893**	**14864**
LandFill Gas	4.80	3	3	3	3	3	15	3	3	3	3	3	3	3	36	2	1	2	3	3	3	3	3	56	3	3	1	1	**64**	**136**	**1508**
TOTAL RENEWABLE		**3**	**5**	**16**	**5**	**5**	**34**	**3**	**7**	**25**	**59**	**117**	**128**	**137**	**510**	**160**	**160**	**154**	**143**	**116**	**70**	**49**	**16**	**1378**	**15**	**12**	**8**	**7**	**1420**	**2056**	**36188**
															-																
TOTAL HOURLY GENERATION		**1941**	**1881**	**1810**	**1824**	**1775**	**9231**	**1860**	**1929**	**2062**	**2163**	**2268**	**2282**	**2308**	**24103**	**2320**	**2324**	**2306**	**2339**	**2293**	**2256**	**2244**	**2328**	**42513**	**2341**	**2312**	**2230**	**2130**	**51526**	**101324**	**1608693**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2341	**1775**	**2147**	**91.71%**	**75.82%**	**51526**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Sunday, June 30, 2019

UNITS	MAXIMUM CAPACITY	HOUR 0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400	TOTAL	MONTH
HYDROELECTRICS																														
Toro Negro 1	8.64						0								0									0					**0**	**655**
Toro Negro 2	1.92						0								0									0					**0**	**0**
Caonillas 1	18.00						0								0									0					**0**	**0**
Caonillas 2	3.60						0								0									0					**0**	**0**
Dos Bocas	15.00						0								0						6	6		12	6	3			**21**	**1364**
Yauco 1	25.00						0								0									0					**0**	**0**
Yauco 2	9.00						0								0							1		1	2	2	2	1	**8**	**563**
Garzas 1	7.20						0								0									0					**0**	**230**
Garzas 2	5.04						0								0									0					**0**	**0**
Río Blanco	5.00						0								0									0					**0**	**0**
TOTAL HYDROELECTRICS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**7**	**13**	**8**	**5**	**2**	**1**	**29**	**2812**
THERMOELECTRICS																														
San Juan 7	100.00	69	69	69	69	69	345	69	69	70	69	69	69	69	829	69	69	69	69	69	69	69	69	1381	69	69	69	70	**1658**	**47289**
San Juan 8	100.00						0								0									0					**0**	**0**
San Juan 9	100.00						0								0									0					**0**	**0**
San Juan 10	100.00						0								0									0					**0**	**0**
Palo Seco 1	85.00	71	71	71	71	71	355	72	72	72	72	72	72	72	859	72	72	72	72	72	72	66	61	1418	61	61	61	61	**1662**	**39962**
Palo Seco 2	85.00						0								0									0					**0**	**0**
Palo Seco 3	216.00	161	161	139	120	120	701	120	120	120	120	124	157	161	1623	161	161	161	161	161	161	161	161	2911	161	161	161	161	**3555**	**65719**
Palo Seco 4	216.00						0								0									0					**0**	**42761**
Costa Sur 3	85.00						0								0									0					**0**	**0**
Costa Sur 4	85.00						0								0									0					**0**	**0**
Costa Sur 5	410.00	280	270	270	280	280	1380	280	280	270	280	270	270	270	3300	280	280	270	270	270	270	280	270	5490	280	280	280	280	**6610**	**202670**
Costa Sur 6	410.00	260	250	250	250	250	1260	260	250	260	260	260	230	250	3030	240	250	250	250	260	260	260	300	5100	310	290	280	280	**6260**	**192020**
Aguirre 1	450.00	280	240	230	235	230	1215	230	230	230	230	230	230	230	2825	230	230	220	230	275	295	275	330	4910	350	365	365	375	**6365**	**160930**
Aguirre 2	450.00						0								0									0					**0**	**0**
TOTAL THERMOELECTRICS		**1121**	**1061**	**1029**	**1025**	**1020**	**5256**	**1031**	**1021**	**1022**	**1031**	**1025**	**1028**	**1052**	**12466**	**1052**	**1062**	**1042**	**1052**	**1107**	**1127**	**1111**	**1191**	**21210**	**1231**	**1226**	**1216**	**1227**	**26110**	**751351**
COMBINED CYCLES																														
Aguirre CC 1	200.00						0								0									0	0	34	50	24	**108**	**41364**
Aguirre CC 2	200.00						0								0									0					**0**	**9905**
TOTAL AGUIRRE GAS C.C.		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**34**	**50**	**24**	**108**	**51269**
Aguirre CC 1-5	96.00						0								0									0					**0**	**5852**
Aguirre CC 2-5	96.00						0								0									0					**0**	**0**
TOTAL AGUIRRE STEAM C.C.		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5852**
TOTAL AGUIRRE C.C.		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**34**	**50**	**24**	**108**	**57121**
San Juan GT 5	172.00	119	119	120	120	120	598	120	119	119	120	120	120	119	1435	120	119	120	120	119	120	119	120	2392	120	119	120	119	**2870**	**60846**
San Juan GT 6	172.00	149	150	150	150	133	732	120	120	119	120	119	120	120	1570	120	120	119	136	150	149	150	150	2664	149	150	150	149	**3262**	**75519**
TOTAL SAN JUAN GAS C.C.		**268**	**269**	**270**	**270**	**253**	**1330**	**240**	**239**	**238**	**240**	**239**	**240**	**239**	**3005**	**240**	**239**	**239**	**256**	**269**	**269**	**269**	**270**	**5056**	**269**	**269**	**270**	**268**	**6132**	**136365**
San Juan STM 5	60.00						0								0									0					**0**	**0**
San Juan STM 6	60.00	48	48	48	48	46	238	40	39	41	40	40	41	42	521	41	41	41	45	50	49	50	49	887	48	48	48	48	**1079**	**24580**
TOTAL SAN JUAN STEAM C.C.		**48**	**48**	**48**	**48**	**46**	**238**	**40**	**39**	**41**	**40**	**40**	**41**	**42**	**521**	**41**	**41**	**41**	**45**	**50**	**49**	**50**	**49**	**887**	**48**	**48**	**48**	**48**	**1079**	**24580**
TOTAL SAN JUAN C.C.		**316**	**317**	**318**	**318**	**299**	**1568**	**280**	**278**	**279**	**280**	**279**	**281**	**281**	**3526**	**281**	**280**	**280**	**301**	**319**	**318**	**319**	**319**	**5943**	**317**	**317**	**318**	**316**	**7211**	**160945**
DIESEL																														
Cambalache 1	82.50						0								0									0					**0**	**0**
Cambalache 2	82.50						0								0									0					**0**	**6543**
Cambalache 3	82.50						0								0									0					**0**	**7630**
TOTAL CAMBALACHE G.P.		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14173**
Mayagüez 1	55.00						0								0									0					**0**	**237**
Mayagüez 2	55.00						0								0									0					**0**	**0**
Mayagüez 3	55.00						0								0									0					**0**	**500**
Mayagüez 4	55.00						0								0									0					**0**	**595**
TOTAL MAYAGUEZ G.P.		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1332**
Palo Seco GT	126.00						0								0						10	57	61	128	62	62	51	56	**359**	**10839**
Costa Sur GT	42.00						0								0									0					**0**	**0**
Aguirre GT	42.00						0								0									0					**0**	**0**
Daguao GT	42.00						0								0							13		13	18	11			**42**	**1124**
Yabucoa GT	42.00						0								0						6	18	18	42	18	8			**68**	**577**
Vega Baja GT	42.00						0								0							15	15	19	16	0	0	**50**	**1714**
Jobos GT	42.00						0								0									0					**0**	**324**
TOTAL GAS TURBINES		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**75**	**107**	**198**	**117**	**97**	**51**	**56**	**519**	**14578**
Culebra	1.83						0								0									0					**0**	**0**
Vieques	6.00						0								0									0					**0**	**0**
TOTAL DIESEL GENERATORS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL DIESEL		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**75**	**107**	**198**	**117**	**97**	**51**	**56**	**519**	**30083**
COGENERATION																														
AES 1	227.15	234	234	234	234	234	1170	224	196	196	196	196	196	196	2570	196	196	196	196	196	207	230	234	4221	233	233	233	233	**5153**	**157776**
AES 2	227.15	233	232	232	233	232	1162	230	199	195	196	196	195	195	2568	195	195	196	196	196	202	225	228	4201	230	233	233	233	**5130**	**157999**
TOTAL AES		**467**	**466**	**466**	**467**	**466**	**2332**	**454**	**395**	**391**	**392**	**392**	**391**	**391**	**5138**	**391**	**391**	**392**	**392**	**392**	**409**	**455**	**462**	**8422**	**463**	**466**	**466**	**466**	**10283**	**315775**
EcoEléctrica	507.00	436	384	336	305	297	1758	298	297	298	315	321	299	297	3883	297	297	297	304	297	297	297	320	6289	399	417	438	367	**7910**	**292058**
TOTAL COGENERATION		**903**	**850**	**802**	**772**	**763**	**4090**	**752**	**692**	**689**	**707**	**713**	**690**	**688**	**9021**	**688**	**688**	**689**	**696**	**689**	**706**	**752**	**782**	**14711**	**862**	**883**	**904**	**833**	**18193**	**607833**
RENEWABLE SYSTEMS																														
Solar	147.10						0		4	26	55	82	95	101	363	102	103	96	81	56	24	5		830					**830**	**21963**
Eólica	102.00	6	4	5	3	1	19			7	29	37	54	64	210	72	74	74	74	74	67	35	18	698	6	3	1	1	**709**	**18387**
LandFill Gas	4.80	3	3	4	3	4	17	3	3	3	4	3	3	2	38	2	2	2	2	1	2	2	2	53	2	1	1	1	**58**	**1535**
TOTAL RENEWABLE		**9**	**7**	**9**	**6**	**5**	**36**	**3**	**7**	**36**	**88**	**122**	**152**	**167**	**611**	**176**	**179**	**172**	**157**	**131**	**93**	**42**	**20**	**1581**	**8**	**4**	**2**	**2**	**1597**	**41885**
TOTAL HOURLY GENERATION		**2349**	**2235**	**2158**	**2121**	**2087**	**10950**	**2066**	**1998**	**2026**	**2106**	**2139**	**2151**	**2188**	**25624**	**2197**	**2209**	**2183**	**2206**	**2246**	**2260**	**2305**	**2426**	**43656**	**2543**	**2566**	**2543**	**2459**	**53767**	**1652030**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2566	**1998**	**2240**	**87.31%**	**77.86%**	**53767**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Wednesday, July 31, 2019

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1	8.64									2	2	2	2	2	10	2	2	2	2	2	2	2	2	26	2				**28**	**593**
Toro Negro 2	1.92																													
Caonillas 1	18.00																													
Caonillas 2	3.60																													
Dos Bocas	15.00																		6			3	6	15	6	3			**24**	**1938**
Yauco 1	25.00																													
Yauco 2	9.00															1	1	1	1	1	2	1	2	10	1	2			**13**	**506**
Garzas 1	7.20										1	1	1	1	4	1	1	1	1					8					**8**	**264**
Garzas 2	5.04																													
Río Blanco	5.00																													
TOTAL HYDROELECTRICS										**2**	**3**	**3**	**3**	**3**	**14**	**4**	**4**	**4**	**10**	**3**	**4**	**6**	**10**	**59**	**9**	**5**			**73**	**3301**
THERMOELECTRICS																												
San Juan 7	100.00	69	69	70	70	70	348	70	70	68	68	72	71	69	836	69	69	69	69	69	69	69	69	1388	69	71	71	73	**1672**	**37962**
San Juan 8	100.00																													
San Juan 9	100.00																													
San Juan 10	100.00																													
Palo Seco 1	85.00																													**39709**
Palo Seco 2	85.00																													
Palo Seco 3	216.00																													**6431**
Palo Seco 4	216.00																													
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													**193580**
Costa Sur 6	410.00	340	340	340	350	350	1720	340	340	340	340	340	340	340	4100	350	330	350	330	360	340	360	350	6870	360	350	310	300	**8190**	**153540**
Aguirre 1	450.00	235	235	245	240	240	1195	240	260	310	315	320	320	325	3285	340	350	330	330	325	320	325	325	5930	325	320	310	320	**7205**	**205970**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**644**	**644**	**655**	**660**	**660**	**3263**	**650**	**670**	**718**	**723**	**732**	**731**	**734**	**8221**	**759**	**749**	**749**	**729**	**754**	**729**	**754**	**744**	**14188**	**754**	**741**	**691**	**693**	**17067**	**637192**
COMBINED CYCLES																												
Aguirre C.C. 1	200.00	102	32	30	30	30	224	30	30	66	90	90	90	97	717	97	98	99	138	138	168	168	159	1782	134	136	136	136	**2324**	**45028**
Aguirre C.C. 2	200.00	67	30	30	30	30	187	30	30	30	45	59	60	60	501	60	60	60	97	97	97	92	86	1150	69	70	70	70	**1429**	**19278**
Aguirre C.C. 1-5	96.00													3	3	14	14	14	13	13	13	13	14	111	12	13	13	13	**162**	**8519**
Aguirre C.C. 2-5	96.00																													
TOTAL AGUIRRE C.C.		**169**	**62**	**60**	**60**	**60**	**411**	**60**	**60**	**96**	**135**	**149**	**150**	**160**	**1221**	**171**	**172**	**173**	**248**	**248**	**278**	**273**	**259**	**3043**	**215**	**219**	**219**	**219**	**3915**	**72825**
San Juan GT 5	172.00	136	136	137	137	137	683	137	137	137	137	136	136	136	1639	137	137	136	136	137	136	136	137	2731	137	137	136	136	**3277**	**98489**
San Juan GT 6	172.00	136	136	137	137	137	683	136	136	137	137	137	137	137	1640	137	137	137	136	136	137	137	136	2733	137	137	137	137	**3281**	**100228**
San Juan STM 5	60.00	45	44	44	44	44	221	44	44	44	45	45	45	46	534	45	45	45	45	44	45	44	45	892	44	43	43	43	**1065**	**30288**
San Juan STM 6	60.00	44	44	44	44	44	220	43	44	45	45	45	45	46	533	47	45	45	45	45	45	44	44	893	44	43	43	43	**1066**	**32715**
TOTAL SAN JUAN C.C.		**361**	**360**	**362**	**362**	**362**	**1807**	**360**	**361**	**363**	**364**	**363**	**363**	**365**	**4346**	**366**	**364**	**363**	**362**	**362**	**363**	**361**	**362**	**7249**	**362**	**360**	**359**	**359**	**8689**	**261720**
DIESEL																												
Cambalache 1	82.50																													
Cambalache 2	82.50																					5	33	38	50	50	50	27	**215**	**6915**
Cambalache 3	82.50																		15	65	77	77	78	312	78	79	53		**522**	**11682**
TOTAL CAMBALACHE G.P.																			**15**	**65**	**77**	**82**	**111**	**350**	**128**	**129**	**103**	**27**	**737**	**18597**
Mayagüez 1	55.00																		45	48	48	48	46	235	1				**236**	**2123**
Mayagüez 2	55.00																													**29**
Mayagüez 3	55.00																		7			1	26	34	25				**59**	**859**
Mayagüez 4	55.00																		47	35	24	24	24	154	14				**168**	**2536**
TOTAL MAYAGUEZ G.P.																			**99**	**83**	**72**	**73**	**96**	**423**	**40**				**463**	**5547**
Palo Seco	126.00											2	38	41	81	41	63	82	83	83	83	84	85	685	85	85	66		**921**	**15570**
Costa Sur	42.00																													
Aguirre	42.00																													
Daguao	42.00																			1	18	18	18	55	18	9			**82**	**1495**
Yabucoa	42.00																		6	17	17	17	17	74	17	5			**96**	**1296**
Vega Baja	42.00										8	20	20	20	68	20	20	20	20	20	20	20	20	228	20	7			**255**	**3160**
Jobos	42.00																			14	20	21	21	76	21	14			**111**	**780**
TOTAL GAS TURBINES											**8**	**22**	**58**	**61**	**149**	**61**	**83**	**102**	**109**	**135**	**158**	**160**	**161**	**1118**	**161**	**120**	**66**		**1465**	**22301**
Culebra	6.00																													**20**
Vieques	6.00																													**21**
TOTAL DIESEL GENERATORS																														**41**
TOTAL DIESEL											**8**	**22**	**58**	**61**	**149**	**61**	**83**	**102**	**223**	**283**	**307**	**315**	**368**	**1891**	**329**	**249**	**169**	**27**	**2665**	**46486**
COGENERATION																												
AES 1	227.15	232	232	233	232	232	1161	232	232	233	233	233	233	233	2790	232	231	228	218	221	222	219	217	4578	219	231	231	232	**5491**	**171004**
AES 2	227.15	233	233	233	233	220	1152	219	219	218	217	217	216	218	2676	216	224	194						3310	4	16	20	40	**3390**	**165775**
TOTAL AES		**465**	**465**	**466**	**465**	**452**	**2313**	**451**	**451**	**451**	**450**	**450**	**449**	**451**	**5466**	**448**	**455**	**422**	**218**	**221**	**222**	**219**	**217**	**7888**	**223**	**247**	**251**	**272**	**8881**	**336779**
EcoEléctrica	507.00	412	446	403	375	392	2028	451	476	462	471	465	457	483	5293	488	483	488	472	405	343	351	382	8705	432	425	478	489	**10529**	**302598**
TOTAL COGENERATION		**877**	**911**	**869**	**840**	**844**	**4341**	**902**	**927**	**913**	**921**	**915**	**906**	**934**	**10759**	**936**	**938**	**910**	**690**	**626**	**565**	**570**	**599**	**16593**	**655**	**672**	**729**	**761**	**19410**	**639377**
RENEWABLE SYSTEMS																												
Solar	147.10								1	10	33	64	71	86	265	74	54	21	9	9	5			437					**437**	**21809**
Eólica	102.00	1					1		2		7	31	42	31	114	34	39	25	19	3			1	235	11	32	12	5	**295**	**20056**
LandFill Gas	4.80	3	3	3	2	2	13	3	2	3	2	2	2	1	28	1	1	1	1	2	2	2	2	40	2	2	2	2	**48**	**802**
TOTAL RENEWABLE		**4**	**3**	**3**	**2**	**2**	**14**	**3**	**5**	**13**	**42**	**97**	**115**	**118**	**407**	**109**	**94**	**47**	**29**	**14**	**7**	**2**	**3**	**712**	**13**	**34**	**14**	**7**	**780**	**42667**
TOTAL HOURLY GENERATION		**2055**	**1980**	**1949**	**1924**	**1928**	**9836**	**1975**	**2023**	**2105**	**2196**	**2281**	**2326**	**2375**	**25117**	**2406**	**2404**	**2348**	**2291**	**2290**	**2253**	**2281**	**2345**	**43735**	**2337**	**2280**	**2181**	**2066**	**52599**	**1703568**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2406	**1924**	**2192**	**91.09%**	**79.97%**	**52599**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Saturday, August 31, 2019

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1	8.64																											640
Toro Negro 2	1.92																											
Caonillas 1	18.00																											
Caonillas 2	3.60																											
Dos Bocas	15.00																											1339
Yauco 1	25.00																											
Yauco 2	9.00												2	2	4	2	2	2	2	2	2	2	2	20	2	2			24	640
Garzas 1	7.20																											516
Garzas 2	5.04																											
Río Blanco	5.00																											
TOTAL HYDROELECTRICS													**2**	**2**	**4**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**20**	**2**	**2**			**24**	**3135**
THERMOELECTRICS																												
San Juan 7	100.00																											37121
San Juan 8	100.00																											
San Juan 9	100.00																											
San Juan 10	100.00																											
Palo Seco 1	85.00																											
Palo Seco 2	85.00																											
Palo Seco 3	216.00	158	158	158	158	158	790	158	148	140	140	140	140	140	1796	140	140	140	140	89	118	160	161	2884	161	161	158	158	3522	113789
Palo Seco 4	216.00																											
Costa Sur 3	85.00																											
Costa Sur 4	85.00																											
Costa Sur 5	410.00	130	120	130	120	120	620	120	130	130	120	120	120	120	1480	120	120	120	130	120	120	120	130	2460	120	120	130	120	2950	5460
Costa Sur 6	410.00	260	260	250	260	250	1280	250	250	260	260	260	260	260	3080	270	260	260	260	280	260	270	260	5200	260	260	260	270	6250	221470
Aguirre 1	450.00	290	290	295	275	245	1395	250	240	250	245	245	245	240	3110	250	245	245	240	280	295	285	300	5250	290	295	285	295	6415	209465
Aguirre 2	450.00																											
TOTAL THERMOELECTRICS		**838**	**828**	**833**	**813**	**773**	**4085**	**778**	**768**	**780**	**765**	**765**	**765**	**760**	**9466**	**780**	**765**	**765**	**770**	**769**	**793**	**835**	**851**	**15794**	**831**	**836**	**833**	**843**	**19137**	**587305**
COMBINED CYCLES																												
Aguirre C.C. 1	200.00	48	48	49	49	49	243	50	49	49	49	49	49	49	587	49	49	48	53	78	78	81	108	1131	120	109	109	109	1578	72395
Aguirre C.C. 2	200.00	13					13								13						20	34	75	142	89	90	90	90	501	36282
Aguirre C.C. 1-5	96.00	16	16	16	16	16	80	16	16	16	16	15	15	15	189	16	16	16	16	16	16	16	16	317	16	16	16	16	381	8277
Aguirre C.C. 2-5	96.00																													
TOTAL AGUIRRE C.C.		**77**	**64**	**65**	**65**	**65**	**336**	**66**	**65**	**65**	**65**	**64**	**64**	**64**	**789**	**65**	**65**	**64**	**69**	**94**	**114**	**131**	**199**	**1590**	**225**	**215**	**215**	**215**	**2460**	**116954**
San Juan GT 5	172.00	117	118	117	118	118	588	118	117	118	118	117	118	118	1412	117	118	117	117	117	119	117	118	2352	117	118	118	117	2822	97651
San Juan GT 6	172.00	137	136	137	137	136	683	138	121	120	119	120	120	120	1541	119	120	120	120	119	126	135	134	2534	135	135	136	135	3075	99402
San Juan STM 5	60.00	39	40	40	39	40	198	39	40	40	40	41	40	40	478	41	41	41	41	41	41	40	40	804	40	40	40	40	964	33024
San Juan STM 6	60.00	44	44	44	44	44	220	43	39	40	40	40	40	40	502	40	40	40	40	40	42	44	44	832	43	45	45	45	1010	32910
TOTAL SAN JUAN C.C.		**337**	**338**	**338**	**338**	**338**	**1689**	**338**	**317**	**318**	**317**	**318**	**318**	**318**	**3933**	**317**	**319**	**318**	**318**	**317**	**328**	**336**	**336**	**6522**	**335**	**338**	**339**	**337**	**7871**	**262987**
DIESEL																												
Cambalache 1	82.50																											
Cambalache 2	82.50	50	50	51	51	51	253	51	51	50	50	50	50	50	605	50	50	50	50	50	50	51	51	1007	50	50	50	43	1200	9927
Cambalache 3	82.50	80	80	80	80	80	400	80	80	79	78	78	78	77	950	77	77	77	77	78	78	78	78	1570	78	79	75	5	1807	13325
TOTAL CAMBALACHE G.P.		**130**	**130**	**131**	**131**	**131**	**653**	**131**	**131**	**129**	**128**	**128**	**128**	**127**	**1555**	**127**	**127**	**127**	**127**	**128**	**128**	**129**	**129**	**2577**	**128**	**129**	**125**	**48**	**3007**	**23252**
Mayagüez 1	55.00	49	22				71								71									71					71	4365
Mayagüez 2	55.00																													2873
Mayagüez 3	55.00																													1507
Mayagüez 4	55.00																													3526
TOTAL MAYAGUEZ G.P.		**49**	**22**				**71**								**71**									**71**					**71**	**12271**
Palo Seco	126.00	53	2				55								55									55					55	16778
Costa Sur	42.00																													
Aguirre	42.00																													104
Daguao	42.00																													1663
Yabucoa	42.00																													2150
Vega Baja	42.00																													2144
Jobos	42.00																													2248
TOTAL GAS TURBINES		**53**	**2**				**55**								**55**									**55**					**55**	**25087**
Culebra	6.00																													
Vieques	6.00																													
TOTAL DIESEL GENERATORS																														
TOTAL DIESEL		**232**	**154**	**131**	**131**	**131**	**779**	**131**	**131**	**129**	**128**	**128**	**128**	**127**	**1681**	**127**	**127**	**127**	**127**	**128**	**128**	**129**	**129**	**2703**	**128**	**129**	**125**	**48**	**3133**	**60610**
COGENERATION																												
AES 1	227.15	231	231	230	231	231	1154	232	231	231	231	231	231	232	2773	231	232	232	232	232	231	231	231	4625	231	231	231	231	5549	169517
AES 2	227.15	233	233	233	233	233	1165	233	233	233	233	233	233	234	2797	234	234	234	233	233	234	233	234	4666	233	233	233	233	5598	165190
TOTAL AES		**464**	**464**	**463**	**464**	**464**	**2319**	**465**	**464**	**464**	**464**	**464**	**464**	**466**	**5570**	**465**	**466**	**466**	**465**	**465**	**465**	**464**	**465**	**9291**	**464**	**464**	**464**	**464**	**11147**	**334707**
EcoEléctrica	507.00	325	337	295	276	275	1508	275	275	302	360	403	415	424	3962	414	389	460	480	489	470	443	488	7595	484	460	417	404	9360	330792
TOTAL COGENERATION		**789**	**801**	**758**	**740**	**739**	**3827**	**740**	**739**	**766**	**824**	**867**	**879**	**890**	**9532**	**879**	**855**	**926**	**945**	**954**	**935**	**907**	**953**	**16886**	**948**	**924**	**881**	**868**	**20507**	**665499**
RENEWABLE SYSTEMS																												
Solar	147.10								1	18	53	74	89	95	330	98	97	62	60	40	11			698					698	20598
Eólica	102.00										6	11	15	17	49	19	28	15	7	5	6	3		132					132	16230
LandFill Gas	4.80	3	4	3	4	3	17	3	3	4	3	4	3	4	41	3	4	4	4	4	3	3	2	68	2	4	4	4	82	1667
TOTAL RENEWABLE		**3**	**4**	**3**	**4**	**3**	**17**	**3**	**4**	**22**	**62**	**89**	**107**	**116**	**420**	**120**	**129**	**81**	**71**	**49**	**20**	**6**	**2**	**898**	**2**	**4**	**4**	**4**	**912**	**38495**
TOTAL HOURLY GENERATION		**2276**	**2189**	**2128**	**2091**	**2049**	**10733**	**2056**	**2024**	**2080**	**2161**	**2231**	**2263**	**2277**	**25825**	**2290**	**2262**	**2283**	**2302**	**2313**	**2320**	**2346**	**2472**	**44413**	**2471**	**2448**	**2397**	**2315**	**54044**	**1734985**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2472	**2024**	**2252**	**91.09%**	**81.88%**	**54044**

PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Monday, September 30, 2019

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1	8.64	3					3			1	1	1	1	1	8	3	3	3	3	3	4	4	4	35	2				**37**	**1162**
Toro Negro 2	1.92																													
Caonillas 1	18.00																													
Caonillas 2	3.60																													
Dos Bocas	15.00	10	10				20								20			1	6	6	6	6	6	51	6	3			**60**	**2806**
Yauco 1	25.00																													
Yauco 2	9.00	2	2	2	2	2	10	2	2	2	2	2	2	2	24	2			2	2	2	2	2	36	2	2			**40**	**842**
Garzas 1	7.20												2	6	8	6	6	6	6					32					**32**	**1260**
Garzas 2	5.04																													
Río Blanco	5.00																													
TOTAL HYDROELECTRICS		**15**	**12**	**2**	**2**	**2**	**33**	**2**	**2**	**3**	**3**	**3**	**5**	**9**	**60**	**11**	**9**	**10**	**17**	**11**	**12**	**12**	**12**	**154**	**10**	**5**			**169**	**6070**
THERMOELECTRICS																												
San Juan 7	100.00	69	69	69	68	69	344	68	69	69	69	68	69	68	824	69	68	69	68	68	69	69	68	1372	68	68	69	69	**1646**	**12424**
San Juan 8	100.00																													
San Juan 9	100.00	76	76	75	75	75	377	74	57	25					533									533					**533**	**43399**
San Juan 10	100.00																													
Palo Seco 1	85.00																													
Palo Seco 2	85.00																													
Palo Seco 3	216.00	152	152	152	152	152	760	152	152	152	152	152	152	152	1824	152	152	152	152	152	150	150	150	3034	150	150	150	150	**3634**	**108929**
Palo Seco 4	216.00																													
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00	140	140	140	140	140	700	140	140	140	140	130	140	140	1670	140	140	130	140	140	130	140	140	2770	140	140	140	140	**3330**	**116750**
Costa Sur 6	410.00	320	290	290	240	260	1400	290	300	300	320	350	340	340	3640	340	310	300	290	300	300	290	310	6080	310	300	290	270	**7250**	**210720**
Aguirre 1	450.00			20	100	150	270	170	225	275	285	310	285	310	2130	315	310	325	315	310	310	305	300	4620	290	290	265	230	**5695**	**166100**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**757**	**727**	**746**	**775**	**846**	**3851**	**894**	**943**	**961**	**966**	**1010**	**986**	**1010**	**10621**	**1016**	**980**	**976**	**965**	**970**	**959**	**954**	**968**	**18409**	**958**	**948**	**914**	**859**	**22088**	**658322**
COMBINED CYCLES																												
Aguirre C.C. 1	200.00	136	116	29			281				13	20	20	24	358	38	48	49	49	49	48	87	133	859	139	139	113	109	**1359**	**65669**
Aguirre C.C. 2	200.00	156	142	72	10	10	390	10	10	10	10	19	20	57	526	90	90	90	68	60	60	85	86	1155	90	90	90	66	**1491**	**73342**
Aguirre C.C. 1-5	96.00															1	15	15	15	15	16	17	16	110	16	16	16	16	**174**	**3610**
Aguirre C.C. 2-5	96.00																													
TOTAL AGUIRRE C.C.		**292**	**258**	**101**	**10**	**10**	**671**	**10**	**10**	**10**	**23**	**39**	**40**	**81**	**884**	**129**	**153**	**154**	**132**	**124**	**124**	**189**	**235**	**2124**	**245**	**245**	**219**	**191**	**3024**	**142621**
San Juan GT 5	172.00	120	119	119	120	120	598	119	120	120	119	120	119	120	1435	119	120	119	120	120	119	120	120	2392	119	119	120	120	**2870**	**47267**
San Juan GT 6	172.00	70	81	91	91	90	423	90	90	89	90	90	99	116	1087	120	120	119	120	120	119	120	120	2045	120	119	120	120	**2524**	**97394**
San Juan STM 5	60.00																													**12410**
San Juan STM 6	60.00											7	23	41	71	42	42	42	42	42	42	42	42	407	42	41	41	41	**572**	**31484**
TOTAL SAN JUAN C.C.		**190**	**200**	**210**	**211**	**210**	**1021**	**209**	**210**	**209**	**209**	**217**	**241**	**277**	**2593**	**281**	**282**	**280**	**282**	**282**	**280**	**282**	**282**	**4844**	**281**	**279**	**281**	**281**	**5966**	**188555**
DIESEL																												
Cambalache 1	82.50																													
Cambalache 2	82.50																													**23423**
Cambalache 3	82.50																													**19288**
TOTAL CAMBALACHE G.P.																														**42711**
Mayagüez 1	55.00																													**12327**
Mayagüez 2	55.00	1					1								1									1					**1**	**16240**
Mayagüez 3	55.00																													**6322**
Mayagüez 4	55.00	4					4								4									4					**4**	**14862**
TOTAL MAYAGUEZ G.P.		**5**					**5**								**5**									**5**					**5**	**49751**
Palo Seco	126.00	78	78	79	64	16	315	16	16	36	63	60	76	75	657	76	77	78	78	77	77	77	76	1273	77	77	77	50	**1554**	**32809**
Costa Sur	42.00																													
Aguirre	42.00																													
Daguao	42.00											3	17	19	39	26	26	26	26	30	30	30	30	263	30	15			**308**	**5934**
Yabucoa	42.00											16	18	18	52	18	18	18	18	18	18	18	18	196	18	8			**222**	**5674**
Vega Baja	42.00																													**1103**
Jobos	42.00												17	18	35	18	18	18	18	18	18	18	19	180	18	11			**209**	**6251**
TOTAL GAS TURBINES		**78**	**78**	**79**	**64**	**16**	**315**	**16**	**16**	**36**	**63**	**79**	**128**	**130**	**783**	**138**	**139**	**140**	**140**	**143**	**143**	**143**	**143**	**1912**	**143**	**111**	**77**	**50**	**2293**	**51771**
Culebra	6.00																													
Vieques	6.00																													**1**
TOTAL DIESEL GENERATORS																														**1**
TOTAL DIESEL		**83**	**78**	**79**	**64**	**16**	**320**	**16**	**16**	**36**	**63**	**79**	**128**	**130**	**788**	**138**	**139**	**140**	**140**	**143**	**143**	**143**	**143**	**1917**	**143**	**111**	**77**	**50**	**2298**	**144234**
COGENERATION																												
AES 1	227.15	232	232	232	233	233	1162	233	233	233	233	233	233	233	2793	233	233	233	233	233	233	233	232	4656	232	232	232	230	**5582**	**119466**
AES 2	227.15	230	230	230	230	229	1149	229	229	207	212	216	224	229	2695	229	230	229	229	229	228	229	228	4526	228	228	230	229	**5441**	**109349**
TOTAL AES		**462**	**462**	**462**	**463**	**462**	**2311**	**462**	**462**	**440**	**445**	**449**	**457**	**462**	**5488**	**462**	**463**	**462**	**462**	**462**	**461**	**462**	**460**	**9182**	**460**	**460**	**462**	**459**	**11023**	**228815**
EcoEléctrica	507.00	284	247	366	401	394	1692	455	444	452	496	495	472	452	4958	404	426	443	426	455	435	478	492	8517	493	493	494	479	**10476**	**290581**
TOTAL COGENERATION		**746**	**709**	**828**	**864**	**856**	**4003**	**917**	**906**	**892**	**941**	**944**	**929**	**914**	**10446**	**866**	**889**	**905**	**888**	**917**	**896**	**940**	**952**	**17699**	**953**	**953**	**956**	**938**	**21499**	**519396**
RENEWABLE SYSTEMS																												
Solar	147.10								1	24	58	74	76	57	290	71	56	38	39	15	2			511					**511**	**18369**
Eólica	102.00												10		10	3	1	2		1	1			18	1	1	1	1	**22**	**7071**
LandFill Gas	4.80	1	1	1	1	2	6	1	1	1	1	1	1	2	14	1	1	1	1	1	1	1	2	23	1	1	2	1	**28**	**936**
TOTAL RENEWABLE		**1**	**1**	**1**	**1**	**2**	**6**	**1**	**2**	**25**	**59**	**75**	**87**	**59**	**314**	**75**	**58**	**41**	**40**	**17**	**4**	**1**	**2**	**552**	**2**	**2**	**3**	**2**	**561**	**26376**
TOTAL HOURLY GENERATION		**2084**	**1985**	**1967**	**1927**	**1942**	**9905**	**2049**	**2089**	**2136**	**2264**	**2367**	**2416**	**2480**	**25706**	**2516**	**2510**	**2506**	**2464**	**2464**	**2418**	**2521**	**2594**	**45699**	**2592**	**2543**	**2450**	**2321**	**55605**	**1685574**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2594	**1927**	**2317**	**89.32%**	**74.29%**	**55605**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Thursday, October 31, 2019

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1	8.64									2	2	3	3	3	13	3	3	3	3	3	3	3	3	37	2				**39**	**861**
Toro Negro 2	1.92																													
Caonillas 1	18.00																													
Caonillas 2	3.60																													
Dos Bocas	15.00	12	12	12	12	12	60	12	12	12	12	12	12	12	144	12	12	12	12	12	12	12	12	240	12	6			**258**	**5491**
Yauco 1	25.00																													
Yauco 2	9.00	2	2	2	2	2	10	2	2	2	2	2	2	2	24	2	2	2	2	2	2	2	2	40	2	2	2	2	**48**	**1099**
Garzas 1	7.20											6	6	6	18	6	6	6	6					42					**42**	**598**
Garzas 2	5.04																													**51**
Río Blanco	5.00																													
TOTAL HYDROELECTRICS		**14**	**14**	**14**	**14**	**14**	**70**	**14**	**14**	**16**	**16**	**23**	**23**	**23**	**199**	**23**	**23**	**23**	**23**	**17**	**17**	**17**	**17**	**359**	**16**	**8**	**2**	**2**	**387**	**8100**
THERMOELECTRICS																												
San Juan 7	100.00																													**9081**
San Juan 8	100.00																													
San Juan 9	100.00	65	66	65	64	64	324	65	65	65	65	65	65	66	780	65	64	64	64	63	61	62	62	1285	62	63	61	61	**1532**	**43689**
San Juan 10	100.00																													
Palo Seco 1	85.00																													
Palo Seco 2	85.00																													
Palo Seco 3	216.00	121	121	121	121	121	605	121	121	121	128	155	155	155	1561	155	144	155	155	151	155	151	155	2782	146	150	150	150	**3378**	**87701**
Palo Seco 4	216.00																													**81420**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00	270	280	280	270	270	1370	300	280	280	280	280	280	270	3340	280	280	270	280	290	280	310	300	5630	290	290	290	280	**6780**	**150720**
Costa Sur 6	410.00	260	270	270	260	260	1320	290	270	270	270	270	270	260	3220	270	260	270	270	270	270	270	270	5370	270	260	250	270	**6420**	**202690**
Aguirre 1	450.00	300	250	250	250	250	1300	250	235	275	320	350	345	350	3425	350	350	355	350	350	350	360	350	6240	350	350	350	350	**7640**	**224555**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**1016**	**987**	**986**	**965**	**965**	**4919**	**1026**	**971**	**1011**	**1063**	**1120**	**1115**	**1101**	**12326**	**1120**	**1098**	**1114**	**1119**	**1124**	**1116**	**1153**	**1137**	**21307**	**1118**	**1113**	**1101**	**1111**	**25750**	**799856**
COMBINED CYCLES																												
Aguirre C.C. 1	200.00	50	50	50	50	50	250	49	50	50	50	50	50	50	599	50	50	50	50	50	50	71	80	1050	58	50	50	50	**1258**	**29493**
Aguirre C.C. 2	200.00																			16	30	50	60	156	59	60	60	45	**380**	**20212**
Aguirre C.C. 1-5	96.00	16	16	16	16	16	80	15	16	16	16	16	16	16	191	16	16	16	16	16	16	16	16	319	16	16	16	16	**383**	**5189**
Aguirre C.C. 2-5	96.00																													
TOTAL AGUIRRE C.C.		**66**	**66**	**66**	**66**	**66**	**330**	**64**	**66**	**66**	**66**	**66**	**66**	**66**	**790**	**66**	**66**	**66**	**66**	**82**	**96**	**137**	**156**	**1525**	**133**	**126**	**126**	**111**	**2021**	**54894**
San Juan GT 5	172.00																													**23918**
San Juan GT 6	172.00	126	119	120	120	120	605	120	119	132	145	145	145	144	1555	144	144	145	145	145	145	145	145	2713	144	145	145	144	**3291**	**83576**
San Juan STM 5	60.00																													
San Juan STM 6	60.00	41	41	41	41	41	205	41	44	49	49	50	50	50	538	50	50	50	50	50	49	49	49	935	49	49	48	49	**1130**	**28654**
TOTAL SAN JUAN C.C.		**167**	**160**	**161**	**161**	**161**	**810**	**161**	**163**	**181**	**194**	**195**	**195**	**194**	**2093**	**194**	**194**	**195**	**195**	**195**	**194**	**194**	**194**	**3648**	**193**	**194**	**193**	**193**	**4421**	**136148**
DIESEL																												
Cambalache 1	82.50																													
Cambalache 2	82.50																													**2404**
Cambalache 3	82.50																													
TOTAL CAMBALACHE G.P.																														**2404**
Mayagüez 1	55.00																													**541**
Mayagüez 2	55.00																													**1766**
Mayagüez 3	55.00																													**331**
Mayagüez 4	55.00																													**564**
TOTAL MAYAGUEZ G.P.																														**3202**
Palo Seco	126.00																					29	57	86	57	35			**178**	**14918**
Costa Sur	42.00																													
Aguirre	42.00																													
Daguao	42.00																													**2193**
Yabucoa	42.00																													**2669**
Vega Baja	42.00																													
Jobos	42.00																													**2768**
TOTAL GAS TURBINES																						**29**	**57**	**86**	**57**	**35**			**178**	**22548**
Culebra	6.00																													
Vieques	6.00																													
TOTAL DIESEL GENERATORS																														
TOTAL DIESEL																						**29**	**57**	**86**	**57**	**35**			**178**	**28154**
COGENERATION																														
AES 1	227.15	229	230	230	230	230	1149	230	230	230	231	230	225	227	2752	228	229	231	230	230	230	230	232	4592	233	233	233	232	**5523**	**170519**
AES 2	227.15	228	228	228	227	228	1139	228	228	228	227	227	228	228	2733	228	227	228	227	228	227	228	227	4553	227	228	227	185	**5420**	**167989**
TOTAL AES		**457**	**458**	**458**	**457**	**458**	**2288**	**458**	**458**	**458**	**458**	**457**	**453**	**455**	**5485**	**456**	**456**	**459**	**457**	**458**	**457**	**458**	**459**	**9145**	**460**	**461**	**460**	**417**	**10943**	**338508**
EcoEléctrica	507.00	393	336	283	274	274	1560	286	369	336	327	315	366	412	3971	395	405	426	453	478	473	479	478	7558	477	478	461	378	**9352**	**310602**
TOTAL COGENERATION		**850**	**794**	**741**	**731**	**732**	**3848**	**744**	**827**	**794**	**785**	**772**	**819**	**867**	**9456**	**851**	**861**	**885**	**910**	**936**	**930**	**937**	**937**	**16703**	**937**	**939**	**921**	**795**	**20295**	**649110**
RENEWABLE SYSTEMS																														
Solar	147.10								1	22	52	66	89	87	317	98	101	86	64	31	3			700					**700**	**20151**
Eólica	102.00	3	3				6					13	1	3	23	13	30	29	31	29	21	3	2	181	1	1			**183**	**6489**
LandFill Gas	4.80																			1	1	1	1	4	1	1	1		**7**	**759**
TOTAL RENEWABLE		**3**	**3**				**6**		**1**	**22**	**52**	**79**	**90**	**90**	**340**	**111**	**131**	**115**	**95**	**61**	**25**	**4**	**3**	**885**	**2**	**2**	**1**		**890**	**27399**
TOTAL HOURLY GENERATION		**2116**	**2024**	**1968**	**1937**	**1938**	**9983**	**2009**	**2042**	**2090**	**2176**	**2255**	**2308**	**2341**	**25204**	**2365**	**2373**	**2398**	**2408**	**2415**	**2378**	**2471**	**2501**	**44513**	**2456**	**2417**	**2344**	**2212**	**53942**	**1703661**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2501	**1937**	**2248**	**89.87%**	**77.45%**	**53942**

PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Saturday, November 30, 2019

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1	8.64																											592
Toro Negro 2	1.92																											
Caonillas 1	18.00																											
Caonillas 2	3.60																											66
Dos Bocas	15.00									12	12	12	12	12	60	12	12	12	12	12	12	12	12	156	12	6			174	3427
Yauco 1	25.00																													
Yauco 2	9.00	2	2	2	2	2	10	2	2	2	2	2	2	2	24	2	2	2	2	2	2	2	2	40	2	2	2	2	48	1058
Garzas 1	7.20																													766
Garzas 2	5.04																													
Río Blanco	5.00																													
TOTAL HYDROELECTRICS		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**14**	**14**	**14**	**14**	**14**	**84**	**14**	**14**	**14**	**14**	**14**	**14**	**14**	**14**	**196**	**14**	**8**	**2**	**2**	**222**	**5909**
THERMOELECTRICS																												
San Juan 7	100.00																													1910
San Juan 8	100.00																													
San Juan 9	100.00	78	78	77	78	77	388	78	78	78	78	79	78	78	935	78	78	78	78	78	78	78	77	1558	78	78	78	78	1870	52361
San Juan 10	100.00																													
Palo Seco 1	85.00																													
Palo Seco 2	85.00																													
Palo Seco 3	216.00	126	120	120	120	120	606	120	120	120	120	120	120	120	1446	120	120	120	120	120	120	138	140	2444	140	140	138	120	2982	99884
Palo Seco 4	216.00																													22560
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00	270	270	270	270	270	1350	250	260	270	270	270	270	270	3210	270	260	270	270	270	270	280	280	5380	270	270	270	260	6450	191170
Costa Sur 6	410.00	250	260	260	260	250	1280	250	250	250	260	250	260	260	3060	260	260	250	260	260	260	270	260	5140	260	260	260	250	6170	190740
Aguirre 1	450.00	235	230	235	230	235	1165	230	230	235	230	235	235	235	2795	240	240	225	235	235	245	310	330	4855	325	330	285	240	6035	206925
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**959**	**958**	**962**	**958**	**952**	**4789**	**928**	**938**	**953**	**958**	**954**	**963**	**963**	**11446**	**968**	**958**	**943**	**963**	**963**	**973**	**1076**	**1087**	**19377**	**1073**	**1078**	**1031**	**948**	**23507**	**765550**
COMBINED CYCLES																												
Aguirre C.C. 1	200.00																					8	14	22					22	19690
Aguirre C.C. 2	200.00																													16082
Aguirre C.C. 1-5	96.00																													4127
Aguirre C.C. 2-5	96.00																													
TOTAL AGUIRRE C.C.																						**8**	**14**	**22**					**22**	**39899**
San Juan GT 5	172.00																													
San Juan GT 6	172.00	120	119	120	120	120	599	120	120	119	120	120	119	120	1437	120	119	120	120	119	120	119	120	2394	120	120	120	119	2873	94537
San Juan STM 5	60.00																													
San Juan STM 6	60.00	39	39	39	39	39	195	39	39	39	40	40	40	40	472	40	40	40	40	40	40	40	40	792	40	40	40	40	952	31847
TOTAL SAN JUAN C.C.		**159**	**158**	**159**	**159**	**159**	**794**	**159**	**159**	**158**	**160**	**160**	**159**	**160**	**1909**	**160**	**159**	**160**	**160**	**159**	**160**	**159**	**160**	**3186**	**160**	**160**	**160**	**159**	**3825**	**126384**
DIESEL																												
Cambalache 1	82.50																													
Cambalache 2	82.50																													1423
Cambalache 3	82.50																													4495
TOTAL CAMBALACHE G.P.																														5918
Mayagüez 1	55.00																													255
Mayagüez 2	55.00																													791
Mayagüez 3	55.00																													41
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.																														1087
Palo Seco	126.00																													4967
Costa Sur	42.00																													
Aguirre	42.00																													
Daguao	42.00																													511
Yabucoa	42.00																													186
Vega Baja	42.00																													
Jobos	42.00																													181
TOTAL GAS TURBINES																														5845
Culebra	6.00																													
Vieques	6.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00																													89
Palo Seco MP 2	27.00																													103
Palo Seco MP 3	27.00																													56
TOTAL PALO SECO M.P.																														248
TOTAL DIESEL																														13098
COGENERATION																														
AES 1	227.15	235	212	202	202	202	1053	202	201	206	227	231	231	230	2581	231	230	232	231	232	232	232	231	4432	232	232	233	234	5363	160275
AES 2	227.15	230	209	200	201	199	1039	198	201	207	225	229	229	228	2556	230	230	229	229	229	229	229	229	4390	229	229	228	230	5306	133693
TOTAL AES		**465**	**421**	**402**	**403**	**401**	**2092**	**400**	**402**	**413**	**452**	**460**	**460**	**458**	**5137**	**461**	**460**	**461**	**460**	**461**	**461**	**461**	**460**	**8822**	**461**	**461**	**461**	**464**	**10669**	**293968**
EcoEléctrica	507.00	372	317	313	281	276	1559	276	278	275	277	277	286	311	3539	335	341	352	371	408	451	469	450	6716	448	419	434	412	8429	284389
TOTAL COGENERATION		**837**	**738**	**715**	**684**	**677**	**3651**	**676**	**680**	**688**	**729**	**737**	**746**	**769**	**8676**	**796**	**801**	**813**	**831**	**869**	**912**	**930**	**910**	**15538**	**909**	**880**	**895**	**876**	**19098**	**578357**
RENEWABLE SYSTEMS																														
Solar	147.10									8	39	71	88	93	299	91	79	58	52	25	2			606					606	20060
Eólica	102.00													3	3	2	2	5	3	5	7	8	6	41	2	1		1	45	6149
LandFill Gas	4.80	3	2	3	3	3	14	2	3	2	3	3	3	3	33	3	3	3	2	2	2	3	3	54	3	2	3	3	65	1562
TOTAL RENEWABLE		**3**	**2**	**3**	**3**	**3**	**14**	**2**	**3**	**10**	**42**	**74**	**91**	**99**	**335**	**96**	**84**	**66**	**57**	**32**	**11**	**11**	**9**	**701**	**5**	**3**	**3**	**4**	**716**	**27771**
TOTAL HOURLY GENERATION		**1960**	**1858**	**1841**	**1806**	**1793**	**9258**	**1767**	**1782**	**1823**	**1903**	**1939**	**1973**	**2005**	**22450**	**2034**	**2016**	**1996**	**2025**	**2037**	**2070**	**2198**	**2194**	**39020**	**2161**	**2129**	**2091**	**1989**	**47390**	**1556968**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2198	**1767**	**1975**	**89.84%**	**80.39%**	**47390**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Tuesday, December 31, 2019

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1	8.64																											621
Toro Negro 2	1.92																											
Caonillas 1	18.00																											
Caonillas 2	3.60																											
Dos Bocas	15.00																			12	12	12	12	48					48	1880
Yauco 1	25.00																													12
Yauco 2	9.00																					2	2	4	2	2			8	506
Garzas 1	7.20																													500
Garzas 2	5.04																													
Río Blanco	5.00																													
TOTAL HYDROELECTRICS																				**12**	**12**	**14**	**14**	**52**	**2**	**2**			**56**	3519
THERMOELECTRICS																														
San Juan 7	100.00																													
San Juan 8	100.00																													
San Juan 9	100.00																													44914
San Juan 10	100.00																													
Palo Seco 1	85.00																													
Palo Seco 2	85.00																													
Palo Seco 3	216.00																													70298
Palo Seco 4	216.00	130	130	130	130	130	650	130	130	130	130	130	130	130	1560	130	130	130	130	131	142	150	150	2653	150	150	150	140	**3243**	56919
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00	280	280	270	270	270	1370	270	270	270	260	270	270	270	3250	280	270	270	275	270	280	305	290	5490	300	290	270	270	**6620**	197700
Costa Sur 6	410.00	260	260	250	260	270	1300	260	260	250	260	260	260	280	3130	260	260	270	270	290	290	300	290	5360	290	300	260	260	**6470**	193320
Aguirre 1	450.00	265	255	250	255	260	1285	250	250	230	235	235	235	240	2960	280	275	315	325	350	350	350	340	5545	320	260	245	245	**6615**	209145
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**935**	**925**	**900**	**915**	**930**	**4605**	**910**	**910**	**880**	**885**	**895**	**895**	**920**	**10900**	**950**	**935**	**985**	**1000**	**1041**	**1062**	**1105**	**1070**	**19048**	**1060**	**1000**	**925**	**915**	22948	772296
COMBINED CYCLES																														
Aguirre C.C. 1	200.00																				21	79	110	210	88	22			**320**	10246
Aguirre C.C. 2	200.00																			15	48	91	120	274	40				**314**	13890
Aguirre C.C. 1-5	96.00																													70
Aguirre C.C. 2-5	96.00																													
TOTAL AGUIRRE C.C.																				**15**	**69**	**170**	**230**	**484**	**128**	**22**			634	24206
San Juan GT 5	172.00																													
San Juan GT 6	172.00	131	120	120	120	119	610	120	120	119	120	120	120	119	1448	120	119	120	120	146	149	150	150	2522	149	150	150	138	**3109**	91341
San Juan STM 5	60.00																													
San Juan STM 6	60.00	43	39	39	39	39	199	38	39	39	39	40	40	41	475	41	41	41	41	47	49	49	48	832	48	49	47	45	**1021**	30070
TOTAL SAN JUAN C.C.		**174**	**159**	**159**	**159**	**158**	**809**	**158**	**159**	**158**	**159**	**160**	**160**	**160**	**1923**	**161**	**160**	**161**	**161**	**193**	**198**	**199**	**198**	**3354**	**197**	**199**	**197**	**183**	4130	121411
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													1178
Cambalache 3	82.50																													
TOTAL CAMBALACHE G.P.																														1178
Mayagüez 1	55.00																					3	17	20					**20**	239
Mayagüez 2	55.00																					11	14	25					**25**	147
Mayagüez 3	55.00																													93
Mayagüez 4	55.00																													12
TOTAL MAYAGUEZ G.P.																						**14**	**31**	**45**					45	491
Palo Seco	126.00																													7930
Costa Sur	42.00																													
Aguirre	42.00																													
Daguao	42.00																													748
Yabucoa	42.00																													393
Vega Baja	42.00																													
Jobos	42.00																													255
TOTAL GAS TURBINES																														9326
Culebra	6.00																													
Vieques	6.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00																													115
Palo Seco MP 2	27.00																													140
Palo Seco MP 3	27.00																													133
TOTAL CAMBALACHE G.P.																														388
TOTAL DIESEL																						**14**	**31**	**45**					45	11383
COGENERATION																														
AES 1	227.15	213	202	202	180	179	976	201	222	231	231	232	231	234	2558	234	233	234	233	233	234	233	233	4425	234	233	234	224	**5350**	163235
AES 2	227.15	213	200	201	179	177	970	192	215	227	227	228	229	228	2516	229	227	227	227	228	228	228	229	4339	229	230	229	229	**5256**	162237
TOTAL AES		**426**	**402**	**403**	**359**	**356**	**1946**	**393**	**437**	**458**	**458**	**460**	**460**	**462**	**5074**	**463**	**460**	**461**	**460**	**461**	**462**	**461**	**462**	**8764**	**463**	**463**	**463**	**453**	10606	325472
EcoEléctrica	507.00	354	364	312	304	313	1647	351	371	352	399	433	465	470	4488	460	470	466	472	472	472	460	404	8164	393	411	387	371	**9726**	277356
TOTAL COGENERATION		**780**	**766**	**715**	**663**	**669**	**3593**	**744**	**808**	**810**	**857**	**893**	**925**	**932**	**9562**	**923**	**930**	**927**	**932**	**933**	**934**	**921**	**866**	**16928**	**856**	**874**	**850**	**824**	20332	602828
RENEWABLE SYSTEMS																														
Solar	147.10									8	42	72	88	95	305	102	98	82	52	28	2			669					**669**	18337
Eólica	102.00	3					3					1	3	6	13	13	15	16	20	5				82					**82**	10196
LandFill Gas	4.80	2	2	3	3	3	13	3	2	3	2	2	3	3	31	3	3	3	2	3	2	2	3	52	2	3	2	3	**62**	1590
TOTAL RENEWABLE		**5**	**2**	**3**	**3**	**3**	**16**	**3**	**2**	**11**	**44**	**75**	**94**	**104**	**349**	**118**	**116**	**101**	**74**	**36**	**4**	**2**	**3**	**803**	**2**	**3**	**2**	**3**	813	30123
TOTAL HOURLY GENERATION		**1894**	**1852**	**1777**	**1740**	**1760**	**9023**	**1815**	**1879**	**1859**	**1945**	**2023**	**2074**	**2116**	**22734**	**2152**	**2141**	**2174**	**2167**	**2230**	**2279**	**2425**	**2412**	**40714**	**2245**	**2100**	**1974**	**1925**	48958	1565766

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2425	**1740**	**2040**	**84.12%**	**71.75%**	**48958**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Friday, January 31, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1-1	1.50																											
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	1	1	1	2	2	15	1				**16**	**438**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	1	1	1	1	2	14	2				**16**	**405**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																													**728**
Dos Bocas 3	5.00																													**754**
Yauco 1-1	25.00																													
Yauco 2-1	4.50																													**571**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													**459**
Garzas 1-2	3.60																													**607**
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**2**	**2**	**2**	**3**	**4**	**29**	**3**				**32**	**3962**
THERMOELECTRICS																												
San Juan 7	100.00	70	70	70	71	70	351	71	70	70	70	70	70	70	842	70	70	70	70	70	70	70	70	1402	69	70	70	70	**1681**	**37256**
San Juan 8	100.00																													
San Juan 9	100.00	84	83	84	72	73	396	72	72	73	80	83	84	84	944	84	84	83	83	83	83	83	83	1610	83	83	84	84	**1944**	**33165**
San Juan 10	100.00																													
Palo Seco 1	85.00	61	61	61	61	61	305	61	61	61	61	61	61	61	732	61	61	61	61	61	61	61	61	1220	61	61	61	61	**1464**	**8741**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	139	130	130	130	130	659	145	150	150	150	150	150	150	1704	150	150	150	150	150	150	150	150	2904	150	150	150	150	**3504**	**74341**
Palo Seco 4	216.00	146	130	130	130	130	666	132	156	156	156	156	156	156	1734	156	156	156	156	156	156	156	156	2982	156	156	156	156	**3606**	**100744**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													**37795**
Costa Sur 6	410.00																													**37355**
Aguirre 1	450.00	230	215	230	230	235	1140	235	230	230	230	230	235	235	2765	230	230	240	230	230	230	230	230	4615	230	235	215	110	**5405**	**173240**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**730**	**689**	**705**	**694**	**699**	**3517**	**716**	**739**	**740**	**747**	**750**	**756**	**756**	**8721**	**751**	**751**	**760**	**750**	**750**	**750**	**750**	**750**	**14733**	**749**	**755**	**736**	**631**	**17604**	**502637**
COMBINED CYCLES																												
Aguirre CC Gas 1-1	50.00	30	30	15	12	10	97	25	40	30	33	40	38	38	341	30	36	32	36	30	30	36	38	609	29	26	22	29	**715**	**15711**
Aguirre CC Gas 1-2	50.00	30	30	15	12	10	97	25	40	30	33	40	38	39	342	30	35	32	36	31	29	37	37	609	29	30	32	32	**732**	**16368**
Aguirre CC Gas 1-3	50.00	30	29				59			7	31	40	38	39	214	35	38	39	41	33	30	35	36	501	30	29	32	32	**624**	**19899**
Aguirre CC Gas 1-4	50.00																													**6664**
Aguirre CC STM 1	96.00																													**2354**
Aguirre CC Gas 2-1	50.00	40	40	20	15	15	130	20	39	31	32	40	40	39	371	40	40	40	45	34	29	37	44	680	29	29	22	34	**794**	**17533**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	28					28		12	29	34	35	35	34	207	35	35	34	36	31	29	29	30	466	29	30	31	30	**586**	**15183**
Aguirre CC Gas 2-4	50.00	30	30	15	15	15	105	24	39	31	32	40	40	39	350	40	40	40	45	34	29	36	46	660	29	28	25	34	**776**	**16880**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**188**	**159**	**65**	**54**	**50**	**516**	**94**	**170**	**158**	**195**	**235**	**229**	**228**	**1825**	**210**	**224**	**217**	**239**	**193**	**176**	**210**	**231**	**3525**	**175**	**172**	**164**	**191**	**4227**	**110592**
San Juan GT 5	160.00	140	139	137	119	120	655	120	132	138	139	140	140	140	1604	140	139	139	137	137	137	138	138	2709	138	138	137	137	**3259**	**35324**
San Juan STM 5	60.00																													
San Juan GT 6	160.00	117	117	117	116	117	584	116	117	117	117	117	114	114	1396	113	113	113	114	114	114	114	114	2305	114	114	114	113	**2760**	**92753**
San Juan STM 6	60.00																													**24899**
TOTAL SAN JUAN C.C.		**257**	**256**	**254**	**235**	**237**	**1239**	**236**	**249**	**255**	**256**	**257**	**254**	**254**	**3000**	**253**	**252**	**252**	**251**	**251**	**251**	**252**	**252**	**5014**	**252**	**252**	**251**	**250**	**6019**	**152976**
DIESEL																												
Cambalache 1	82.50																													
Cambalache 2	82.50	77	49	49	51	52	278	52	50	50	51	50	51	50	632	50	50	50	50	71	76	77	77	1133	78	70	51	51	**1383**	**31773**
Cambalache 3	82.50																					6	48	54	78	78	78	78	**366**	**25614**
TOTAL CAMBALACHE G.P.		**77**	**49**	**49**	**51**	**52**	**278**	**52**	**50**	**50**	**51**	**50**	**51**	**50**	**632**	**50**	**50**	**50**	**50**	**71**	**76**	**83**	**125**	**1187**	**156**	**148**	**129**	**129**	**1749**	**57387**
Mayagüez 1	55.00	5					5								5					35	46	46	46	178	46	47	49	49	**369**	**12543**
Mayagüez 2	55.00																													**102**
Mayagüez 3	55.00	2					2								2		7	51	51	51	51	51	51	315	51	51	51	52	**520**	**10233**
Mayagüez 4	55.00																													**98**
TOTAL MAYAGUEZ G.P.		**7**					**7**								**7**		**7**	**51**	**51**	**86**	**97**	**97**	**97**	**493**	**97**	**98**	**100**	**101**	**889**	**22976**

PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Friday, January 31, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
DIESEL																														
Palo Seco 1-1	21.00	21	20	21	20	21	103	20	21	21	20	20		14	219	19	19	19	20	20	20	20	20	376	20	20	20	20	**456**	**11858**
Palo Seco 1-2	21.00																													**8457**
Palo Seco 2-1	21.00											3	20	20	43	20	20	20	20	20	21	21	21	206	21	20	21	21	**289**	**289**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													**10932**
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																													
Daguao 1-1	21.00																		18	18	18	18	18	90	18	3			**111**	**5777**
Daguao 1-2	21.00																					13	16	29	16	4			**49**	**4243**
Yabucoa 1-1	21.00													10	10	18	18	18	18	18	18	18	18	154	17				**171**	**5885**
Yabucoa 1-2	21.00																													
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																	11						11					**11**	**14**
Jobos 1-1	21.00																													**277**
Jobos 1-2	21.00													9	9	18	18	18	18	18	18	18	19	154	18	18			**190**	**5587**
TOTAL GAS TURBINES		**21**	**20**	**21**	**20**	**21**	**103**	**20**	**21**	**21**	**20**	**23**	**20**	**53**	**281**	**75**	**75**	**86**	**94**	**94**	**95**	**108**	**112**	**1020**	**110**	**65**	**41**	**41**	**1277**	**53319**
Culebra 1	2.00																													**11**
Culebra 2	2.00																													**18**
Culebra 3	2.00																													**26**
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														**55**
Palo Seco MP 1	27.00	22	22	22	22	22	110	22	22	22	22	22	22	22	264	22	22	22	22	22	22	22	22	440	22	22	22	22	**528**	**10699**
Palo Seco MP 2	27.00	22	22	22	22	22	110	22	22	22	22	22	22	22	264	22	22	22	22	22	22	22	22	440	22	22	22	22	**528**	**10172**
Palo Seco MP 3	27.00	22	22	22			66							18	84	22	22	22	22	22	22	22	22	260	22	22	22	22	**348**	**9586**
TOTAL PALO SECO MP		**66**	**66**	**66**	**44**	**44**	**286**	**44**	**44**	**44**	**44**	**44**	**44**	**62**	**612**	**66**	**66**	**66**	**66**	**66**	**66**	**66**	**66**	**1140**	**66**	**66**	**66**	**66**	**1404**	**30457**
TOTAL DIESEL		**171**	**135**	**136**	**115**	**117**	**674**	**116**	**115**	**115**	**115**	**117**	**115**	**165**	**1532**	**191**	**198**	**253**	**261**	**317**	**334**	**354**	**400**	**3840**	**429**	**377**	**336**	**337**	**5319**	**164194**
COGENERATION																														
AES 1	227.15	231	231	230	226	226	1144	226	226	227	226	226	227	227	2729	227	231	231	231	231	231	231	228	4570	230	231	231	231	**5493**	**142689**
AES 2	227.15	198	216	225	227	227	1093	228	226	227	227	227	227	224	2679	224	225	225	225	226	226	225	225	4480	226	227	227	228	**5388**	**99498**
TOTAL AES		**429**	**447**	**455**	**453**	**453**	**2237**	**454**	**452**	**454**	**453**	**453**	**454**	**451**	**5408**	**451**	**456**	**456**	**456**	**457**	**457**	**456**	**453**	**9050**	**456**	**458**	**458**	**459**	**10881**	**242187**
ECOELECTRICA		168	151	163	168	170	820	176	169	169	170	168	178	178	2028	168	190	168	181	187	187	188	187	3484	175	177	185	185	**4206**	**127245**
TOTAL COGENERATION		**597**	**598**	**618**	**621**	**623**	**3057**	**630**	**621**	**623**	**623**	**621**	**632**	**629**	**7436**	**619**	**646**	**624**	**637**	**644**	**644**	**644**	**640**	**12534**	**631**	**635**	**643**	**644**	**15087**	**369432**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									2	6	11	14	16	49	16	16	15	11	7	2			116					**116**	**2705**
San Fermín	20.00									1	7	12	11	15	46	18	13							77					**77**	**2158**
Horizon	10.00									1	3	7	9	8	28	10	10	10	7	3				68					**68**	**1484**
Oriana	45.00									2	12	24	30	27	95	29	29	30	29	18	5			235					**235**	**5115**
Coto Laurel	10.00										3	5	6	4	18	7	8	8	4	1				46					**46**	**1135**
Fonroche	40.00									2	10	14	20	23	69	24	23	17	8	8	3			152					**152**	**3366**
TOTAL SOLAR										**8**	**41**	**73**	**90**	**93**	**305**	**104**	**99**	**80**	**59**	**37**	**10**			**694**					**694**	**15963**
Bechara	1.00																													
Pattern Santa Isabel	75.00					1	1	1	1			2	4	15	24	23	24	34	38	25	11	9	2	190			1	1	**192**	**5146**
Punta Lima	26.00																													
TOTAL WIND						**1**	**1**	**1**	**1**			**2**	**4**	**15**	**24**	**23**	**24**	**34**	**38**	**25**	**11**	**9**	**2**	**190**			**1**	**1**	**192**	**5146**
LandFill Gas Fajardo	2.40	1		1		1	3	1		1		1		1	7	1		1	1	1		1	1	13	1		1		**15**	**205**
LandFill Gas Toa Baja	2.40	1		1		1	3	1		1		1		1	7	1		1	1	1		1	1	13	1	1		1	**16**	**448**
TOTAL LANDFILL GAS		**2**		**2**		**2**	**6**	**2**		**2**		**2**		**2**	**14**	**2**		**2**	**2**	**2**		**2**	**2**	**26**	**2**	**1**	**1**	**1**	**31**	**653**
TOTAL RENEWABLE		**2**		**2**		**3**	**7**	**3**	**1**	**10**	**41**	**77**	**94**	**110**	**343**	**129**	**123**	**116**	**99**	**64**	**21**	**11**	**4**	**910**	**2**	**1**	**2**	**2**	**917**	**21762**
TOTAL HOURLY GENERATION (NET)		**1945**	**1837**	**1780**	**1719**	**1729**	**9010**	**1795**	**1895**	**1903**	**1979**	**2059**	**2082**	**2144**	**22867**	**2155**	**2196**	**2224**	**2239**	**2221**	**2178**	**2224**	**2281**	**40585**	**2241**	**2192**	**2132**	**2055**	**49205**	**1325555**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2281	**1719**	**2050**	**89.88%**	**75.36%**	**49205**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Saturday, February 29, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1-1	1.50																											
Toro Negro 1-2	1.50																											**309**
Toro Negro 1-3	1.50																											**307**
Toro Negro 1-4	4.00																											
Toro Negro 2-1	2.00																											
Caonillas 1-1	9.00																											
Caonillas 1-2	9.00																											
Caonillas 2-1	3.60																											
Dos Bocas 1	5.00																											
Dos Bocas 2	5.00																											
Dos Bocas 3	5.00																											
Yauco 1-1	25.00																											
Yauco 2-1	4.50																			2	2	2	2	8	2	2			**12**	**396**
Yauco 2-2	4.50																													**30**
Garzas 1-1	3.60																													**122**
Garzas 1-2	3.60																													**120**
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS																				**2**	**2**	**2**	**2**	**8**	**2**	**2**			**12**	**1284**
THERMOELECTRICS																														
San Juan 7	100.00	69	69	70	70	70	348	69	70	69	70	69	70	69	834	68	68	69	69	69	69	69	69	1384	69	69	69	69	**1660**	**45675**
San Juan 8	100.00																													
San Juan 9	100.00	83	82	82	82	82	411	82	83	82	82	83	82	82	987	83	81	82	82	82	82	82	82	1643	83	82	82	82	**1972**	**48672**
San Juan 10	100.00																													
Palo Seco 1	85.00	72	72	72	72	72	360	70	70	70	70	70	70	70	850	70	70	70	70	70	70	70	70	1410	70	70	70	70	**1690**	**40740**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	145	145	145	145	145	725	145	141	141	141	141	141	141	1716	141	141	141	141	141	141	141	141	2844	141	141	141	141	**3408**	**87473**
Palo Seco 4	216.00	120	120	120	120	120	600	120	120	120	120	120	120	120	1440	120	120	120	120	120	120	120	120	2400	120	120	120	68	**2828**	**88188**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	240	240	240	240	235	1195	240	240	240	240	240	235	240	2870	240	240	240	255	245	245	235	250	4820	240	245	245	250	**5800**	**157730**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**729**	**728**	**729**	**729**	**724**	**3639**	**726**	**724**	**722**	**723**	**723**	**718**	**722**	**8697**	**722**	**720**	**722**	**737**	**727**	**727**	**717**	**732**	**14501**	**723**	**727**	**727**	**680**	**17358**	**468478**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	50	20				70								70				17	30	30	30	30	207	29	40	40	40	**356**	**14215**
Aguirre CC Gas 1-2	50.00	50	37				87								87						24	30	30	171	30	30	35	35	**301**	**18424**
Aguirre CC Gas 1-3	50.00	15					15			6	30	30	30	30	141	30	30	30	30	30	30	30	31	382	30	30	30	30	**502**	**14864**
Aguirre CC Gas 1-4	50.00	50	37	32	30	30	179	29	29	29	29	29	30	30	384	30	29	29	30	30	30	30	30	622	30	30	30	30	**742**	**16660**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	45	38	25			108								108					20	35	30	30	223	29	35	35	35	**357**	**20565**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	44					44				11	30	30	30	145	30	25	30	33	30	30	30	30	383	30	30	30	30	**503**	**18491**
Aguirre CC Gas 2-4	50.00	45	37	32	30	30	174	29	29	29	29	30	30	30	380	30	30	30	30	29	30	30	30	619	30	30	30	30	**739**	**20610**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**299**	**169**	**89**	**60**	**60**	**677**	**58**	**58**	**64**	**99**	**119**	**120**	**120**	**1315**	**120**	**114**	**119**	**140**	**169**	**209**	**210**	**211**	**2607**	**208**	**225**	**230**	**230**	**3500**	**123829**
San Juan GT 5	160.00																						38	38	88	119	120	120	**485**	**78261**
San Juan STM 5	60.00																													
San Juan GT 6	160.00																													**70040**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.																							**38**	**38**	**88**	**119**	**120**	**120**	**485**	**148301**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50	50	50	50	50	50	250	51	50	50	50	50	50	50	601	50	50	50	50	50	50	50	51	1002	50	50	51	51	**1204**	**21212**
Cambalache 3	82.50	4					4								4									4					**4**	**23178**
TOTAL CAMBALACHE G.P.		**54**	**50**	**50**	**50**	**50**	**254**	**51**	**50**	**50**	**50**	**50**	**50**	**50**	**605**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**51**	**1006**	**50**	**50**	**51**	**51**	**1208**	**44390**
Mayagüez 1	55.00																			11	47	48	48	154	49	46			**249**	**9824**
Mayagüez 2	55.00																													
Mayagüez 3	55.00																			36	51	51	52	190	56	51	2		**299**	**12015**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.																				**47**	**98**	**99**	**100**	**344**	**105**	**97**	**2**		**548**	**21839**

PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Saturday, February 29, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
DIESEL																														
Palo Seco 1-1	21.00	21	21	22	22	22	108	21	22	21	21	22	22	21	258	21	21	21	21	21	21	21	21	426	21	21	22	21	**511**	**14079**
Palo Seco 1-2	21.00																													
Palo Seco 2-1	21.00																													**912**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			2	21	21	22	66	22	7			**95**	**2606**
Daguao 1-1	21.00																			3	18	18	18	57	18	5			**80**	**3056**
Daguao 1-2	21.00																													**2374**
Yabucoa 1-1	21.00																			1	18	18	18	55	18	5			**78**	**2562**
Yabucoa 1-2	21.00																													**10**
Vega Baja 1-1	21.00																													**72**
Vega Baja 1-2	21.00																				17	18	18	53	18	5			**76**	**2138**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																				15	18	18	51	18	5			**74**	**3712**
TOTAL GAS TURBINES		**21**	**21**	**22**	**22**	**22**	**108**	**21**	**22**	**21**	**21**	**22**	**22**	**21**	**258**	**21**	**21**	**21**	**21**	**27**	**110**	**114**	**115**	**708**	**115**	**48**	**22**	**21**	**914**	**31521**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	22	22	22	22	22	110	22	22	22	22	22	22	22	264	22	22	22	22	22	22	22	22	440	22	22	22	22	**528**	**13322**
Palo Seco MP 2	27.00	22	22	22	22	22	110	22	22	22	22	22	22	22	264	22	22	22	22	22	22	22	22	440	22	22	22	22	**528**	**14562**
Palo Seco MP 3	27.00	22	22	22	22	22	110	22	22	22	22	22	22	22	264	22	22	22	22	22	22	22	22	440	22	22	22	22	**528**	**15188**
TOTAL PALO SECO MP		**66**	**66**	**66**	**66**	**66**	**330**	**66**	**66**	**66**	**66**	**66**	**66**	**66**	**792**	**66**	**66**	**66**	**66**	**66**	**66**	**66**	**66**	**1320**	**66**	**66**	**66**	**66**	**1584**	**43072**
TOTAL DIESEL		**141**	**137**	**138**	**138**	**138**	**692**	**138**	**138**	**137**	**137**	**138**	**138**	**137**	**1655**	**137**	**137**	**137**	**137**	**190**	**324**	**329**	**332**	**3378**	**336**	**261**	**141**	**138**	**4254**	**140822**
COGENERATION																														
AES 1	227.15	203	220	216	230	231	1100	231	231	231	230	232	231	231	2717	231	232	232	232	232	232	232	234	4574	233	235	235	235	**5512**	**150265**
AES 2	227.15	220	219	219	220	221	1099	220	220	220	220	222	222	221	2644	223	221	221	221	222	221	221	220	4414	219	219	220	218	**5290**	**150946**
TOTAL AES		**423**	**439**	**435**	**450**	**452**	**2199**	**451**	**451**	**451**	**450**	**454**	**453**	**452**	**5361**	**454**	**453**	**453**	**453**	**454**	**453**	**453**	**454**	**8988**	**452**	**454**	**455**	**453**	**10802**	**301211**
ECOELECTRICA		307	344	355	323	297	1626	310	327	337	352	370	373	393	4088	404	404	420	438	422	329	378	429	7312	373	361	425	400	**8871**	**163195**
TOTAL COGENERATION		**730**	**783**	**790**	**773**	**749**	**3825**	**761**	**778**	**788**	**802**	**824**	**826**	**845**	**9449**	**858**	**857**	**873**	**891**	**876**	**782**	**831**	**883**	**16300**	**825**	**815**	**880**	**853**	**19673**	**464406**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									2	7	12	15	17	53	17	17	15	13	8	3			126					**126**	**3124**
San Fermín	20.00									2	8	11	15	17	53	18	16	16	14	9	3	3		132					**132**	**2796**
Horizon	10.00									1	5	8	10	10	34	10	10	10	9	6	2			81					**81**	**1918**
Oriana	45.00									3	17	28	30	30	108	30	29	27	21	9	4			228					**228**	**6122**
Coto Laurel	10.00									1	4	6	7	8	26	9	9	8	7	4	1			64					**64**	**1265**
Fonroche	40.00									4	12	16	18	26	76	28	27	24	16	12	3			186					**186**	**5187**
TOTAL SOLAR										**13**	**53**	**81**	**95**	**108**	**350**	**112**	**108**	**100**	**80**	**48**	**16**	**3**		**817**					**817**	**20412**
Bechara	1.00																													
Pattern Santa Isabel	75.00		1	1	3	3	8			1		3	13	16	41	18	33	40	29	29	22	12	4	228	2				**230**	**13656**
Punta Lima	26.00																													
TOTAL WIND			**1**	**1**	**3**	**3**	**8**			**1**		**3**	**13**	**16**	**41**	**18**	**33**	**40**	**29**	**29**	**22**	**12**	**4**	**228**	**2**				**230**	**13656**
LandFill Gas Fajardo	2.40																													**312**
LandFill Gas Toa Baja	2.40	1	2	2	2	2	9	2	1	2	2	2	2	2	22	1	2	1	2	2	2	2	2	36	2	2	2	2	**44**	**441**
TOTAL LANDFILL GAS		**1**	**2**	**2**	**2**	**2**	**9**	**2**	**1**	**2**	**2**	**2**	**2**	**2**	**22**	**1**	**2**	**1**	**2**	**2**	**2**	**2**	**2**	**36**	**2**	**2**	**2**	**2**	**44**	**753**
TOTAL RENEWABLE		**1**	**3**	**3**	**5**	**5**	**17**	**2**	**1**	**16**	**55**	**86**	**110**	**126**	**413**	**131**	**143**	**141**	**111**	**79**	**40**	**17**	**6**	**1081**	**4**	**2**	**2**	**2**	**1091**	**34821**
TOTAL HOURLY GENERATION (NET)		**1900**	**1820**	**1749**	**1705**	**1676**	**8850**	**1685**	**1699**	**1727**	**1816**	**1890**	**1912**	**1950**	**21529**	**1968**	**1971**	**1992**	**2016**	**2043**	**2084**	**2106**	**2204**	**37913**	**2186**	**2151**	**2100**	**2023**	**46373**	**1381941**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2204	**1676**	**1932**	**87.67%**	**76.04%**	**46373**

M:\AREA_OPERACIONES\CCE\IGD2020\202002.xls

GOVERNMENT OF PUERTO RICO
Central Recovery and Reconstruction Office

Hon. Wanda Vázquez Garced
Governor

Ottmar J. Chávez Piñero
Governor's Authorized
Representative

March 31, 2020

Mr. Alex Amparo
Federal Coordinating Officer (DR-4473)
Federal Emergency Management Agency
GFR Media Building
PR-165 Buchanan Sector Industrial Park
Guaynabo, Puerto Rico 00908

And:

Mr. Sidney Melton
Infrastructure Branch Director (DR-4473)
Federal Emergency Management Agency (FEMA)
GFR Media Building
PR-165 Buchanan Sector Industrial Park
Guaynabo, Puerto Rico 00908

Re: FEMA-4473-DR-PR – PREPA's Category B PW Request from March 19, 2020

Dear Mr. Amparo,

COR3 appreciates FEMA's continued support to the recovery of Puerto Rico after the January 7, 2020 earthquake and ensuing aftershocks. It is of general knowledge that the 6.4 magnitude earthquake suffered on January 7, 2020 caused major structural and mechanical damage to Puerto Rico Electric Power Authority (PREPA) Costa Sur power plant ("Costa Sur"). Costa Sur is a 820 MW power plant that provides over 26% of the electric power on the island. The island suffered a complete electric power blackout as a direct result of the Costa Sur power plant failure caused by the earthquake. On January 11, 2020, a magnitude 5.9 aftershock once again rattled Puerto Rico's southwestern coast, exacerbating damages to Costa Sur that were caused by the previous earthquake.

On March 2, 2020, PREPA requested a Cat B PW for emergency power generation as a direct result of the damages caused by the earthquake to Costa Sur. On March 13, 2020, FEMA issued a Request for Information (RFI) regarding PREPA's Cat B PW request. PREPA responded the RFI on March 28, 2020 (please see Attachment A). Regardless of FEMA's 14-day time extension to all deadlines due to COVID-19 emergency, PREPA responded seven of the nine inquiries included in the RFI within 15 days. At the same time, PREPA requested a time extension to respond to the remaining 2 items.

After reviewing PREPA's partial response, we note that most of the information requested in the RFI was either previously explained in PREPA's Category B request from March 2, 2020 or

uploaded in the Grants Portal system by PREPA or FEMA's PDMG before March 13, 2020. While PREPA and COR3 remain committed to providing any necessary information required by FEMA to evaluate this and other requests, considering time-sensitive nature of this request, we respectfully encourage that all parties take into account the narratives provided by PREPA as well as documents that are constantly uploaded in Grants Portal. This way all parties ensure that the requests are being addressed promptly and prevent duplication of efforts from any of the parties involved.

With respect to the remaining inquiries of the RFI, COR3 understands that the additional time requested by PREPA to provide responses to such 2 items is justified considering the COVID-19 emergency, the current lockdown and closure of commerce and government operations and the highly technical nature of the information requested. To produce such information, PREPA is required to perform certain assessments that have been delayed due to the ongoing circumstances.

I. Pending Inquiries:

1- Has PREPA identified any other alternate power generation sources to mitigate the shortage in base generation?

Costa Sur is a huge generation plant that provides 26% of the unified energy generation system of Puerto Rico. As expressed in PREPA's request dated March 2, 2020, PREPA is already using all its available equipment to supply energy and there is no equipment left to supply peaking consumption times, contrary to industry standards guidelines. Also, PREPA is using all their peaking units' equipment for base power generation purposes. Such equipment is not designed to operate continuously neither as base generation units.

PREPA is looking for alternate sources available in the market to mitigate shortage in base generation. However, this type of equipment is not easy to find and not available in Puerto Rico. Consequently, if alternate options are found, they will not be installed and operational by the date they are needed, which is in the following 15 days.

2- Provide the timeline to get Units #5 and #6 operational.

Considering the size of Costa Sur and the extent of the damages suffered, PREPA needs to complete assessments and, at least, temporary repairs to bring the plant back to minimum compliance with industry standards. Not doing so presents a threat to life and safety, as well as non-compliance by PREPA with industry standards and obligations.

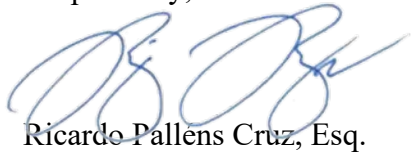
The safety assessments currently being performed by PREPA shall identify safety hazards that need to be addressed before further evaluations and repairs can be made. As PREPA expressed in their request from March 2, 2020, "*engineers have communicated to PREPA management that damages suffered by the event to the tanks require that those be demolished and rebuilt along with the construction of ancillary walls to prevent further seismic damages. Tanks are critical to the operation of the generation units and are expected be repaired with an estimated minimum 6 month scheduled. Such estimate does not consider the evaluation of load foundation pillars that will be examined once the demolition of tanks is initiated, thus possibly extending the initial estimated*

repairs beyond the 6-month base line" (see Attachment B). We understand it is impossible for PREPA to have a detailed timeline to get units #5 and #6 operational if they are not able to determine the extent of damages and needed repairs.

II. Request

Based on the information and details provided by PREPA, we understand PREPA's response, although partial, is sufficient to begin the evaluation of its request for a Category B PW for temporary power generators for Costa Sur. PREPA requests a 14-day extension to complete its response to the RFI. Such term is consistent and subject to the time extension granted by FEMA on March 20, 2020 for all pending deadlines, including FEMA-4473-DR, which is continuously valid for the duration of the Public Health Emergency, as declared by the Secretary of the U.S. Department of Health and Human Services. Therefore, we recommend FEMA apply the time extension granted to the submission of PREPA's response to the RFI.

Respectfully,



Ricardo Pallens Cruz, Esq.
Earthquake Recovery Director
Central Recovery and Reconstruction Office of Puerto Rico (COR3)
Puerto Rico Public-Private Partnerships Authority

U.S. Department of Homeland Security
Region II
FEMA-4473-DR-PR
#50 165 Suite 3
Parque Industrial Buchanan Guaynabo,
P.R. 00968

FEMA

April 16, 2020

Mr. Ottmar Chávez Piñero
Executive Director
Central Office for Recovery and Reconstruction, COR3
Governor's Authorized Representative
Commonwealth of Puerto Rico
P.O. Box 195014
San Juan, PR, 00918-5014

Re: FEMA-4473-DR-PR
PREPA's Category B PW Request for Temporary Relocation of Essential Services

Dear Mr. Chávez:

This letter is in response to the Government of Puerto Rico's (Recipient) March 31, 2020 request on behalf of Puerto Rico Electric Power Authority (PREPA; Subrecipient) for a FEMA-4473-DR-PR, Category B Project Worksheet (PW) for emergency power generation. As mentioned on FEMA's Request for Information (RFI), dated March 13, 2020, FEMA will not be considering the provision of temporary generation via Direct Federal Assistance (DFA). Nevertheless, FEMA is approving the temporary relocation of essential services, generated by the Costa Sur power plant, through its Public Assistance Program.

As established by PREPA, Units 5 & 6 at the Costa Sur power plant, which provides 26% of Puerto Rico's power generation system, suffered severe damages as a result of the earthquakes beginning on December 28, 2019 and continuing through February 4, 2020. The loss of generation produced by Costa Sur has caused a deficiency in the capacity of the power system to deliver electricity to the Commonwealth of Puerto Rico. Therefore, since Costa Sur remains inoperable, the critical service it provides must be relocated.

Furthermore, in addition to power loss and damages sustained by facilities located in Costa Sur, the entire facility has been determined unsafe by the Occupational Safety and Health Administration (OSHA). Consequently, all employees have been instructed to evacuate the facility.

In accordance with the Public Assistance Program and Policy Guide (PAPPG), the temporary relocation of essential services provided by a facility that is unsafe, inaccessible, or destroyed as a result of a declared event are considered eligible.[1] Hence, the essential services provided by

[1] Temporary Relocation of Essential Services. See FP 104-009-2, PAPPG, Chapter 2.VI.B.17, at 76. (April 2018)

PREPA, through its Costa Sur power plant, are deemed eligible to be temporarily relocated to another facility. However, all costs associated with operating and maintaining the temporary facility will not be considered eligible for PA funding. Once temporary generation initiates, the use of the "Peaking Units", currently utilized by PREPA to compensate for energy deficiency, will not be eligible for PA funding.

Even though the temporary relocation of essential services is considered eligible, FEMA is requesting that PREPA provides the additional information mentioned below for FEMA to determine the extent of PA funding that can be allocated for the temporary relocation of essential services.

1. Projected timeframe to get Unit 5 fully operational.
2. Number of generators needed, once temporary generation compensation is only required for Unit 6 being down.
3. A cost analysis to demonstrate the most cost-effective and practical option for temporary generation.

FEMA asks that the requested information is provided within two weeks of receiving this letter and the response be mailed to DR-4473-PA@fema.dhs.gov. Subsequently, FEMA will review the documentation and proceed with the PA grant formulation.

Should you have any questions or require further assistance, please contact Sidney Melton Infrastructure Branch Director for FEMA-4473-DR-PR at Sidney.Melton@fema.dhs.gov

Sincerely,

ALEXIS AMPARO

Digitally signed by ALEXIS AMPARO
Date: 2020.04.15 20:27:51 -04'00'

Alex Amparo
Federal Coordinating Officer
FEMA-4473-DR-PR

Attachments:
COR3's Letter dated 3-31 to FCO Amparo and IBD Melton regarding PREPA's CAT B PW Request from 3-19-20
Attachment A / PREPA's Letter dated 3-28-20 to COR3 regarding FEMA's RFI FCO Letter dated 3-13-20
Attachment B / PREPA's Letter dated 3-2-20 / Req for Temp Generation following FEMA-4473-DR-PR FCO Letter dated 3-13-20 to COR3 GAR re: 4473 PREPA RFI
Attachment D / Appendix A – Sites for Temporary Generation

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GOVERNMENT OF PUERTO RICO
Puerto Rico Electric Power Authority

April 23, 2020

Mr. Ottmar J. Chávez Piñero
Executive Director
Central Office for Recovery and Reconstruction, COR3
Governor's Authorized Representative
Commonwealth of Puerto Rico
P.O. Box 42001
San Juan, PR, 00940-2001

Dear Mr. Chávez:

Re: FEMA-4473-DR-PR PREPA's Category B PW Request for Temporary Relocation of Essential Services

In response to the Federal Emergency Management Agency ("FEMA") letter dated April 16, 2020 requesting additional information regarding a project formulation request made by the Puerto Rico Electric Power Authority ("PREPA"), we hereby provide the following information to fulfill the aforementioned request:

1. Projected timeframe to get Unit 5 fully operational.

   Following the completion of Engineering and technical studies completed to date, PREPA expects to start-up unit 5 at a target date of August 14, 2020. Please refer to attachment A for a detail schedule and timeline on all work streams identified by PREPA. Please note that date is subject to change and that consideration should be giving that unit may power-up but may not be fully operational.

2. Number of generators needed, once temporary generation compensation is only required for Unit 6 being down.

   Unit 5 is expected to be utilized at a capacity factor of 70-80%, thus we expect that once unit is powered-on and meets the expected output a total of 200Mw is still expected to be leased out for the remaining repair timeline of unit 6. Please refer to attachment B for a general timeline on repairs to be performed on Costa Sur's Generation Unit 6.

"We are an equal opportunity employer and do not discriminate on the basis of race, color, gender, age, national or social origin, social status, political ideas or affiliation, religion; for being or perceived to be a victim of domestic violence, sexual aggression or harassment, regardless of marital status, sexual orientation, gender identity or immigration status; for physical or mental disability, for veteran status or genetic information."

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1. A cost analysis to demonstrate the most cost-effective and practical option for temporary generation.

   PREPA's RFP expects to have a proponent selected within the following days. It is therefore, that once we have completed our evaluation of the proposal received, we will have all the necessary inputs to complete our lease vs purchase analysis. Please allow us the following week to properly complete such.

Furthermore, we hereby notify that all documentation referenced herein has been uploaded to Grants Portal for documentation retention purposes.

Additionally, PREPA updated our Peaking units' project proposal utilizing actual information for the months of January and February. Please find attached herein documentation uploaded to Grants Portal and sent to our FEMA PDMG's for project formulation purposes.

Considering that PREPA is actively incurring a significant amount of expenses to operate the peaking units, we hereby respectfully request that FEMA will provide priority to our Peaking Units project formulation and thus expedite its reimbursement.

Regards,

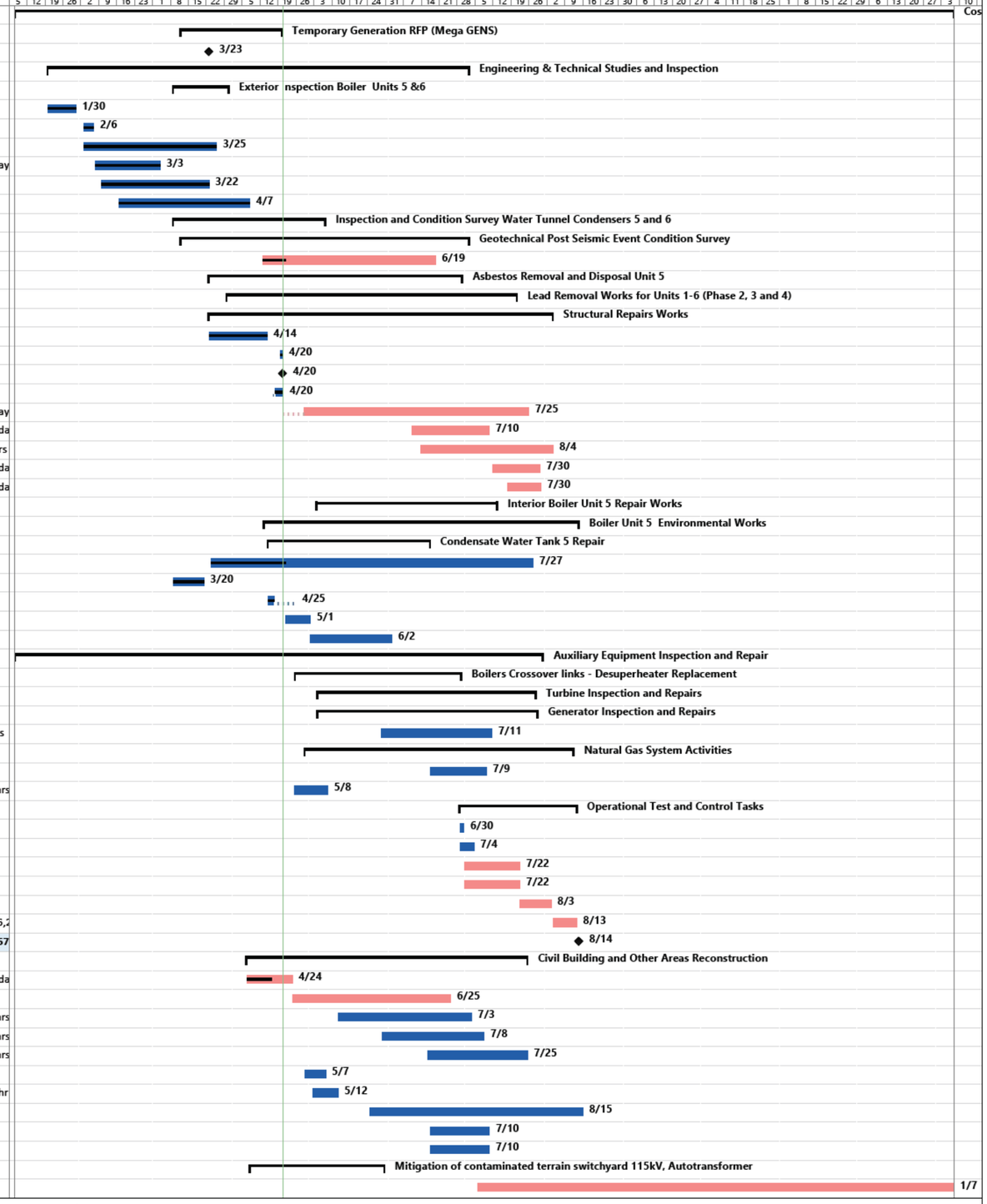
DocuSigned by:
Arturo Deliz
FC66C48222B9499...

Arturo Deliz Vélez
DFMO Administrator

Attachment A

Costa Sur Damage Assessment and Repairs | UPDATE #1 (AS OF 04/21/2020)

ID	Work Stream ID	Primaver Activity ID	Task Name	% Complete	Baseline1 Start	Baseline1 Finish	Rounded Duration	Start	Finish	Finish Variance KPI	Finish Variance Days	Predecessors
1			**Costa Sur Damage Assessment and Repairs | MASTER SCHEDULE**	**13%**	**Tue 1/7/20**	**Thu 1/7/21**	**332days**	**Tue 1/7/20**	**Thu 1/7/21**		**0**	
2			**Temporary Generation RFP (Mega GENS)**	**100%**	**Thu 3/12/20**	**Mon 4/20/20**	**35days**	**Thu 3/12/20**	**Mon 4/20/20**		**0**	
11			**Emergency Declaration**	100%	Mon 3/23/20	Mon 3/23/20	0days	Mon 3/23/20	Mon 3/23/20		0	
12			**Engineering & Technical Studies and Inspection**	**76%**	**Mon 1/20/20**	**Mon 6/29/20**	**149days**	**Mon 1/20/20**	**Thu 7/2/20**		**3**	
13	**1**	A1000	Exterior Inspection Boiler Units 5 &6	**100%**	**Mon 3/9/20**	**Mon 3/30/20**	**20days**	**Mon 3/9/20**	**Mon 3/30/20**		**0**	
17	2	A1010	Preliminary Structural Inspection Works Units 3,4, 5 and 6	100%	Mon 1/20/20	Thu 2/6/20	11days	Mon 1/20/20	Thu 1/30/20		-7	
18	3	A1020	Initial Assessment High Energy Piping Post Seismic Event Units 5 and 6	100%	Mon 2/3/20	Fri 2/28/20	4days	Mon 2/3/20	Thu 2/6/20		-22	
19	4	A1030	Initial Lead Removal for Inmediate Repair Works Units 3,4 and 5	100%	Mon 2/3/20	Tue 2/25/20	47days	Mon 2/3/20	Wed 3/25/20		29	
20	5	A1040	Inmediate Repair Works for Safety and Continuing Inpection Works Units 3,	100%	Fri 2/7/20	Wed 2/26/20	22days	Fri 2/7/20	Tue 3/3/20		6	19SS+5.05 day
21	6	A1050	Water and Fuel Tanks Condition Survey (20 tanks)	100%	Mon 2/10/20	Tue 3/10/20	38days	Mon 2/10/20	Sun 3/22/20		12	
22	7	A1060	Interior Inspection Work Boilers Units 5 and 6	100%	Mon 2/17/20	Fri 3/27/20	46days	Mon 2/17/20	Tue 4/7/20		11	
23	**9**	A1070	Inspection and Condition Survey Water Tunnel Condensers 5 and 6	**67%**	**Mon 3/23/20**	**Thu 5/7/20**	**54days**	**Mon 3/9/20**	**Thu 5/7/20**		**0**	
29	**10**	A1080	Geotechnical Post Seismic Event Condition Survey	**31%**	**Thu 3/12/20**	**Mon 6/29/20**	**102days**	**Thu 3/12/20**	**Thu 7/2/20**		**3**	
35	11	A1090	Project Management and Inspection Team for Rehabilitation Unit 5	14%	Mon 4/27/20	Fri 7/3/20	61days	Mon 4/13/20	Fri 6/19/20		-14	
36			**Asbestos Removal and Disposal Unit 5**	**19%**	**Mon 3/23/20**	**Tue 6/23/20**	**89days**	**Mon 3/23/20**	**Mon 6/29/20**		**6**	
41	**12**	A1115	**Lead Removal Works for Units 1-6 (Phase 2, 3 and 4)**	**13%**	**Mon 3/30/20**	**Mon 7/13/20**	**102days**	**Mon 3/30/20**	**Tue 7/21/20**		**8**	
47			**Structural Repairs Works**	**12%**	**Mon 3/23/20**	**Tue 8/4/20**	**121days**	**Mon 3/23/20**	**Tue 8/4/20**		**0**	
48	**13**		Procurement for Structural Steel Repair Works	100%	Mon 3/23/20	Tue 4/14/20	21days	**Mon 3/23/20**	**Tue 4/14/20**		0	11
49	13		Kick-off Meeting	100%	Tue 4/14/20	Wed 4/15/20	1days	Mon 4/20/20	Mon 4/20/20		5	48
50	13		Notice to Proceed	100%	Wed 4/15/20	Wed 4/15/20	0days	Mon 4/20/20	Mon 4/20/20		5	49
51	13		Contractor's Mobilization	100%	Wed 4/15/20	Mon 4/20/20	2days	Fri 4/17/20	Mon 4/20/20		0	50
52	13	A1120	Structure Steel Repair Works Units 5 phase 2	0%	Tue 4/21/20	Sat 7/18/20	80days	Tue 4/21/20	Sat 7/25/20		7	46SS+4.21 day
53	14	A1122	Structure Steel Repair Works Units 5 phase 3	0%	Wed 6/10/20	Sat 7/11/20	28days	Wed 6/10/20	Fri 7/10/20		-1	52SS+45.47 da
54	14	A1123	Structure Steel Repair Works Units 5 phase 4	0%	Mon 6/15/20	Tue 8/4/20	45days	Sat 6/13/20	Tue 8/4/20		0	53SS+37.5 hrs
55	15	A1130	Structure Steel Repair Works Units 1 and 2 (For Safety Concerrns)	0%	Mon 7/13/20	Thu 7/30/20	16days	Sat 7/11/20	Thu 7/30/20		0	54SS+25.26 da
56	16	A1140	Structure Steel Repair Works Units 3 and 4 (For Safety Concerrns)	0%	Sat 7/18/20	Fri 7/31/20	12days	Fri 7/17/20	Thu 7/30/20		-1	54SS+30.32 da
57	**18**	**5000**	**Interior Boiler Unit 5 Repair Works**	**0%**	**Mon 5/4/20**	**Mon 7/13/20**	**64days**	**Mon 5/4/20**	**Mon 7/13/20**		**0**	
61	**19**	**5B00**	**Boiler Unit 5 Environmental Works**	**0%**	**Mon 4/13/20**	**Fri 8/14/20**	**112days**	**Mon 4/13/20**	**Fri 8/14/20**		**0**	
217	**20,21,2**		**Condensate Water Tank 5 Repair**	**5%**	**Wed 4/15/20**	**Thu 7/16/20**	**57days**	**Wed 4/15/20**	**Wed 6/17/20**		**-29**	
222	24	A1220	**Demineralized Water Treatement Demi ARO and Demi Resina**	23%	Tue 3/24/20	Mon 7/27/20	113days	Tue 3/24/20	Mon 7/27/20		0	
223	25	A1230	**Install New Overhead Crane Units 5 and 6**	100%	Mon 3/23/20	Tue 4/14/20	12days	Mon 3/9/20	Fri 3/20/20		-25	11
224	25	A1231	**Certify Overhead Crane**	100%	Mon 5/4/20	Thu 5/7/20	3days	Wed 4/15/20	Sat 4/25/20		-12	223
225	36		**Structural Repairs Overhead Crane Units 3-6**	0%	Mon 3/9/20	Wed 3/18/20	9days	Wed 4/22/20	Fri 5/1/20		44	
226	36		**Certification Existing 50 Ton Overhead Crane Units 3-6**	0%	Wed 3/18/20	Sat 4/18/20	28days	Fri 5/1/20	Tue 6/2/20		45	225
227			**Auxiliary Equipment Inspection and Repair**	0%	**Tue 1/7/20**	**Fri 7/31/20**	**187days**	**Tue 1/7/20**	**Fri 7/31/20**		**0**	
466	**30**		**Boilers Crossover links - Desuperheater Replacement**	**0%**	**Sat 4/18/20**	**Mon 6/29/20**	**58days**	**Sat 4/25/20**	**Mon 6/29/20**		**0**	
474			**Turbine Inspection and Repairs**	0%	**Mon 5/4/20**	**Tue 7/28/20**	**77days**	**Mon 5/4/20**	**Tue 7/28/20**		**0**	
515			**Generator Inspection and Repairs**	0%	**Mon 5/4/20**	**Wed 7/29/20**	**78days**	**Mon 5/4/20**	**Wed 7/29/20**		**0**	
533	42	A1310	**Inspection on High Energy Supports (Pipe Hangers)**	0%	Fri 5/29/20	Sat 7/11/20	39days	Fri 5/29/20	Sat 7/11/20		0	60SS+150 hrs
534	**47**	**5B90**	**Natural Gas System Activities**	0%	**Tue 4/28/20**	**Wed 8/12/20**	**95days**	**Wed 4/29/20**	**Wed 8/12/20**		**0**	
540	48	A1350	**Inspection and Test MPT and Repair Dikes**	0%	Wed 6/17/20	Thu 7/9/20	20days	Wed 6/17/20	Thu 7/9/20		0	463
541	49	A1360	**Reestablish of Potable Water System**	0%	Sat 4/25/20	Fri 5/8/20	12days	Sat 4/25/20	Fri 5/8/20		0	222SS+225 hrs
542			**Operational Test and Control Tasks**	0%	**Mon 6/29/20**	**Fri 8/14/20**	**42days**	**Mon 6/29/20**	**Thu 8/13/20**		**-1**	
543	50	A1380	Reestablish of Compressed Gases, Sulfuric Acid, CO2 and Caustic Soda Syste	0%	Mon 6/29/20	Tue 6/30/20	2days	Mon 6/29/20	Tue 6/30/20		0	544SS
544	51	A1370	Blow off Pumps Test	0%	Mon 6/29/20	Sat 7/4/20	6days	Mon 6/29/20	Sat 7/4/20		0	
545	44	A1320	DCS Foxboro Inspection - Boilers	0%	Wed 7/1/20	Wed 7/22/20	19days	Wed 7/1/20	Wed 7/22/20		0	
546	45	A1330	Mark VI Turbines Inspection	0%	Wed 7/1/20	Wed 7/22/20	19days	Wed 7/1/20	Wed 7/22/20		0	545SS
547	46	A1340	Trip Test Boilers and Turbine	0%	Wed 7/22/20	Mon 8/3/20	11days	Wed 7/22/20	Mon 8/3/20		0	546
548	56	A1410	Unit 5 Star Up and Commissioning Test	0%	Tue 8/4/20	Fri 8/14/20	9days	Tue 8/4/20	Thu 8/13/20		-1	547,54,55,56,2
549			**Unit 5 Start Up Completed**	0%	**Fri 8/14/20**	**Fri 8/14/20**	**0days**	**Fri 8/14/20**	**Fri 8/14/20**		**0**	**548,534,61,57**
550			**Civil Building and Other Areas Reconstruction**	**4%**	**Mon 4/6/20**	**Mon 7/20/20**	**100days**	**Mon 4/6/20**	**Sat 7/25/20**		**5**	
551			Procurement for Civil Works	54%	Mon 4/6/20	Sat 4/18/20	17days	Mon 4/6/20	Fri 4/24/20		6	11SS+13.47 da
552	26	A1240	Civil and Interior Works at Unit 5 Control Room	0%	Mon 4/20/20	Fri 6/19/20	55days	Fri 4/24/20	Thu 6/25/20		6	551
553	27	A1250	Compressor Room Demolition and Reconstruction	0%	Thu 5/7/20	Sat 6/27/20	47days	Tue 5/12/20	Fri 7/3/20		6	552SS+150 hrs
554	28	A1260	Engineering Room Demolition and Reconstruction	0%	Mon 5/25/20	Thu 7/2/20	36days	Fri 5/29/20	Wed 7/8/20		6	553SS+150 hrs
555	29	A1270	Civil Repair Work Shift Engineer Room	0%	Thu 6/11/20	Mon 7/20/20	36days	Tue 6/16/20	Sat 7/25/20		5	554SS+150 hrs
556	53	A1390	Temporary Laboratory Preparation and Commissioning Trailer	0%	Wed 4/29/20	Thu 5/7/20	8days	Wed 4/29/20	Thu 5/7/20		0	81
557	54	A1400	Temporary Office for Shift Engineer Trailer	0%	Sat 5/2/20	Tue 5/12/20	8days	Sat 5/2/20	Tue 5/12/20		0	556SS+37 5 hr
558	55		New Laboratory and Administration Building	0%	Mon 5/25/20	Sat 8/15/20	76days	Mon 5/25/20	Sat 8/15/20		0	
559	57		MPT 4 Secondary Containment repairs	0%	Wed 6/17/20	Fri 7/10/20	21days	Wed 6/17/20	Fri 7/10/20		0	540SS
560	58		MPT 6 Secondary Containment repairs	0%	Wed 6/17/20	Fri 7/10/20	21days	Wed 6/17/20	Fri 7/10/20		0	540SS
561	59		Mitigation of contaminated terrain switchyard 115kV, Autotransformer	0%	Mon 3/23/20	Mon 3/23/20	48days	Wed 4/8/20	Sat 5/30/20		68	11
565	60		Structural Concrete Repairs Discharge Channel	0%	Mon 7/6/20	Thu 1/7/21	168days	Mon 7/6/20	Thu 1/7/21		0	11

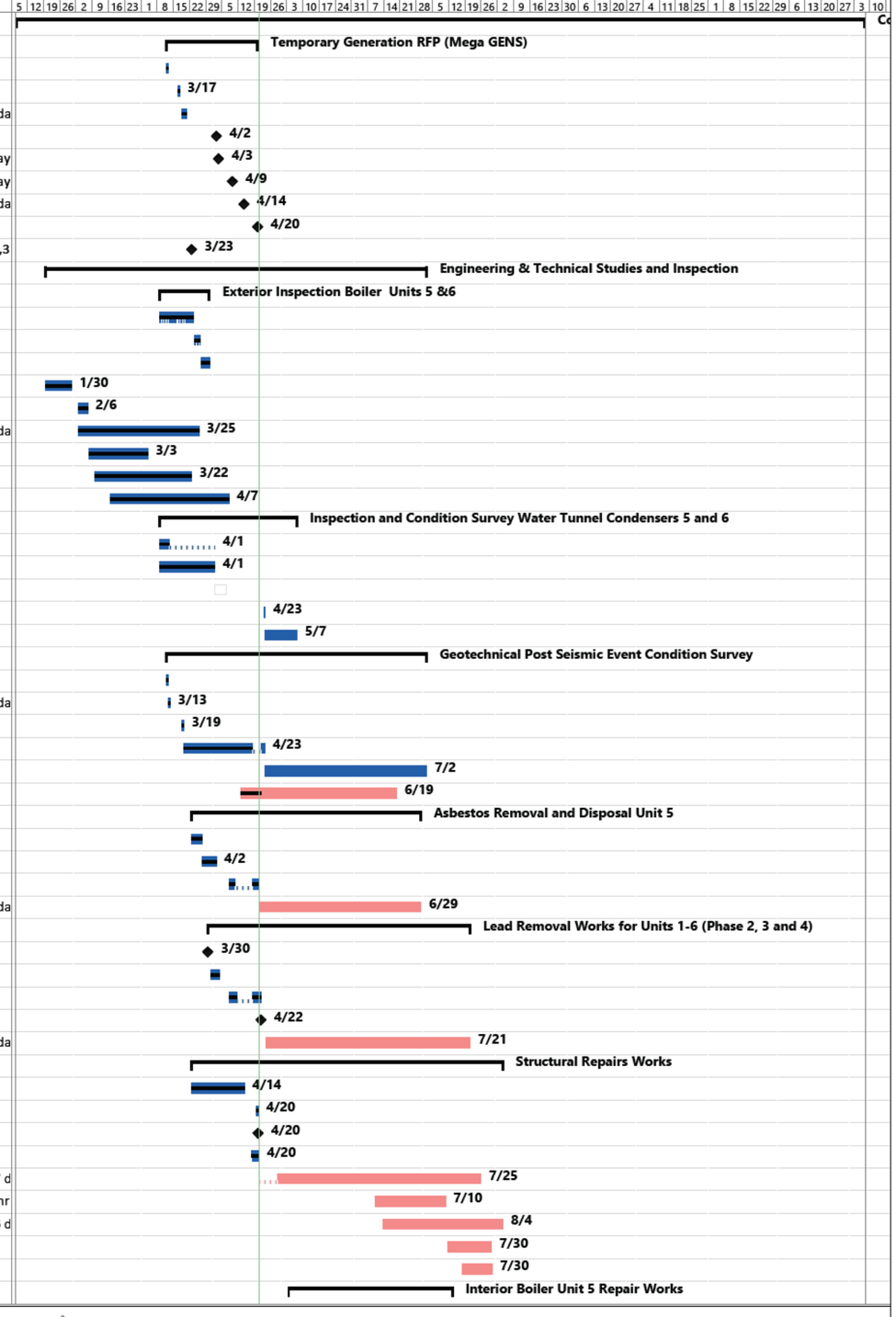


Date: Tue 4/21/20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

Costa Sur Damage Assessment and Repairs | UPDATE #1 (AS OF 04/21/2020)

ID	Work Stream ID	Task Name	% Complete	Baseline1 Start	Baseline1 Finish	Rounded Duration	Start	Finish	Finish Variance KPI	Finish Variance Days	Predecessors	Successors
1		**Costa Sur Damage Assessment and Repairs | MASTER SCHEDULE**	**13%**	**Tue 1/7/20**	**Thu 1/7/21**	**332days**	**Tue 1/7/20**	**Thu 1/7/21**		**0**		
2		**Temporary Generation RFP (Mega GENS)**	**100%**	**Thu 3/12/20**	**Mon 4/20/20**	**35days**	**Thu 3/12/20**	**Mon 4/20/20**		**0**		
3		Issue Request for Proposal	100%	Thu 3/12/20	Thu 3/12/20	1days	Thu 3/12/20	Thu 3/12/20		0		4
4		Kick-off Meeting	100%	Tue 3/17/20	Tue 3/17/20	1days	Tue 3/17/20	Tue 3/17/20		0	3	5
5		Site Visits	100%	Wed 3/18/20	Fri 3/20/20	2days	Wed 3/18/20	Fri 3/20/20		0	4	6FS+11.79 da
6		Proponents Request for Clarifications (RFC)	100%	Thu 4/2/20	Thu 4/2/20	0days	Thu 4/2/20	Thu 4/2/20		0	5FS+11.79 day	7
7		PREPA's response to RFC	100%	Fri 4/3/20	Fri 4/3/20	0days	Fri 4/3/20	Fri 4/3/20		0	6	8FS+5.05 day
8		Proposal Submittal Deadline	100%	Thu 4/9/20	Thu 4/9/20	0days	Thu 4/9/20	Thu 4/9/20		0	7FS+5.05 days	9FS+4.21 day
9		Interviews / Presentations with Proponents	100%	Tue 4/14/20	Tue 4/14/20	0days	Tue 4/14/20	Tue 4/14/20		0	8FS+4.21 days	10FS+5.05 da
10		Selection / Award announcement	100%	Mon 4/20/20	Mon 4/20/20	0days	Mon 4/20/20	Mon 4/20/20		0	9FS+5.05 days	
11		**Emergency Declaration**	100%	Mon 3/23/20	Mon 3/23/20	0days	Mon 3/23/20	Mon 3/23/20		0		24,561,565,3
12		**Engineering & Technical Studies and Inspection**	**76%**	**Mon 1/20/20**	**Mon 6/29/20**	**149days**	**Mon 1/20/20**	**Thu 7/2/20**		**3**		
13	**1**	Exterior Inspection Boiler Units 5 &6	**100%**	**Mon 3/9/20**	**Mon 3/30/20**	**20days**	**Mon 3/9/20**	**Mon 3/30/20**		**0**		
14		Inspection of Both Units	100%	Mon 3/9/20	Mon 3/23/20	12days	Mon 3/9/20	Mon 3/23/20		0		15
15		Report for Unit 5	100%	Tue 3/24/20	Thu 3/26/20	3days	Tue 3/24/20	Thu 3/26/20		0	14	16
16		Report for Unit 6	100%	Fri 3/27/20	Mon 3/30/20	3days	Fri 3/27/20	Mon 3/30/20		0	15	
17	**2**	Preliminary Structural Inspection Works Units 3,4, 5 and 6	100%	Mon 1/20/20	Thu 2/6/20	11days	Mon 1/20/20	Thu 1/30/20		-7		
18	**3**	Initial Assessment High Energy Piping Post Seismic Event Units 5 and 6	100%	Mon 2/3/20	Fri 2/28/20	4days	Mon 2/3/20	Thu 2/6/20		-22		
19	**4**	Initial Lead Removal for Inmediate Repair Works Units 3,4 and 5	100%	Mon 2/3/20	Tue 2/25/20	47days	Mon 2/3/20	Wed 3/25/20		29		20SS+5.05 da
20	**5**	Inmediate Repair Works for Safety and Continuing Inpection Works Units 3,	100%	Fri 2/7/20	Wed 2/26/20	22days	Fri 2/7/20	Tue 3/3/20		6	19SS+5.05 day	
21	**6**	Water and Fuel Tanks Condition Survey (20 tanks)	100%	Mon 2/10/20	Tue 3/10/20	38days	Mon 2/10/20	Sun 3/22/20		12		
22	**7**	Interior Inspection Work Boilers Units 5 and 6	100%	Mon 2/17/20	Fri 3/27/20	46days	Mon 2/17/20	Tue 4/7/20		11		
23	**9**	Inspection and Condition Survey Water Tunnel Condensers 5 and 6	**67%**	**Mon 3/23/20**	**Thu 5/7/20**	**54days**	**Mon 3/9/20**	**Thu 5/7/20**		**0**		**281**
24		Inspection of Underwater intake canal	100%	Mon 3/23/20	Sat 4/4/20	4days	Mon 3/9/20	Wed 4/1/20		-3	11	25
25		Preliminary Report Condition	100%	Mon 4/13/20	Thu 4/16/20	22days	Mon 3/9/20	Wed 4/1/20		-15	24	26
26		~~Final Report (placed on Hold dur to COVID-19)~~	~~0%~~	~~Mon 4/20/20~~	~~Thu 4/23/20~~	~~4days~~	~~Thu 4/2/20~~	~~Mon 4/6/20~~		~~-17~~	~~25~~	~~27~~
27		New Proposal for local services	0%	Mon 4/27/20	Thu 4/30/20	1days	Thu 4/23/20	Thu 4/23/20		-7	26	28
28		Assessment & Report	0%	Mon 5/4/20	Thu 5/7/20	12days	Thu 4/23/20	Thu 5/7/20		0	27	
29	**10**	Geotechnical Post Seismic Event Condition Survey	**31%**	**Thu 3/12/20**	**Mon 6/29/20**	**102days**	**Thu 3/12/20**	**Thu 7/2/20**		**3**		
30		Notice to Proceed	100%	Thu 3/12/20	Thu 3/12/20	1days	Thu 3/12/20	Thu 3/12/20		0		31
31		Kick-off Meeting	100%	Thu 3/12/20	Fri 3/13/20	1days	Thu 3/12/20	Fri 3/13/20		0	30	32FS+4 21 da
32		Mobilization	100%	Wed 3/18/20	Thu 3/19/20	1days	Wed 3/18/20	Thu 3/19/20		0	31FS+4.21 day	33
33		Field DataCollection Priority Areas (Tank 5, 6 Unit 5, gas line)	94%	Thu 3/19/20	Mon 4/20/20	29days	Thu 3/19/20	Thu 4/23/20		3	32	34
34		Other Areas	0%	Mon 4/20/20	Mon 6/29/20	63days	Thu 4/23/20	Thu 7/2/20		3	33	
35	11	Project Management and Inspection Team for Rehabilitation Unit 5	14%	Mon 4/27/20	Fri 7/3/20	61days	Mon 4/13/20	Fri 6/19/20		-14		
36		**Asbestos Removal and Disposal Unit 5**	**19%**	**Mon 3/23/20**	**Tue 6/23/20**	**89days**	**Mon 3/23/20**	**Mon 6/29/20**		**6**		
37		Preparation of Specification Packages (by PREPA)	100%	Mon 3/23/20	Fri 3/27/20	5days	Mon 3/23/20	Fri 3/27/20		0	11	38
38		Requisition Process	100%	Fri 3/27/20	Thu 4/2/20	5days	Fri 3/27/20	Thu 4/2/20		0	37	39
39		Procurement & Contracting	100%	Wed 4/8/20	Tue 4/14/20	5days	Wed 4/8/20	Mon 4/20/20		6	38	40
40		Asbestos Removal Works & Disposal for Unit 5	0%	Wed 4/15/20	Tue 6/23/20	63days	Tue 4/21/20	Mon 6/29/20		6	39	52SS+1.68 da
41	**12**	**Lead Removal Works for Units 1-6 (Phase 2, 3 and 4)**	**13%**	**Mon 3/30/20**	**Mon 7/13/20**	**102days**	**Mon 3/30/20**	**Tue 7/21/20**		**8**		
42		Preparation of Specification Packages (by PREPA)	100%	Mon 3/30/20	Mon 3/30/20	0days	Mon 3/30/20	Mon 3/30/20		0		43
43		Requisition Process	100%	Tue 3/31/20	Fri 4/3/20	4days	Tue 3/31/20	Fri 4/3/20		0	11FS+5.05 day	44
44		Procurement & Contracting	100%	Wed 4/8/20	Thu 4/16/20	7days	Wed 4/8/20	Tue 4/21/20		5	43	45
45		Notice To Proceed - Procurement Lead Contract Process	99%	Thu 4/16/20	Thu 4/16/20	0days	Wed 4/22/20	Wed 4/22/20		6	44	46
46	12	Lead Removal Works : Phase 2, 3 , and 4 Units 1-6	0%	Thu 4/16/20	Mon 7/13/20	79days	Fri 4/24/20	Tue 7/21/20		8	45	52SS+4 21 da
47		**Structural Repairs Works**	**12%**	**Mon 3/23/20**	**Tue 8/4/20**	**121days**	**Mon 3/23/20**	**Tue 8/4/20**		**0**		
48	**13**	Procurement for Structural Steel Repair Works	100%	Mon 3/23/20	Tue 4/14/20	21days	**Mon 3/23/20**	**Tue 4/14/20**		0	**11**	49
49	**13**	Kick-off Meeting	100%	Tue 4/14/20	Wed 4/15/20	1days	Mon 4/20/20	Mon 4/20/20		5	48	50
50	**13**	Notice to Proceed	100%	Wed 4/15/20	Wed 4/15/20	0days	Mon 4/20/20	Mon 4/20/20		5	49	51
51	**13**	Contractor's Mobilization	100%	Wed 4/15/20	Mon 4/20/20	2days	Fri 4/17/20	Mon 4/20/20		0	50	52
52	**13**	Structure Steel Repair Works Units 5 phase 2	0%	Tue 4/21/20	Sat 7/18/20	80days	Tue 4/21/20	Sat 7/25/20		7	46SS+4.21 day	53SS+45.47 d
53	**14**	Structure Steel Repair Works Units 5 phase 3	0%	Wed 6/10/20	Sat 7/11/20	28days	Wed 6/10/20	Fri 7/10/20		-1	52SS+45.47 da	54SS+37.5 hr
54	**14**	Structure Steel Repair Works Units 5 phase 4	0%	Mon 6/15/20	Tue 8/4/20	45days	Sat 6/13/20	Tue 8/4/20		0	53SS+37.5 hrs	55SS+25.26 d
55	**15**	Structure Steel Repair Works Units 1 and 2 (For Safety Concerrns)	0%	Mon 7/13/20	Thu 7/30/20	16days	Sat 7/11/20	Thu 7/30/20		0	54SS+25.26 da	548
56	**16**	Structure Steel Repair Works Units 3 and 4 (For Safety Concerrns)	0%	Sat 7/18/20	Fri 7/31/20	12days	Fri 7/17/20	Thu 7/30/20		-1	54SS+30.32 da	548
57	**18**	**Interior Boiler Unit 5 Repair Works**	**0%**	**Mon 5/4/20**	**Mon 7/13/20**	**64days**	**Mon 5/4/20**	**Mon 7/13/20**		**0**		**549**

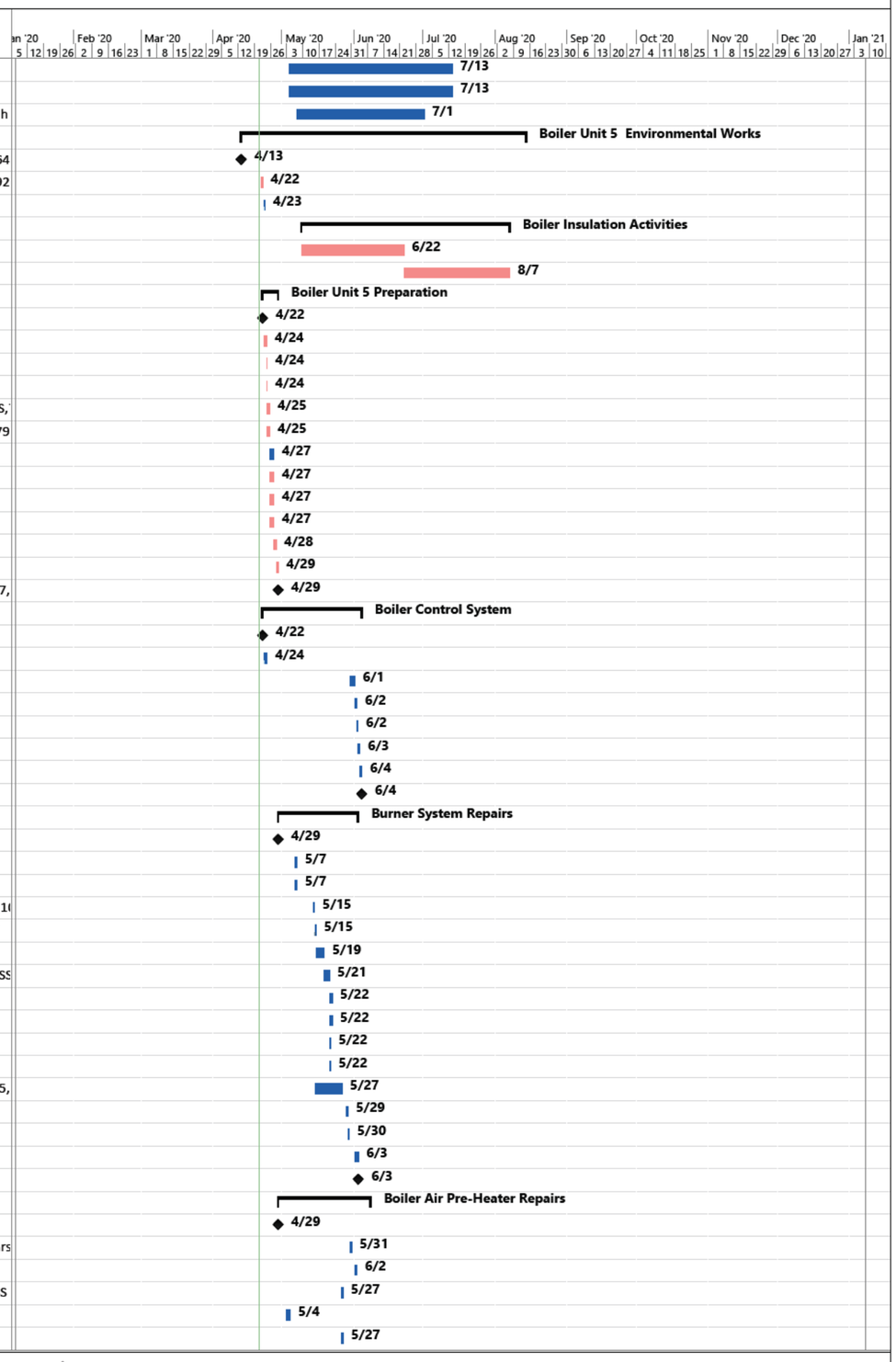


Date: Tue 4/21/20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

Costa Sur Damage Assessment and Repairs | UPDATE #1 (AS OF 04/21/2020)

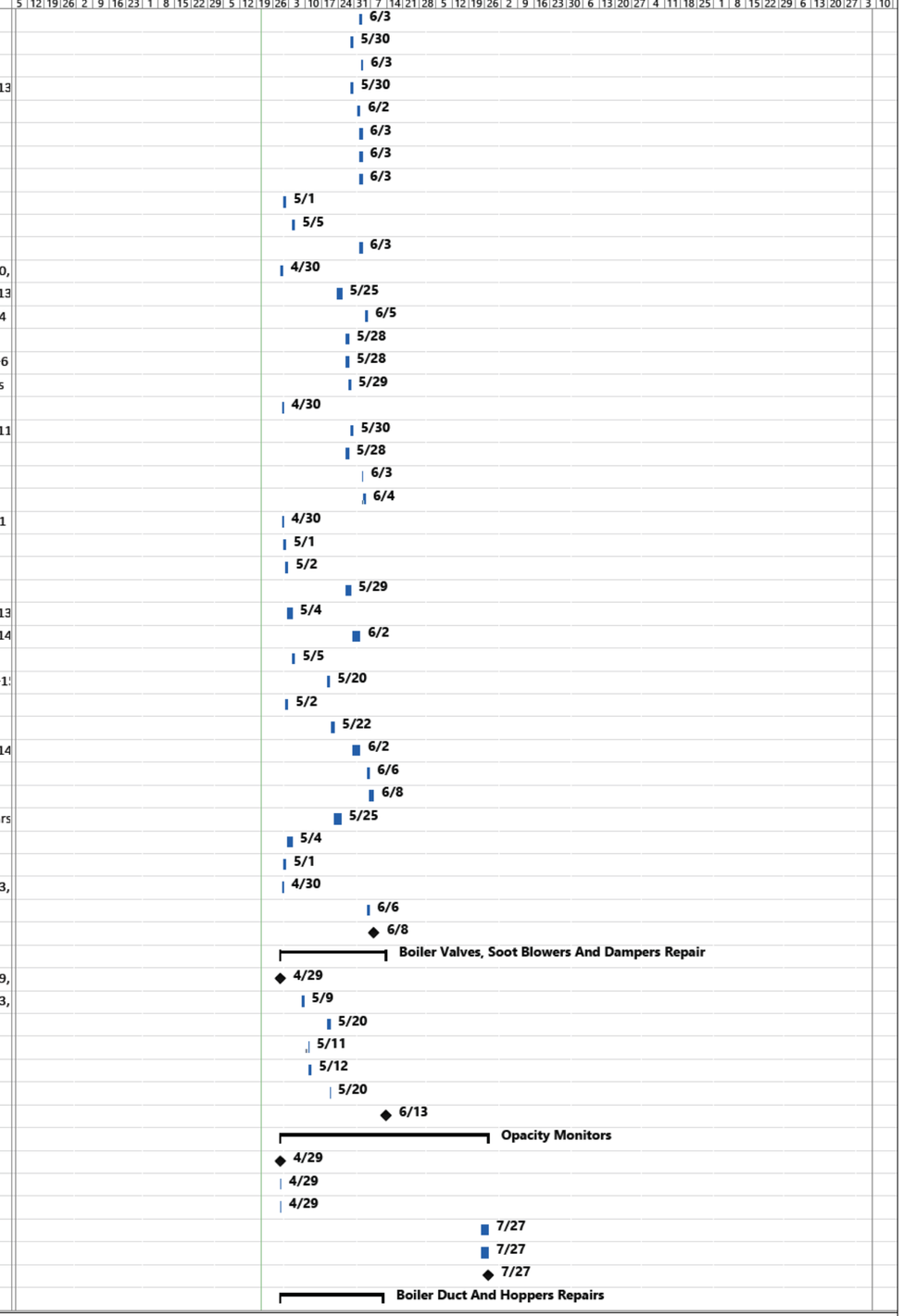
ID	Work Stream ID	Task Name	% Complete	Baseline1 Start	Baseline1 Finish	Rounded Duration	Start	Finish	Finish Variance KPI	Finish Variance Days	Predecessors	Successors
58	18	Interior Boiler Units 5 Repair Works	0%	Mon 5/4/20	Mon 7/13/20	64days	Mon 5/4/20	Mon 7/13/20		0		59SS
59	18	Enviromental Works	0%	Mon 5/4/20	Mon 7/13/20	64days	Mon 5/4/20	Mon 7/13/20		0	58SS	
60	18	Non Destructive Test on Steam piping Unit 5	0%	Thu 5/7/20	Wed 7/1/20	49days	Thu 5/7/20	Wed 7/1/20		0	472SS+60 hrs	533SS+150 h
61	19	**Boiler Unit 5 Environmental Works**	**0%**	**Mon 4/13/20**	**Fri 8/14/20**	**112days**	**Mon 4/13/20**	**Fri 8/14/20**		**0**		**549**
62		>> START UNIT 5 BOILER WORKS	0%	Mon 4/13/20	Mon 4/13/20	0days	Mon 4/13/20	Mon 4/13/20		0		69,216,63,64
63		Open Boiler Door & Access Door (Boiler Cool Down)	0%	Mon 4/13/20	Tue 4/14/20	1days	Wed 4/22/20	Wed 4/22/20		8	62	69,83,157,92
64		RED TAG BOILER UNIT 5	0%	Tue 4/14/20	Tue 4/14/20	1days	Wed 4/22/20	Thu 4/23/20		9	62SS,63	
65		**Boiler Insulation Activities**	**0%**	**Sat 5/9/20**	**Fri 8/7/20**	**81days**	**Sat 5/9/20**	**Fri 8/7/20**		**0**		
66		Refractory Repair Works Boiler	0%	Sat 5/9/20	Mon 6/22/20	39days	Sat 5/9/20	Mon 6/22/20		0	81FS+75 hrs	67
67		Insulation Repair Works Boiler	0%	Mon 6/22/20	Fri 8/7/20	41days	Mon 6/22/20	Fri 8/7/20		0	81,66	
68		**Boiler Unit 5 Preparation**	**0%**	**Tue 4/14/20**	**Tue 4/28/20**	**6days**	**Wed 4/22/20**	**Wed 4/29/20**		**1**		
69		>> START BOILER UNIT 5 PREPARATION	0%	Tue 4/14/20	Tue 4/14/20	0days	Wed 4/22/20	Wed 4/22/20		8	62,63	70,77,80
70		Remove Furnace Slag	0%	Wed 4/15/20	Thu 4/16/20	1days	Thu 4/23/20	Fri 4/24/20		8	69	71,80
71		Clean Air Preheater Gas & Air Hoppers	0%	Thu 4/16/20	Thu 4/16/20	1days	Fri 4/24/20	Fri 4/24/20		8	70	72SS,73,93
72		Water Wash Air & Gas Ducts	0%	Thu 4/16/20	Thu 4/16/20	1days	Fri 4/24/20	Fri 4/24/20		8	71SS	175,172,73
73		Water Wash Reheater & Superheater Front Side	0%	Fri 4/17/20	Sat 4/18/20	1days	Fri 4/24/20	Sat 4/25/20		7	71,72	467,76,74SS,
74		Water Wash Reheater & Economizer Rear Side	0%	Fri 4/17/20	Sat 4/18/20	1days	Fri 4/24/20	Sat 4/25/20		7	73SS	75,144,78,79
75		Clean Economizer Hoppers	0%	Sat 4/18/20	Sat 4/18/20	1days	Sat 4/25/20	Mon 4/27/20		9	74	94
76		Clean Superheater Headers Enclousure	0%	Sat 4/18/20	Sun 4/19/20	1days	Sat 4/25/20	Mon 4/27/20		8	73	77SS,81,79
77		Clean & Water Wash the Stack	0%	Mon 4/20/20	Tue 4/21/20	1days	Sat 4/25/20	Mon 4/27/20		6	76SS,69	81
78		Hydroblast Water Wall Tubes	0%	Fri 4/24/20	Sat 4/25/20	1days	Sat 4/25/20	Mon 4/27/20		2	74,73	178,81,79
79		Clean Roof & Botton Enclosure	0%	Sat 4/25/20	Mon 4/27/20	1days	Mon 4/27/20	Tue 4/28/20		1	76,74,78	80,81
80		Install Guindola (At Burner Level)	0%	Tue 4/28/20	Tue 4/28/20	1days	Tue 4/28/20	Wed 4/29/20		1	79,69,70	81,90
81		<< FINISH BOILER UNIT 5 PREPARATION	0%	Tue 4/28/20	Tue 4/28/20	0days	Wed 4/29/20	Wed 4/29/20		1	77,78,76,80,7	472,209,157,
82		**Boiler Control System**	**0%**	**Tue 4/14/20**	**Thu 6/4/20**	**39days**	**Wed 4/22/20**	**Thu 6/4/20**		**0**		
83		>> START UNIT BOILER CONTROL SYSTEM ACTIVITIES	0%	Tue 4/14/20	Tue 4/14/20	0days	Wed 4/22/20	Wed 4/22/20		8	63	84,85
84		Inspect/Repair all Trifecta Valves as Necesary	0%	Fri 4/17/20	Sat 4/18/20	2days	Wed 4/22/20	Fri 4/24/20		6	83	87,90
85		Calibrate Burner Tilt Position Transmitters	0%	Sat 5/30/20	Mon 6/1/20	1days	Sat 5/30/20	Mon 6/1/20		0	104,83	86,90
86		Maintenance to Viscosimeter	0%	Mon 6/1/20	Tue 6/2/20	1days	Mon 6/1/20	Tue 6/2/20		0	85	87,90
87		Reguladoras de Atomizar (Split-Range)	0%	Tue 6/2/20	Tue 6/2/20	1days	Tue 6/2/20	Tue 6/2/20		0	84,86	88
88		Reguladora de Propano	0%	Tue 6/2/20	Wed 6/3/20	1days	Tue 6/2/20	Wed 6/3/20		0	87	89
89		Trip de Propano	0%	Wed 6/3/20	Thu 6/4/20	1days	Wed 6/3/20	Thu 6/4/20		0	88	90
90		<< FINISH BOILER CONTROL SYSTEM ACTIVITIES	0%	Thu 6/4/20	Thu 6/4/20	0days	Thu 6/4/20	Thu 6/4/20		0	89,85,84,86,8	216
91		**Burner System Repairs**	**0%**	**Tue 4/28/20**	**Wed 6/3/20**	**31days**	**Wed 4/29/20**	**Wed 6/3/20**		**0**		
92		>> START BOILER BURNER SYSTEM REPAIRS	0%	Tue 4/28/20	Tue 4/28/20	0days	Wed 4/29/20	Wed 4/29/20		1	63,81	95
93		Inspect & Repair Air Heaters Inlet Dampers	0%	Wed 5/6/20	Thu 5/7/20	1days	Wed 5/6/20	Thu 5/7/20		0	71,157	216,163
94		Inspect & Repair Economizer Outlet Damper	0%	Wed 5/6/20	Thu 5/7/20	1days	Wed 5/6/20	Thu 5/7/20		0	75,74,157	163
95		Remove Burner Flame Scanners. Ignitor & Switches	0%	Thu 5/14/20	Fri 5/15/20	1days	Thu 5/14/20	Fri 5/15/20		0	92	96SS+8 hrs,1
96		Clean & Store Burner Flame Scanners, Ignitior & Switches	0%	Fri 5/15/20	Fri 5/15/20	1days	Fri 5/15/20	Fri 5/15/20		0	95SS+8 hrs	105,106,97
97		Inspect/Repair Igniter Booster Fan 5-1	0%	Fri 5/15/20	Tue 5/19/20	2days	Fri 5/15/20	Tue 5/19/20		0	96	98,99
98		Inspect/Repair Igniter Booster Fan 5-2	0%	Tue 5/19/20	Thu 5/21/20	3days	Tue 5/19/20	Thu 5/21/20		0	97	107,99,100SS
99		Maintenace to Scanner Booster Fan 5-1 Motor	0%	Thu 5/21/20	Fri 5/22/20	1days	Thu 5/21/20	Fri 5/22/20		0	97,98	100SS
100		Maintenace to Scanner Booster Fan 5-2 Motor	0%	Thu 5/21/20	Fri 5/22/20	1days	Thu 5/21/20	Fri 5/22/20		0	98SS,99SS	106
101		Maintenance to Burner Tilt Mechanism	0%	Thu 5/21/20	Fri 5/22/20	1days	Thu 5/21/20	Fri 5/22/20		0	95	104,102SS
102		Maintenance to Burner Tilts Drives	0%	Thu 5/21/20	Fri 5/22/20	1days	Thu 5/21/20	Fri 5/22/20		0	101SS	104
103		Install / Repair Burner Atomizing Lines Insulation as necesary	0%	Fri 5/15/20	Wed 5/27/20	6days	Fri 5/15/20	Wed 5/27/20		0	95	209,104,105,
104		Check Calibration of Burner Tilts Mechanism	0%	Thu 5/28/20	Fri 5/29/20	1days	Thu 5/28/20	Fri 5/29/20		0	103,101,102	85
105		Install Boiler Burner Ignitors	0%	Fri 5/29/20	Sat 5/30/20	1days	Fri 5/29/20	Sat 5/30/20		0	103,96	106,107
106		Install Boiler Burner Flame Scanners, Ignitors & Switchs	0%	Mon 6/1/20	Wed 6/3/20	2days	Mon 6/1/20	Wed 6/3/20		0	103,105,100,9	107
107		<< FINISH BOILER BURNER SYSTEM REPAIR	0%	Wed 6/3/20	Wed 6/3/20	0days	Wed 6/3/20	Wed 6/3/20		0	106,105,98	216,215
108		**Boiler Air Pre-Heater Repairs**	**0%**	**Tue 4/28/20**	**Mon 6/8/20**	**36days**	**Wed 4/29/20**	**Mon 6/8/20**		**0**		
109		>> START AIR PREHEATERS WORKS	0%	Tue 4/28/20	Tue 4/28/20	0days	Wed 4/29/20	Wed 4/29/20		1	63SS,81	126
110		Calibrate Hot Side Seals as Necesary	0%	Sat 5/30/20	Sun 5/31/20	1days	Sat 5/30/20	Sun 5/31/20		0	116	111SS+10 hrs
111		Calibrate Cold End Seals	0%	Mon 6/1/20	Tue 6/2/20	1days	Mon 6/1/20	Tue 6/2/20		0	110SS+10 hrs	120
112		Maintenance to Guide Bearing System	0%	Tue 5/26/20	Wed 5/27/20	1days	Tue 5/26/20	Wed 5/27/20		0	127	114SS,133SS
113		Maintenance to Air Heaters Access Door	0%	Sat 5/2/20	Mon 5/4/20	1days	Sat 5/2/20	Mon 5/4/20		0	153	121
114		Remove Air Heaters Scaffolding (Cold Side)	0%	Tue 5/26/20	Wed 5/27/20	1days	Tue 5/26/20	Wed 5/27/20		0	112SS	140



Date: Tue 4/21/20

Task | Summary | Inactive Milestone | Duration-only | Start-only | External Milestone | Critical Split
Split | Project Summary | Inactive Summary | Manual Summary Rollup | Finish-only | Deadline | Progress
Milestone | Inactive Task | Manual Task | Manual Summary | External Tasks | Critical | Manual Progress

ID	Work Stream ID	Task Name	% Complete	Baseline1 Start	Baseline1 Finish	Rounded Duration	Start	Finish	Finish Variance KPI	Finish Variance Days	Predecessors	Successors
115		Install AH 5-1 & 5-2 Guide Bearings Thermocouples	0%	Tue 6/2/20	Wed 6/3/20	1days	Tue 6/2/20	Wed 6/3/20		0	133SS,119	117
116		Inspect Stay Plate	0%	Fri 5/29/20	Sat 5/30/20	1days	Fri 5/29/20	Sat 5/30/20		0	130,131SS+8 h	110
117		Install Dampers	0%	Wed 6/3/20	Wed 6/3/20	1days	Wed 6/3/20	Wed 6/3/20		0	115	154
118		Inspect & Maintenance Rotor Drives	0%	Fri 5/29/20	Sat 5/30/20	1days	Fri 5/29/20	Sat 5/30/20		0	137,133SS	120SS,122,13
119		Escape por sellos de bombas de aceite guide brgs.	0%	Mon 6/1/20	Tue 6/2/20	1days	Mon 6/1/20	Tue 6/2/20		0	133,141	115
120		Water Wash Baskets Elements	0%	Tue 6/2/20	Wed 6/3/20	1days	Tue 6/2/20	Wed 6/3/20		0	111,118SS	121SS
121		Close Air Preheaters Access Door	0%	Tue 6/2/20	Wed 6/3/20	1days	Tue 6/2/20	Wed 6/3/20		0	113,120SS	122SS
122		Connect AH Rotor Drives (Electrically)	0%	Tue 6/2/20	Wed 6/3/20	1days	Tue 6/2/20	Wed 6/3/20		0	121SS,118	155
123		Inspect/Repair AH Alarms Solenoids	0%	Thu 4/30/20	Fri 5/1/20	1days	Thu 4/30/20	Fri 5/1/20		0	137	124
124		AH:Sensing Line,Manometer,Thermometer,Mercoids	0%	Mon 5/4/20	Tue 5/5/20	1days	Mon 5/4/20	Tue 5/5/20		0	123	155FF
125		Install Air Heaters 5-1 & 5-2 Support Bearing Thermocouples	0%	Tue 6/2/20	Wed 6/3/20	1days	Tue 6/2/20	Wed 6/3/20		0	142	155,135
126		Clean Air PreHeaters (by Operation)	0%	Wed 4/29/20	Thu 4/30/20	1days	Wed 4/29/20	Thu 4/30/20		0	109	137,138,150,
127		Wash & Inspect Air Preheater Housings	0%	Sat 5/23/20	Mon 5/25/20	1days	Sat 5/23/20	Mon 5/25/20		0	146	112,129SS,13
128		Connect AH Guide Bearing 5-1 & 5-2 Thermo Switch	0%	Thu 6/4/20	Fri 6/5/20	1days	Thu 6/4/20	Fri 6/5/20		0	147,136	155,148,154
129		Inspect Air Heater Diaphragms	0%	Wed 5/27/20	Thu 5/28/20	1days	Wed 5/27/20	Thu 5/28/20		0	150SS+45 hrs,	130SS
130		Inspect End Plates	0%	Wed 5/27/20	Thu 5/28/20	1days	Wed 5/27/20	Thu 5/28/20		0	127SS,129SS,1	116,131SS+6
131		Inspect & Repair Hot & Cold Baskets Supports	0%	Thu 5/28/20	Fri 5/29/20	1days	Thu 5/28/20	Fri 5/29/20		0	130SS+6 hrs	116SS+8 hrs
132		Remove AH 5-1 & 5-2 Guide Bearings Thermocouples	0%	Thu 4/30/20	Thu 4/30/20	1days	Thu 4/30/20	Thu 4/30/20		0	126	152,138
133		Maintenance to Guide Bearing & System	0%	Fri 5/29/20	Sat 5/30/20	1days	Fri 5/29/20	Sat 5/30/20		0	112SS	119,115SS,11
134		Remv./ Inspect/Repair & Install AH's S-Blower	0%	Wed 5/27/20	Thu 5/28/20	1days	Wed 5/27/20	Thu 5/28/20		0	127	135
135		Connect AH 5-1 & 5-2 Soot Blowers Motors	0%	Wed 6/3/20	Wed 6/3/20	1days	Wed 6/3/20	Wed 6/3/20		0	143,125,134,1	155,136
136		Connect AH5-1 & 5-2 Guide Brng. Lub-Motor	0%	Wed 6/3/20	Thu 6/4/20	1days	Wed 6/3/20	Thu 6/4/20		0	141,118,135	128
137		Disconnect AH Rotor Drives 5-1 & 5-2	0%	Thu 4/30/20	Thu 4/30/20	1days	Thu 4/30/20	Thu 4/30/20		0	126	118,123,151
138		Remove AH 5-1 & 5-2 Guide Bearing Thermo Switch	0%	Thu 4/30/20	Fri 5/1/20	1days	Thu 4/30/20	Fri 5/1/20		0	126,132	139,140
139		Disconnect AH 5-1 & 5-2 Support & Guide Bearing Lub Motor	0%	Fri 5/1/20	Sat 5/2/20	1days	Fri 5/1/20	Sat 5/2/20		0	138	141,151
140		Remove AH5-1 & 5-2 Support Bearing Thermo Switch	0%	Wed 5/27/20	Fri 5/29/20	2days	Wed 5/27/20	Fri 5/29/20		0	138,114	142
141		Maintenance to AH 5-1 & 5-2 Guide Brng.Lub-Motor	0%	Sat 5/2/20	Mon 5/4/20	1days	Sat 5/2/20	Mon 5/4/20		0	139	119,130SS,13
142		Mant. Support Brngs. & Lub-oil System	0%	Sat 5/30/20	Tue 6/2/20	2days	Sat 5/30/20	Tue 6/2/20		0	141SS,140,152	125,147SS,14
143		Maintenance to Soot Blower Motor	0%	Mon 5/4/20	Tue 5/5/20	1days	Mon 5/4/20	Tue 5/5/20		0	151	135
144		Inspect / Replace Hot Radial & Circunferential Seals as Necesary	0%	Tue 5/19/20	Wed 5/20/20	1days	Tue 5/19/20	Wed 5/20/20		0	74,153	146,150SS+1
145		Remove Air Heaters Damper & Washing Device	0%	Fri 5/1/20	Sat 5/2/20	1days	Fri 5/1/20	Sat 5/2/20		0	152	146
146		Inspect Baskets Elements & Gratings	0%	Thu 5/21/20	Fri 5/22/20	1days	Thu 5/21/20	Fri 5/22/20		0	144,145	127
147		Maintenance to AH 5-1 & 5-2 Support Brng. Motors	0%	Sat 5/30/20	Tue 6/2/20	2days	Sat 5/30/20	Tue 6/2/20		0	142SS	128,135SS,14
148		Install AH 5-1& 5-2 Support Bearing ThermoSwitch	0%	Fri 6/5/20	Sat 6/6/20	1days	Fri 6/5/20	Sat 6/6/20		0	128,147,142SS	155,149
149		Install AH 5-1 & 5-2 Support Brng. Thermocouple	0%	Sat 6/6/20	Mon 6/8/20	1days	Sat 6/6/20	Mon 6/8/20		0	148	155
150		Inspect / Replace Cold Radial & Circunferential Seals as necesary	0%	Fri 5/22/20	Mon 5/25/20	2days	Fri 5/22/20	Mon 5/25/20		0	144SS+15 hrs,	129SS+45 hrs
151		Remv.all Electric Motors & send to Mechanical shop	0%	Sat 5/2/20	Mon 5/4/20	1days	Sat 5/2/20	Mon 5/4/20		0	139,137,153	143
152		Remv. AH 5-1 & 5-2 Support Brngs. Thermocouples	0%	Thu 4/30/20	Fri 5/1/20	1days	Thu 4/30/20	Fri 5/1/20		0	132	142,145
153		Open Air PreHeaters Access Door	0%	Thu 4/30/20	Thu 4/30/20	1days	Thu 4/30/20	Thu 4/30/20		0	126	144,150,113,
154		Cal. Diff. Press.Transmmiter Across AH	0%	Fri 6/5/20	Sat 6/6/20	1days	Fri 6/5/20	Sat 6/6/20		0	117,128	155
155		<< FINISH AIR PREHEATERS WORK	0%	Mon 6/8/20	Mon 6/8/20	0days	Mon 6/8/20	Mon 6/8/20		0	122,124FF,145	216,214
156		**Boiler Valves, Soot Blowers And Dampers Repair**	**0%**	**Tue 4/28/20**	**Sat 6/13/20**	**42days**	**Wed 4/29/20**	**Sat 6/13/20**		**0**		
157		>> START VALVES,DAMPERS & RETRACT BLOWER REPAIRS	0%	Tue 4/28/20	Tue 4/28/20	0days	Wed 4/29/20	Wed 4/29/20		1	63,81	162,160,159,
158		Repack all Root & Secondary Valves as Necesary (Operation List)	0%	Fri 5/8/20	Sat 5/9/20	1days	Fri 5/8/20	Sat 5/9/20		0	157	160,159,163,
159		Inspect Boiler Soot Blowing System (All Elevations)	0%	Tue 5/19/20	Wed 5/20/20	1days	Tue 5/19/20	Wed 5/20/20		0	158,157	162,163
160		Inspect Boiler Lead 5-1 Valve Actuator /Lubricate	0%	Sat 5/9/20	Mon 5/11/20	1days	Sat 5/9/20	Mon 5/11/20		0	157,158	161
161		Inspect Boiler Lead 5-2 Valve Actuator /Lubricate	0%	Mon 5/11/20	Tue 5/12/20	1days	Mon 5/11/20	Tue 5/12/20		0	160	
162		Verify Soot Blower Steam Press. Transmitter	0%	Wed 5/20/20	Wed 5/20/20	0days	Wed 5/20/20	Wed 5/20/20		0	157,184SS,155	163
163		<< FINISH VALVES,DAMPERS & RETRACT BLOWER REPAIR	0%	Sat 6/13/20	Sat 6/13/20	0days	Sat 6/13/20	Sat 6/13/20		0	159,158,419,1	216,214
164		**Opacity Monitors**	**0%**	**Tue 4/28/20**	**Mon 7/27/20**	**80days**	**Wed 4/29/20**	**Mon 7/27/20**		**0**		
165		>> START OPACITY MONITORS ACTIVITIES	0%	Tue 4/28/20	Tue 4/28/20	0days	Wed 4/29/20	Wed 4/29/20		1	63SS,81	166
166		Remove Oxigen (O2) Analizer	0%	Wed 4/29/20	Wed 4/29/20	1days	Wed 4/29/20	Wed 4/29/20		0	165	168
167		Remove Opacity Detector	0%	Wed 4/29/20	Wed 4/29/20	1days	Wed 4/29/20	Wed 4/29/20		0	81	169
168		Install and Calibrate Oxigen (O2) Analizer	0%	Fri 7/24/20	Mon 7/27/20	2days	Fri 7/24/20	Mon 7/27/20		0	209,166	169SS,170
169		Install and Calibrate Opacity Detector	0%	Fri 7/24/20	Mon 7/27/20	2days	Fri 7/24/20	Mon 7/27/20		0	167,168SS,81	170
170		<< FINISH OPACITY MONITORS ACTIVITIES	0%	Mon 7/27/20	Mon 7/27/20	0days	Mon 7/27/20	Mon 7/27/20		0	168,169	216
171		**Boiler Duct And Hoppers Repairs**	**0%**	**Tue 4/28/20**	**Fri 6/12/20**	**40days**	**Wed 4/29/20**	**Fri 6/12/20**		**0**		

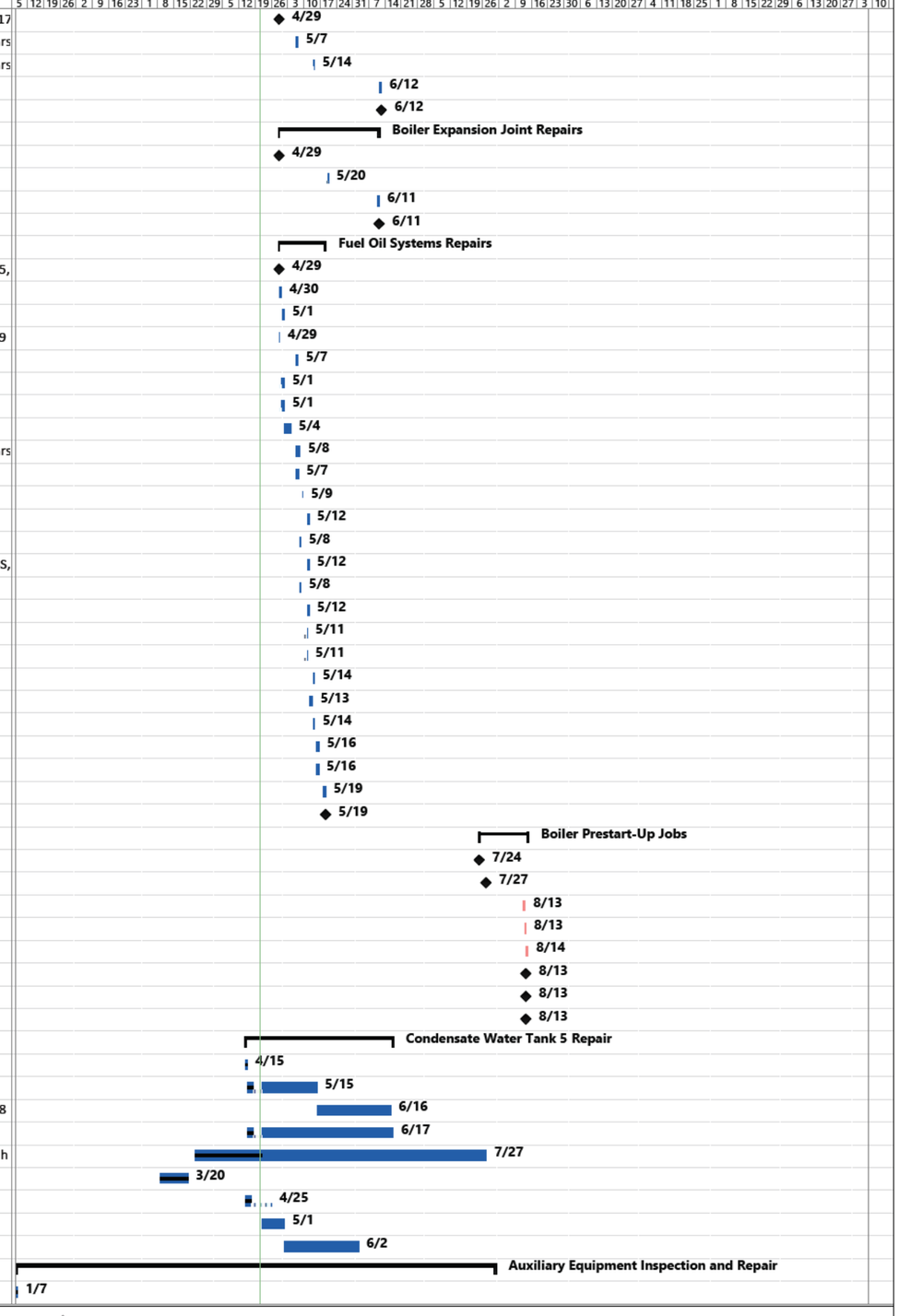


Date: Tue 4/21/20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

Costa Sur Damage Assessment and Repairs | UPDATE #1 (AS OF 04/21/2020)

ID	Work Stream ID	Task Name	% Complete	Baseline1 Start	Baseline1 Finish	Rounded Duration	Start	Finish	Finish Variance KPI	Finish Variance Days	Predecessors	Successors
172		>> START BOILER DUCTS REPAIR ACTIVITIES	0%	Tue 4/28/20	Tue 4/28/20	0days	Wed 4/29/20	Wed 4/29/20	🔴	1	81,72	175,178SS,17
173		Inspect/Repair Air Side Ducts and Hoppers (as necesary)	0%	Wed 5/6/20	Thu 5/7/20	1days	Wed 5/6/20	Thu 5/7/20	🟢	0	172	174SS+50 hrs
174		Inspect and/or Repair Gas Side Ducts and Hoppers (as necesary)	0%	Wed 5/13/20	Thu 5/14/20	1days	Wed 5/13/20	Thu 5/14/20	🟢	0	173SS+50 hrs	175SS+45 hrs
175		Inspect/Repair GRF Inlet Gas Duct (as necesary)	0%	Thu 6/11/20	Fri 6/12/20	1days	Thu 6/11/20	Fri 6/12/20	🟢	0	174SS+45 hrs,	176
176		<< FINISH BOILER DUCTS REPAIR ACTIVITIES	0%	Fri 6/12/20	Fri 6/12/20	0days	Fri 6/12/20	Fri 6/12/20	🟢	0	175,174	216
177		**Boiler Expansion Joint Repairs**	**0%**	**Tue 4/28/20**	**Thu 6/11/20**	**39days**	**Wed 4/29/20**	**Thu 6/11/20**		**0**		
178		>> START BOILER EXPANSION JOINT REPAIRS	0%	Tue 4/28/20	Tue 4/28/20	0days	Wed 4/29/20	Wed 4/29/20	🔴	1	78,172SS	179
179		Inspect/Repair Air Side Ducts X-Joints (as necesary)	0%	Tue 5/19/20	Wed 5/20/20	1days	Tue 5/19/20	Wed 5/20/20	🟢	0	178	181,180
180		Inspect/Repair Gas Side Ducts X-Joints (as necesary)	0%	Wed 6/10/20	Thu 6/11/20	1days	Wed 6/10/20	Thu 6/11/20	🟢	0	179	181
181		<< FINISH BOILER EXPANSION JOINT REPAIRS	0%	Thu 6/11/20	Thu 6/11/20	0days	Thu 6/11/20	Thu 6/11/20	🟢	0	180,179	216
182		**Fuel Oil Systems Repairs**	**0%**	**Tue 4/28/20**	**Tue 5/19/20**	**18days**	**Wed 4/29/20**	**Tue 5/19/20**		**0**		
183		>> START FUEL OIL SYSTEM ACTIVITIES	0%	Tue 4/28/20	Tue 4/28/20	0days	Wed 4/29/20	Wed 4/29/20	🔴	1	63,81	184,186,185,
184		Verify BC Press Transmitter	0%	Wed 4/29/20	Thu 4/30/20	1days	Wed 4/29/20	Thu 4/30/20	🟢	0	183	162SS,207
185		Inspect/Replace BC Heater Relief Valves (as necesary)	0%	Thu 4/30/20	Fri 5/1/20	1days	Thu 4/30/20	Fri 5/1/20	🟢	0	183	
186		Disconnect Electrically BC Pump Motor 5-1	0%	Wed 4/29/20	Wed 4/29/20	1days	Wed 4/29/20	Wed 4/29/20	🟢	0	183	188,191,189
187		P.M. to Bunker C Heater (Repair BC Heaters Elements Leaks as Necesary)	0%	Wed 5/6/20	Thu 5/7/20	1days	Wed 5/6/20	Thu 5/7/20	🟢	0	183	207
188		Remove BC Pump Motor 5-1 Thermocouples	0%	Wed 4/29/20	Fri 5/1/20	2days	Wed 4/29/20	Fri 5/1/20	🟢	0	186	191,190
189		Disconnect Electrically BC Pump Motor 5-2	0%	Wed 4/29/20	Fri 5/1/20	2days	Wed 4/29/20	Fri 5/1/20	🟢	0	186	193
190		Remove BC Pump Motor 5-2 Thermocouples	0%	Fri 5/1/20	Sat 5/2/20	2days	Fri 5/1/20	Mon 5/4/20	🔴	2	188	193
191		P.M. to B.C. Pump and Motor 5-1	0%	Wed 5/6/20	Fri 5/8/20	2days	Wed 5/6/20	Fri 5/8/20	🟢	0	186,188	193SS+15 hrs
192		Limpiar filtros de Bombas de BC 5-1 & 5-2	0%	Wed 5/6/20	Thu 5/7/20	2days	Wed 5/6/20	Thu 5/7/20	🟢	0	191SS	196
193		P.M. to B.C. Pump and Motor 5-2	0%	Sat 5/9/20	Sat 5/9/20	1days	Sat 5/9/20	Sat 5/9/20	🟢	0	189,191SS+15	199,200
194		Inspect/Repair Bunker C Pump 5-2 Recirculating Valve	0%	Mon 5/11/20	Tue 5/12/20	1days	Mon 5/11/20	Tue 5/12/20	🟢	0	196SS	202
195		Install B.C. Pump 5-1 Thermocouples	0%	Fri 5/8/20	Fri 5/8/20	1days	Fri 5/8/20	Fri 5/8/20	🟢	0	191	207
196		Inspect/Repair BC Pump 5-1 Recirculating Valve	0%	Mon 5/11/20	Tue 5/12/20	1days	Mon 5/11/20	Tue 5/12/20	🟢	0	191,192	194SS,198SS,
197		Connect Electrically B.C. Pump 5-1 Motor	0%	Fri 5/8/20	Fri 5/8/20	1days	Fri 5/8/20	Fri 5/8/20	🟢	0	191	207
198		Inspect/Repair Bunker C Steam Press Control Valve	0%	Mon 5/11/20	Tue 5/12/20	1days	Mon 5/11/20	Tue 5/12/20	🟢	0	196SS	201SS
199		Install B.C. Pump 5-2 Thermocouples	0%	Sat 5/9/20	Mon 5/11/20	1days	Sat 5/9/20	Mon 5/11/20	🟢	0	193	207
200		Connect Electrically B.C. Pump 5-2 Motor	0%	Sat 5/9/20	Mon 5/11/20	1days	Sat 5/9/20	Mon 5/11/20	🟢	0	193	207
201		Inspect/Repair Bunker C Atomizing Steam Control Valve	0%	Thu 5/14/20	Thu 5/14/20	1days	Thu 5/14/20	Thu 5/14/20	🟢	0	196,198SS	204
202		Inpect/Repair BC Fuel Oil Flow Control Valve	0%	Tue 5/12/20	Wed 5/13/20	2days	Tue 5/12/20	Wed 5/13/20	🟢	0	194	203,207
203		Inepct/Repair Fuel Oil Minimum Flow Control Valve	0%	Thu 5/14/20	Thu 5/14/20	1days	Thu 5/14/20	Thu 5/14/20	🟢	0	202	207
204		Inspect/Repair Bunker C Steam Atomizing Valve	0%	Fri 5/15/20	Sat 5/16/20	1days	Fri 5/15/20	Sat 5/16/20	🟢	0	201	205SS,206
205		Inspect Atomizing Vapor Pressure Transmiters	0%	Fri 5/15/20	Sat 5/16/20	1days	Fri 5/15/20	Sat 5/16/20	🟢	0	204SS	207,206
206		Replace Micromotion	0%	Mon 5/18/20	Tue 5/19/20	1days	Mon 5/18/20	Tue 5/19/20	🟢	0	204,205	207
207		<< FINISH FUEL OIL SYSTEM ACTIVITIES	0%	Tue 5/19/20	Tue 5/19/20	0days	Tue 5/19/20	Tue 5/19/20	🟢	0	187,197,202,2	216,215
208		**Boiler Prestart-Up Jobs**	**0%**	**Fri 7/24/20**	**Fri 8/14/20**	**19days**	**Fri 7/24/20**	**Fri 8/14/20**		**0**		
209		>> START BOILER PRESTART-UP JOBS	0%	Fri 7/24/20	Fri 7/24/20	0days	Fri 7/24/20	Fri 7/24/20	🟢	0	473,220,81,10	210,168
210		Boiler Hytrotest	0%	Mon 7/27/20	Mon 7/27/20	0days	Mon 7/27/20	Mon 7/27/20	🟢	0	158,209,332,3	211
211		Repair Tubes After Hydrotest	0%	Wed 8/12/20	Wed 8/12/20	1days	Wed 8/12/20	Thu 8/13/20	🔴	1	539,210	212
212		Final Hydrotest	0%	Wed 8/12/20	Thu 8/13/20	1days	Thu 8/13/20	Thu 8/13/20	🟢	0	211,324	214SS,213
213		Remove Guindola	0%	Thu 8/13/20	Fri 8/14/20	1days	Thu 8/13/20	Fri 8/14/20	🟢	0	212	214SS
214		Close Boiler Doors & Access Doors	0%	Thu 8/13/20	Thu 8/13/20	0days	Thu 8/13/20	Thu 8/13/20	🟢	0	155,163,212SS	215
215		<< FINISH BOILER PRESTART-UP JOBS	0%	Thu 8/13/20	Thu 8/13/20	0days	Thu 8/13/20	Thu 8/13/20	🟢	0	214,107,334,2	216
216		<< FINISH BOILER UNIT 5 WORKS	0%	Thu 8/13/20	Thu 8/13/20	0days	Thu 8/13/20	Thu 8/13/20	🟢	0	107,155,163,1	
217	20,21,2	**Condensate Water Tank 5 Repair**	**5%**	**Wed 4/15/20**	**Thu 7/16/20**	**57days**	**Wed 4/15/20**	**Wed 6/17/20**		**-29**		
218		Procurement Process - Notice To Proceed	100%	Wed 4/15/20	Wed 4/15/20	1days	Wed 4/15/20	Wed 4/15/20	🟢	0	11FS+21.05 da	219
219		Condensate Water Tank 5 Engineering studies for repair specifications and c	10%	Wed 4/15/20	Tue 5/12/20	24days	Wed 4/15/20	Fri 5/15/20	🔴	3	218	220,221SS
220		Tank 5 repairs & Hydrostatic tests	0%	Tue 5/12/20	Fri 6/12/20	28days	Fri 5/15/20	Tue 6/16/20	🔴	4	219	209,210,548
221		Temporary Connection Condensate Water Tanks 3 and 4	4%	Wed 7/15/20	Thu 7/16/20	53days	Wed 4/15/20	Wed 6/17/20	🟢	-29	219SS	
222	24	**Demineralized Water Treatement Demi ARO and Demi Resina**	23%	Tue 3/24/20	Mon 7/27/20	113days	Tue 3/24/20	Mon 7/27/20	🟢	0		541SS+225 h
223	25	**Install New Overhead Crane Units 5 and 6**	100%	Mon 3/23/20	Tue 4/14/20	12days	Mon 3/9/20	Fri 3/20/20	🟢	-25	11	224
224	25	**Certify Overhead Crane**	100%	Mon 5/4/20	Thu 5/7/20	3days	Wed 4/15/20	Sat 4/25/20	🟢	-12	223	
225	36	**Structural Repairs Overhead Crane Units 3-6**	0%	Mon 3/9/20	Wed 3/18/20	9days	Wed 4/22/20	Fri 5/1/20	🔴	44		226
226	36	**Certification Existing 50 Ton Overhead Crane Units 3-6**	0%	Wed 3/18/20	Sat 4/18/20	28days	Fri 5/1/20	Tue 6/2/20	🔴	45	225	
227		**Auxiliary Equipment Inspection and Repair**	**0%**	**Tue 1/7/20**	**Fri 7/31/20**	**187days**	**Tue 1/7/20**	**Fri 7/31/20**		**0**		
228		Corregir escape por flange de la boya de control en Heater 7	100%	Tue 1/7/20	Tue 1/7/20	1days	Tue 1/7/20	Tue 1/7/20	🟢	0		

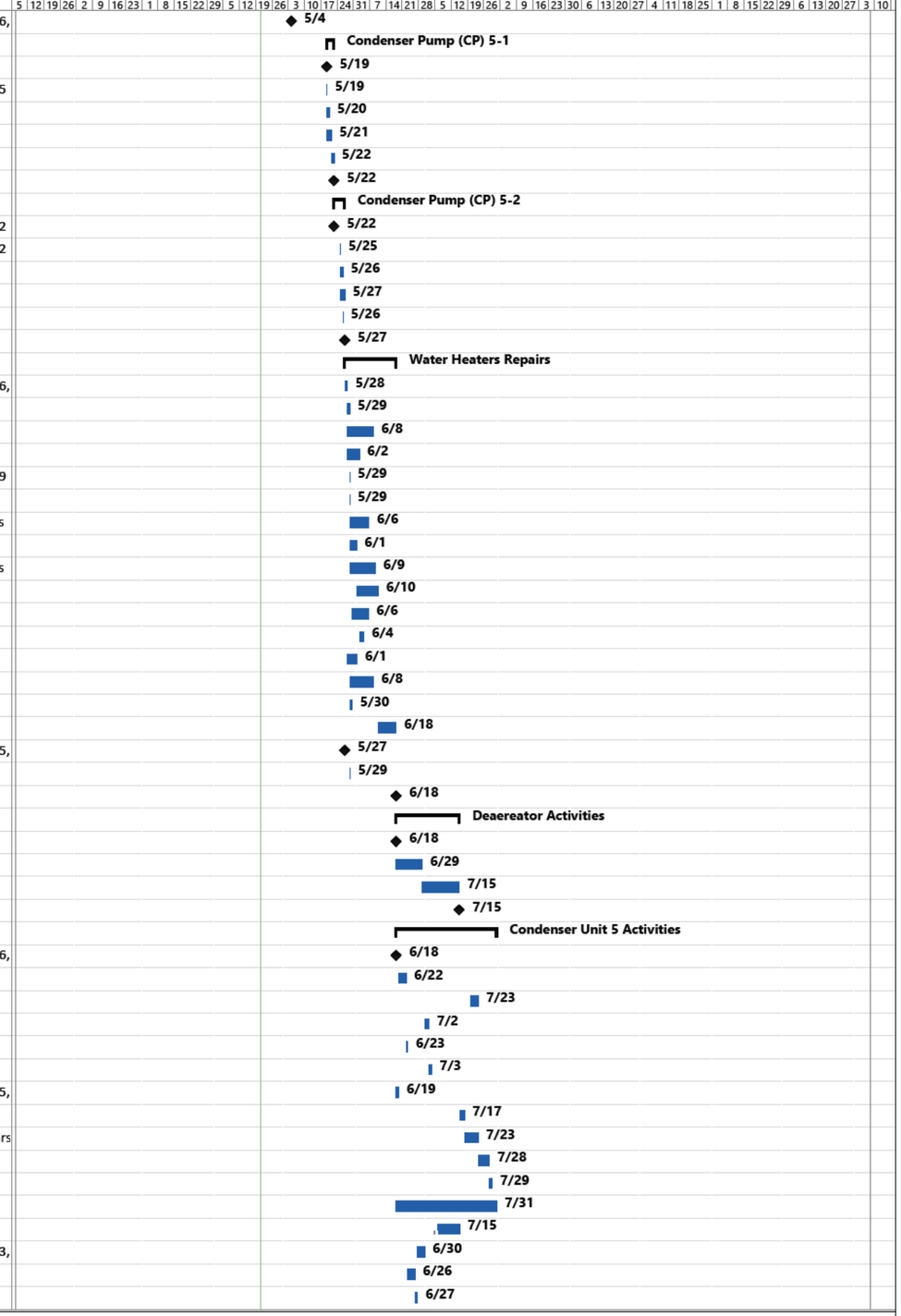


Date: Tue 4/21/20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

Costa Sur Damage Assessment and Repairs | UPDATE #1 (AS OF 04/21/2020)

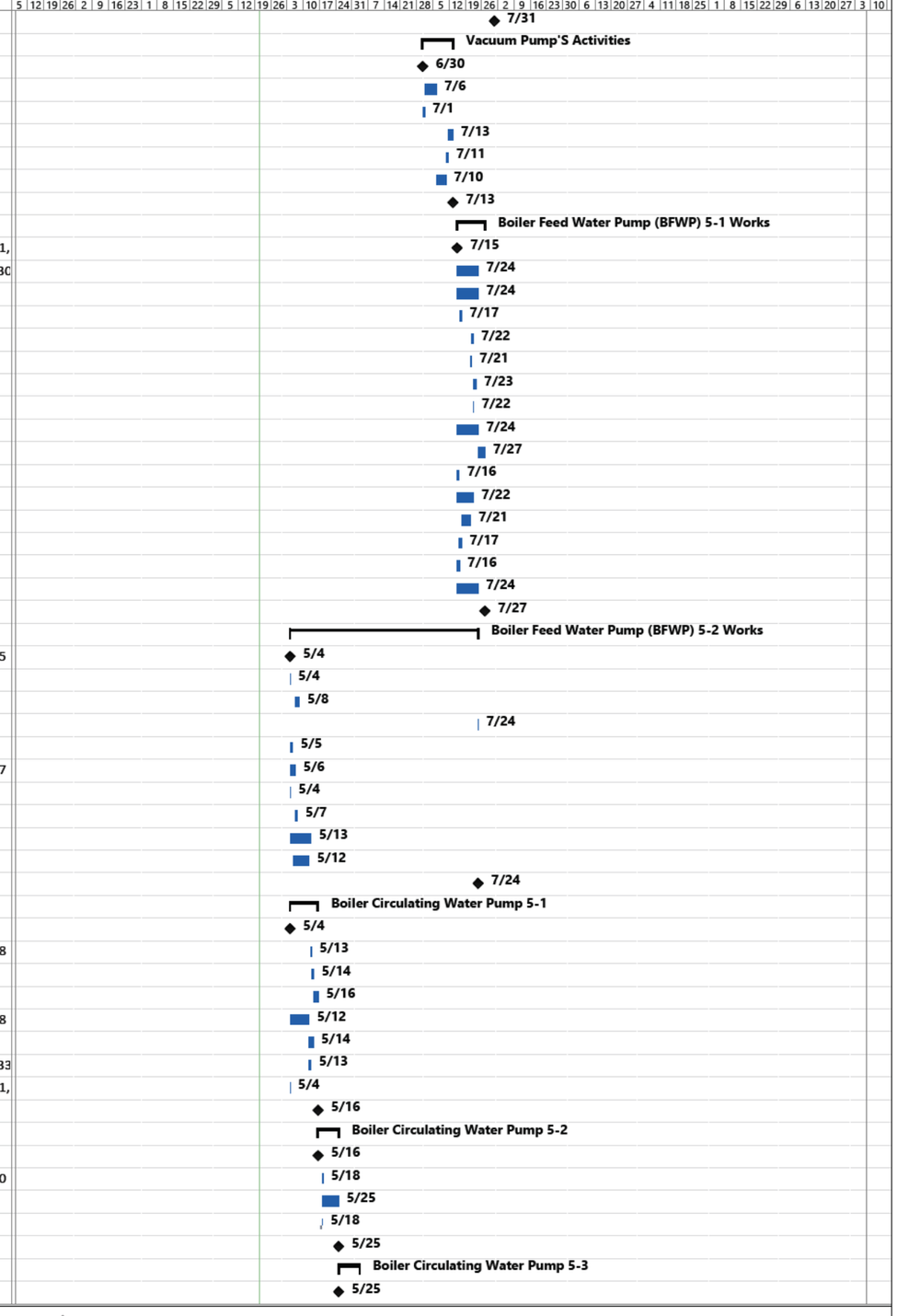
ID	Work Stream ID	Task Name	% Complete	Baseline1 Start	Baseline1 Finish	Rounded Duration	Start	Finish	Finish Variance KPI	Finish Variance Days	Predecessors	Successors
229		>> START AUXILIARIES WORKS	0%	Mon 5/4/20	Mon 5/4/20	0days	Mon 5/4/20	Mon 5/4/20		0		406,288,296,
230		**Condenser Pump (CP) 5-1**	**0%**	**Tue 5/19/20**	**Fri 5/22/20**	**3days**	**Tue 5/19/20**	**Fri 5/22/20**		**0**		
231		>> START CONDENSER PUMP (CP) 5-1 ACTIVITIES	0%	Tue 5/19/20	Tue 5/19/20	0days	Tue 5/19/20	Tue 5/19/20		0	514FS+40 hrs,	232,233
232		RED TAG CONDENSER PUMP 5-1	0%	Tue 5/19/20	Tue 5/19/20	0days	Tue 5/19/20	Tue 5/19/20		0	231	233,234,235
233		Inspect/Clean or Replace Condenser Pump 5-1 Motor Cooling Coils	0%	Tue 5/19/20	Wed 5/20/20	1days	Tue 5/19/20	Wed 5/20/20		0	232,231	236,235
234		Inspect Condenser Pump 5-1 Pit (Do Uranine Test)	0%	Tue 5/19/20	Thu 5/21/20	2days	Tue 5/19/20	Thu 5/21/20		0	232	241SS,235
235		Inspect / Clean Condenser Pump (CP) 5-1 Suction Valve	0%	Thu 5/21/20	Fri 5/22/20	1days	Thu 5/21/20	Fri 5/22/20		0	233,234,232	236
236		<< FINISH CONDENSER PUMP (CP) 5-1 ACTIVITIES	0%	Fri 5/22/20	Fri 5/22/20	0days	Fri 5/22/20	Fri 5/22/20		0	233,235	238,465
237		**Condenser Pump (CP) 5-2**	**0%**	**Fri 5/22/20**	**Wed 5/27/20**	**3days**	**Fri 5/22/20**	**Wed 5/27/20**		**0**		
238		>> START CONDENSER PUMP (CP) 5-2 ACTIVITIES	0%	Fri 5/22/20	Fri 5/22/20	0days	Fri 5/22/20	Fri 5/22/20		0	229,236	239,240,242
239		RED TAG CONDENSER PUMP 5-2	0%	Mon 5/25/20	Mon 5/25/20	0days	Mon 5/25/20	Mon 5/25/20		0	238	240,241,242
240		Inspect/Clean or Replace Condenser Pump 5-2 Motor Cooling Coils	0%	Mon 5/25/20	Tue 5/26/20	1days	Mon 5/25/20	Tue 5/26/20		0	238,239	243,242
241		Inspect Condenser Pump 5-2 Pit (Do Uranine Test)	0%	Mon 5/25/20	Wed 5/27/20	2days	Mon 5/25/20	Wed 5/27/20		0	239,234SS	243
242		Empaquetar la bomba de Condensado 5-2	0%	Tue 5/26/20	Tue 5/26/20	0days	Tue 5/26/20	Tue 5/26/20		0	238,240,239	243
243		<< FINISH CONDENSER PUMP (CP) 5-2 ACTIVITIES	0%	Wed 5/27/20	Wed 5/27/20	0days	Wed 5/27/20	Wed 5/27/20		0	240,241,242	261,465
244		**Water Heaters Repairs**	**0%**	**Wed 5/27/20**	**Thu 6/18/20**	**20days**	**Wed 5/27/20**	**Thu 6/18/20**		**0**		
245		RED TAG UNIT 5 WATER HEATERS	0%	Wed 5/27/20	Thu 5/28/20	1days	Wed 5/27/20	Thu 5/28/20		0	261	254,247,246,
246		Maintenance to Extraction 7 Valve Actuator (Lubricate)	0%	Thu 5/28/20	Fri 5/29/20	1days	Thu 5/28/20	Fri 5/29/20		0	245,257SS	250,249
247		Inspect & Repair Water Heater 7 Non-return Valve	0%	Thu 5/28/20	Mon 6/8/20	10days	Thu 5/28/20	Mon 6/8/20		0	245	263
248		Remplazar Valvula de Drenaje Alterno de Heater 4	0%	Thu 5/28/20	Tue 6/2/20	3days	Thu 5/28/20	Tue 6/2/20		0	245,261	256
249		Empaquetar La Reguladora de Drips del Heater 7	0%	Fri 5/29/20	Fri 5/29/20	0days	Fri 5/29/20	Fri 5/29/20		0	246	252,262,259
250		Disconnect Heater 7 Inlet Valve Actuator	0%	Fri 5/29/20	Fri 5/29/20	0days	Fri 5/29/20	Fri 5/29/20		0	261,246,245	258
251		Inspect & Repair Water Heater 6 Non-return Valve	0%	Fri 5/29/20	Sat 6/6/20	8days	Fri 5/29/20	Sat 6/6/20		0	259SS	253SS+3 hrs
252		Empaquetar bigote inferior HTR 7	0%	Fri 5/29/20	Mon 6/1/20	1days	Fri 5/29/20	Mon 6/1/20		0	249	263
253		Inspect & Repair Water Heater 5 Non-return Valve	0%	Fri 5/29/20	Tue 6/9/20	9days	Fri 5/29/20	Tue 6/9/20		0	251SS+3 hrs	254SS+3 hrs
254		Inspect & Repair Water Heater 4 Non-return Valve	0%	Mon 6/1/20	Wed 6/10/20	6days	Mon 6/1/20	Wed 6/10/20		0	253SS+3 hrs,2	260
255		Inspect / Repair Feed Water Heater 7	0%	Sat 5/30/20	Sat 6/6/20	6days	Sat 5/30/20	Sat 6/6/20		0	259	263
256		Remplazar Valvula de Drenaje Alterno de Heater 6	0%	Tue 6/2/20	Thu 6/4/20	1days	Tue 6/2/20	Thu 6/4/20		0	248	
257		Maintenance to Extraction 6 Valve Actuator (Lubricate)	0%	Thu 5/28/20	Mon 6/1/20	2days	Thu 5/28/20	Mon 6/1/20		0	261,245	246SS
258		Maintenance to Heater 7 Inlet Valve Motor Actuator	0%	Fri 5/29/20	Mon 6/8/20	5days	Fri 5/29/20	Mon 6/8/20		0	250	263
259		Do Hydrostatic Test to Feed Water Heater 7	0%	Fri 5/29/20	Sat 5/30/20	1days	Fri 5/29/20	Sat 5/30/20		0	249	251SS,255
260		Inspect & Repair Water Heater 5 Non-return Valve at Deareator	0%	Wed 6/10/20	Thu 6/18/20	7days	Wed 6/10/20	Thu 6/18/20		0	254	263
261		>> START UNIT 5 WATER HEATERS ACTIVITIES	0%	Wed 5/27/20	Wed 5/27/20	0days	Wed 5/27/20	Wed 5/27/20		0	514,243,229	250,248,245,
262		Empaquetar Valvula By-pass del Heater 7	0%	Fri 5/29/20	Fri 5/29/20	0days	Fri 5/29/20	Fri 5/29/20		0	249	
263		<< FINISH UNIT 5 FEED WATER HEATERS ACTIVITIES	0%	Thu 6/18/20	Thu 6/18/20	0days	Thu 6/18/20	Thu 6/18/20		0	255,252,260,2	476,265
264		**Deaereator Activities**	**0%**	**Thu 6/18/20**	**Wed 7/15/20**	**25days**	**Thu 6/18/20**	**Wed 7/15/20**		**0**		
265		>> START DEAREATOR ACTIVITIES	0%	Thu 6/18/20	Thu 6/18/20	0days	Thu 6/18/20	Thu 6/18/20		0	229,63FS+48 h	266,270
266		Inspect Dearetor	0%	Thu 6/18/20	Mon 6/29/20	10days	Thu 6/18/20	Mon 6/29/20		0	265	267,268
267		Replace bandejas	0%	Mon 6/29/20	Wed 7/15/20	15days	Mon 6/29/20	Wed 7/15/20		0	266	268
268		<< FINISH DEAREATOR ACTIVITIES	0%	Wed 7/15/20	Wed 7/15/20	0days	Wed 7/15/20	Wed 7/15/20		0	266,267	210,296
269		**Condenser Unit 5 Activities**	**0%**	**Thu 6/18/20**	**Fri 7/31/20**	**39days**	**Thu 6/18/20**	**Fri 7/31/20**		**0**		
270		>> START CONDENSER UNIT 5	0%	Thu 6/18/20	Thu 6/18/20	0days	Thu 6/18/20	Thu 6/18/20		0	514,229,265	271,285,276,
271		Inspect and Repair aisladoras reguladora de Hotwell	0%	Fri 6/19/20	Mon 6/22/20	1days	Fri 6/19/20	Mon 6/22/20		0	270,276	274,275
272		Inspect / Repair Condenser Sluice gate Piston (northeast side) [Replace R	0%	Mon 7/20/20	Thu 7/23/20	3days	Mon 7/20/20	Thu 7/23/20		0	278SS	279,280
273		Inspect Expansion Joint at Condenser Inlet	0%	Tue 6/30/20	Thu 7/2/20	2days	Tue 6/30/20	Thu 7/2/20		0	285,283	275
274		Open Condenser Unit 5	0%	Mon 6/22/20	Tue 6/23/20	0days	Mon 6/22/20	Tue 6/23/20		0	276,271	285,284
275		Maintenance to Hotwell Regulating Valve	0%	Thu 7/2/20	Fri 7/3/20	2days	Thu 7/2/20	Fri 7/3/20		0	273,271	282
276		RED TAG CONDENSER UNIT 5	0%	Thu 6/18/20	Fri 6/19/20	1days	Thu 6/18/20	Fri 6/19/20		0	270	274,271,285,
277		Inspect Condenser UNIT 5	0%	Wed 7/15/20	Fri 7/17/20	2days	Wed 7/15/20	Fri 7/17/20		0	282,283	278
278		Insp.Condenser Pump & Motor System(Sluice Gates)	0%	Fri 7/17/20	Thu 7/23/20	5days	Fri 7/17/20	Thu 7/23/20		0	277	279SS+24 hrs
279		Inst./Adjust Sluice Gate to Prevent Lateral Mov.	0%	Thu 7/23/20	Tue 7/28/20	4days	Thu 7/23/20	Tue 7/28/20		0	278SS+24 hrs,	280
280		Check Sluice Gate Operating-Close Condenser	0%	Tue 7/28/20	Wed 7/29/20	1days	Tue 7/28/20	Wed 7/29/20		0	279,272	286
281		Condenser Circulator Discharge Pipe Coating	0%	Thu 6/18/20	Fri 7/31/20	39days	Thu 6/18/20	Fri 7/31/20		0	270,23	286
282		Maintenance of Condenser Cathodic Protection	0%	Fri 7/3/20	Wed 7/15/20	11days	Fri 7/3/20	Wed 7/15/20		0	270,283,275	277
283		Clean Condenser UNIT 5	0%	Sat 6/27/20	Tue 6/30/20	3days	Sat 6/27/20	Tue 6/30/20		0	285	282,288,273,
284		Replace Hotwell Regulating Valve Tube	0%	Tue 6/23/20	Fri 6/26/20	2days	Tue 6/23/20	Fri 6/26/20		0	274,276	286,285
285		Erect Scaffolding at Condenser	0%	Fri 6/26/20	Sat 6/27/20	1days	Fri 6/26/20	Sat 6/27/20		0	270,274,276,2	273,283



Date: Tue 4/21/20

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress

ID	Work Stream ID	Task Name	% Complete	Baseline1 Start	Baseline1 Finish	Rounded Duration	Start	Finish	Finish Variance KPI	Finish Variance Days	Predecessors	Successors
286		<< FINISH CONDENSER UNIT 5 WORKS	0%	Fri 7/31/20	Fri 7/31/20	0days	Fri 7/31/20	Fri 7/31/20		0	280,281,284	
287		**Vacuum Pump'S Activities**	**0%**	**Tue 6/30/20**	**Mon 7/13/20**	**12days**	**Tue 6/30/20**	**Mon 7/13/20**		**0**		
288		>> START VACUUM PUMPS ACTIVITIES	0%	Tue 6/30/20	Tue 6/30/20	0days	Tue 6/30/20	Tue 6/30/20		0	229,283	290
289		Clean Vaccum Pump 5-2 Coolers	0%	Wed 7/1/20	Mon 7/6/20	5days	Wed 7/1/20	Mon 7/6/20		0	290	294,293
290		RED TAG VACUUM PUMPS 5-1 & 5-2	0%	Tue 6/30/20	Wed 7/1/20	0days	Tue 6/30/20	Wed 7/1/20		0	288	289,293
291		Cambiar Aceite a Reductor de Velocidad Vaccum Pump 5-1	0%	Sat 7/11/20	Mon 7/13/20	1days	Sat 7/11/20	Mon 7/13/20		0	292	294
292		Cambiar Aceite a Reductor de Velocidad Vaccum Pump 5-2	0%	Fri 7/10/20	Sat 7/11/20	1days	Fri 7/10/20	Sat 7/11/20		0	293	291,294
293		Clean Vaccum Pump 5-1 Coolers	0%	Mon 7/6/20	Fri 7/10/20	5days	Mon 7/6/20	Fri 7/10/20		0	289,290	294,292
294		<< FINISH VACUUM PUMPS ACTIVITIES	0%	Mon 7/13/20	Mon 7/13/20	0days	Mon 7/13/20	Mon 7/13/20		0	293,289,291,2	353,465
295		**Boiler Feed Water Pump (BFWP) 5-1 Works**	**0%**	**Wed 7/15/20**	**Mon 7/27/20**	**11days**	**Wed 7/15/20**	**Mon 7/27/20**		**0**		
296		>> START BOILER FEED WATER PUMP (BFWP 5-1)	0%	Wed 7/15/20	Wed 7/15/20	0days	Wed 7/15/20	Wed 7/15/20		0	491,514,229,2	297,298,311,
297		Open / Repair / Close Boiler Feed Water Regulating Valve Isolator Valve (	0%	Wed 7/15/20	Fri 7/24/20	6days	Wed 7/15/20	Fri 7/24/20		0	296	210,317FF,30
298		Open / Repair / Close Boiler Feed Water Regulating Valve Isolator Valve (	0%	Wed 7/15/20	Fri 7/24/20	6days	Wed 7/15/20	Fri 7/24/20		0	296	317FF,305
299		Maintenance to BFWP 5-1 Discharge Valve Actuator/ Lubricate	0%	Thu 7/16/20	Fri 7/17/20	1days	Thu 7/16/20	Fri 7/17/20		0	310	
300		Install BFWP 5-1 Termocouples	0%	Tue 7/21/20	Wed 7/22/20	0days	Tue 7/21/20	Wed 7/22/20		0	301	302,303
301		Install BFWP 5-1 Lub-Oil System	0%	Tue 7/21/20	Tue 7/21/20	1days	Tue 7/21/20	Tue 7/21/20		0	308	300
302		Aling & Couple BFWP 5-1 Zurn	0%	Wed 7/22/20	Thu 7/23/20	2days	Wed 7/22/20	Thu 7/23/20		0	300	312
303		Verify Feed Water to Economizer Thermocouple	0%	Wed 7/22/20	Wed 7/22/20	0days	Wed 7/22/20	Wed 7/22/20		0	300	312
304		Open / Repair / Close Boiler Feed Water Regulating Valve	0%	Wed 7/15/20	Fri 7/24/20	6days	Wed 7/15/20	Fri 7/24/20		0	296,63FS+24 h	312
305		Inspect / Lubricate & Test BFW Regulating Isolator Valves & Valves Opera	0%	Fri 7/24/20	Mon 7/27/20	1days	Fri 7/24/20	Mon 7/27/20		0	297,298	312,210
306		Remove BFWP 5-1 Termocouples	0%	Wed 7/15/20	Thu 7/16/20	1days	Wed 7/15/20	Thu 7/16/20		0	296	309
307		Replace Feed Water By pass Regulating Valve 5-1 & Water Tube to 6"	0%	Wed 7/15/20	Wed 7/22/20	6days	Wed 7/15/20	Wed 7/22/20		0	310SS	312
308		Maintenance to BFWP 5-1 Lub-Oil Cooler System/ Clean as Nec.	0%	Fri 7/17/20	Tue 7/21/20	3days	Fri 7/17/20	Tue 7/21/20		0	309	301
309		Remove BFWP 5-1 Lub-Oil System	0%	Thu 7/16/20	Fri 7/17/20	1days	Thu 7/16/20	Fri 7/17/20		0	306	308
310		Inspect/Lubricate & Test BFWP 5-1 Isolators of Regulating Valve Operato	0%	Wed 7/15/20	Thu 7/16/20	1days	Wed 7/15/20	Thu 7/16/20		0	296	299,307SS
311		Open / Repair / Close Boiler Feed Water Pump 5-1 Check Valve at Dischai	0%	Wed 7/15/20	Fri 7/24/20	6days	Wed 7/15/20	Fri 7/24/20		0	296	312
312		<< FINISH BOILER FEED WATER PUMP (BFWP) 5-1	0%	Mon 7/27/20	Mon 7/27/20	0days	Mon 7/27/20	Mon 7/27/20		0	302,311,303,3	476
313		**Boiler Feed Water Pump (BFWP) 5-2 Works**	**0%**	**Mon 5/4/20**	**Fri 7/24/20**	**74days**	**Mon 5/4/20**	**Fri 7/24/20**		**0**		
314		>> START BOILER FEED WATER PUMP (BFWP) 5-2	0%	Mon 5/4/20	Mon 5/4/20	0days	Mon 5/4/20	Mon 5/4/20		0	63,229	322,320,315
315		RED TAG BOILER FEED WATER PUMP (BFWP) 5-2	0%	Mon 5/4/20	Mon 5/4/20	0days	Mon 5/4/20	Mon 5/4/20		0	314	320,318
316		Install BFWP 5-2 Lub-Oil System	0%	Wed 5/6/20	Fri 5/8/20	1days	Wed 5/6/20	Fri 5/8/20		0	319	324
317		Inspect/Lubricate & Test BFWP 5-2 Isolators of Regulating Valve Actuator	0%	Fri 7/24/20	Fri 7/24/20	1days	Fri 7/24/20	Fri 7/24/20		0	298FF,297FF,3	324
318		Clean & Inspect Motors Pedestal / Inspect Anchol Bolts	0%	Mon 5/4/20	Tue 5/5/20	1days	Mon 5/4/20	Tue 5/5/20		0	315	
319		Maintenance to BFWP 5-2 Lub-Oil Cooler System/ Clean as Nec.	0%	Mon 5/4/20	Wed 5/6/20	2days	Mon 5/4/20	Wed 5/6/20		0	320	321,316,317
320		Remove BFWP 5-2 Lub-Oil System	0%	Mon 5/4/20	Mon 5/4/20	0days	Mon 5/4/20	Mon 5/4/20		0	314,315	321,319
321		Open BFWP 5-2 Recirculating Regulating Valve	0%	Wed 5/6/20	Thu 5/7/20	1days	Wed 5/6/20	Thu 5/7/20		0	320,319	
322		Open / Repair / Close Boiler Feed Water Pump 5-2 Check Valve at Dischai	0%	Mon 5/4/20	Wed 5/13/20	6days	Mon 5/4/20	Wed 5/13/20		0	314	324
323		Replace Feed Water By pass Regulating Valve & Water Tube to 6"	0%	Tue 5/5/20	Tue 5/12/20	6days	Tue 5/5/20	Tue 5/12/20		0	63FS+24 hrs,2	210
324		<< FINISH BOILER FEED WATER PUMP (BFWP 5-2)	0%	Fri 7/24/20	Fri 7/24/20	0days	Fri 7/24/20	Fri 7/24/20		0	316,322,317	209,212
325		**Boiler Circulating Water Pump 5-1**	**0%**	**Mon 5/4/20**	**Sat 5/16/20**	**12days**	**Mon 5/4/20**	**Sat 5/16/20**		**0**		
326		>> START BOILER CIRCULATING WATER PUMP 5-1 WORK	0%	Mon 5/4/20	Mon 5/4/20	0days	Mon 5/4/20	Mon 5/4/20		0	229,63FS+24 h	333
327		Replace Packing at BCWP's Inyection Water Regulating Valve (Big one)	0%	Wed 5/13/20	Wed 5/13/20	1days	Wed 5/13/20	Wed 5/13/20		0	332,333	210,334,328
328		Replace BCWP's Inyection Valve Isolator Valves	0%	Wed 5/13/20	Thu 5/14/20	1days	Wed 5/13/20	Thu 5/14/20		0	327,330	334
329		Destapar y/o remplazar Coils de Enfriamiento del OBB del motor (BCWP 5	0%	Thu 5/14/20	Sat 5/16/20	2days	Thu 5/14/20	Sat 5/16/20		0	331	334
330		Reemplazar BCWP 5-1	0%	Mon 5/4/20	Tue 5/12/20	5days	Mon 5/4/20	Tue 5/12/20		0	333	332,331,328
331		Inspect Mechanical Seal Cooling Water Lines (In/Out) : Replace if Necesar	0%	Tue 5/12/20	Thu 5/14/20	2days	Tue 5/12/20	Thu 5/14/20		0	333,330	334,329
332		Inspect/Lubricate & Test BCWP 5-1 Suction Valve Actuator	0%	Tue 5/12/20	Wed 5/13/20	0days	Tue 5/12/20	Wed 5/13/20		0	333,330	210,337SS,33
333		RED TAG BCWP 5-1	0%	Mon 5/4/20	Mon 5/4/20	0days	Mon 5/4/20	Mon 5/4/20		0	326	330,332,331,
334		<< FINISH BOILER CIRCULATING WATER PUMP 5-1 WORK	0%	Sat 5/16/20	Sat 5/16/20	0days	Sat 5/16/20	Sat 5/16/20		0	332,329,331,3	215,336
335		**Boiler Circulating Water Pump 5-2**	**0%**	**Sat 5/16/20**	**Mon 5/25/20**	**7days**	**Sat 5/16/20**	**Mon 5/25/20**		**0**		
336		>> START BOILER CIRCULATING WATER PUMP 5-2 WORK	0%	Sat 5/16/20	Sat 5/16/20	0days	Sat 5/16/20	Sat 5/16/20		0	63,334,229	339
337		Inspect/Lubricate & Test BCWP 5-2 Suction Valve Actuator	0%	Mon 5/18/20	Mon 5/18/20	1days	Mon 5/18/20	Mon 5/18/20		0	338SS,332SS	210,343,340
338		Destapar y/o remplazar Coils de Enfriamiento del OBB del motor (BCWP 5	0%	Mon 5/18/20	Mon 5/25/20	6days	Mon 5/18/20	Mon 5/25/20		0	339	337SS,340
339		RED TAG BCWP 5-2	0%	Sat 5/16/20	Mon 5/18/20	1days	Sat 5/16/20	Mon 5/18/20		0	336	338
340		<< FINISH BOILER CIRCULATING WATER PUMP 5-2 WORK	0%	Mon 5/25/20	Mon 5/25/20	0days	Mon 5/25/20	Mon 5/25/20		0	338,337	342,465
341		**Boiler Circulating Water Pump 5-3**	**0%**	**Mon 5/25/20**	**Wed 6/3/20**	**9days**	**Mon 5/25/20**	**Wed 6/3/20**		**0**		
342		>> START BOILER CIRCULATING WATER PUMP (BCWP) 5-3 WORKS	0%	Mon 5/25/20	Mon 5/25/20	0days	Mon 5/25/20	Mon 5/25/20		0	340,63,229	348,347

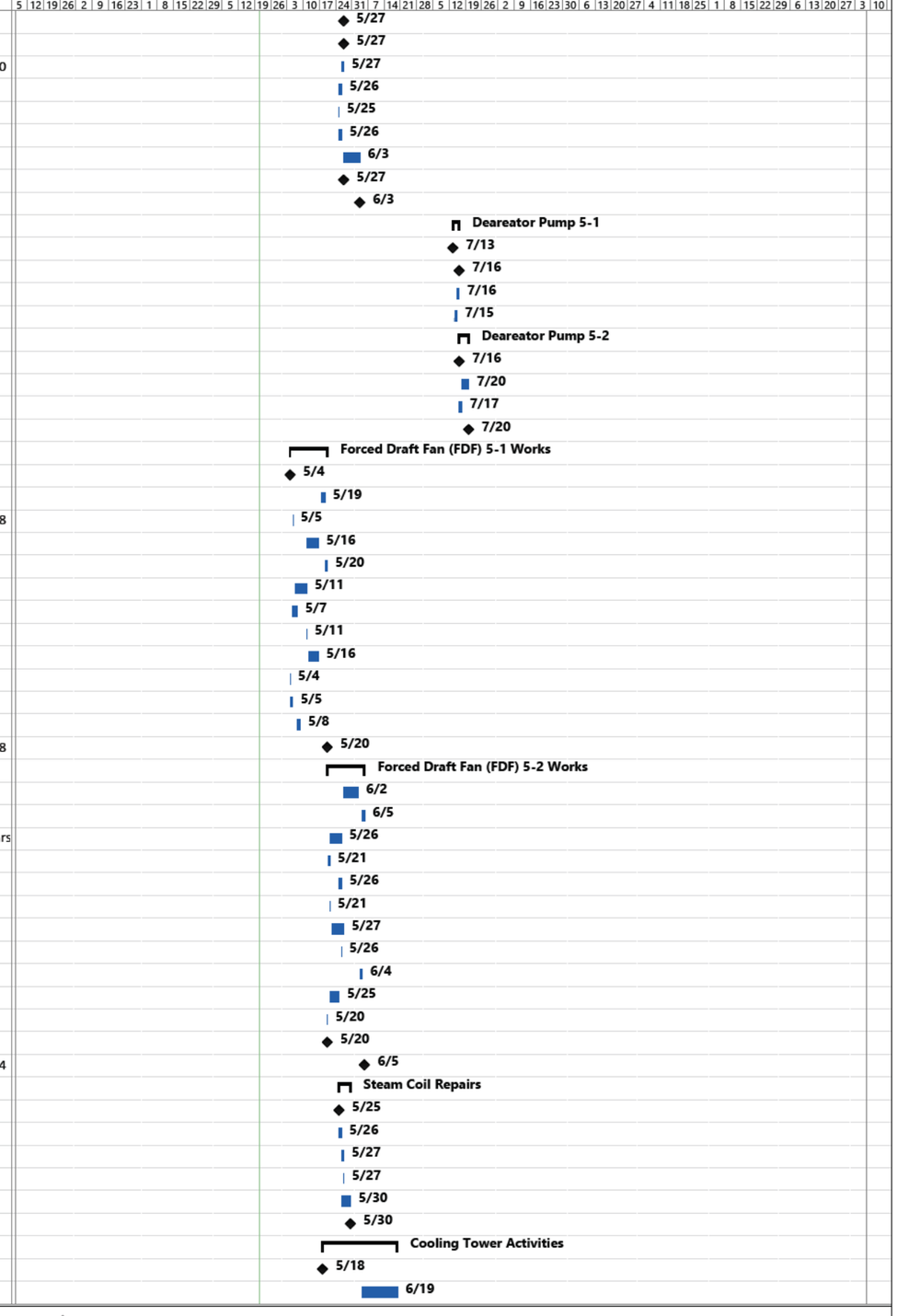


Date: Tue 4/21/20

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split			
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress			
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress			

Costa Sur Damage Assessment and Repairs | UPDATE #1 (AS OF 04/21/2020)

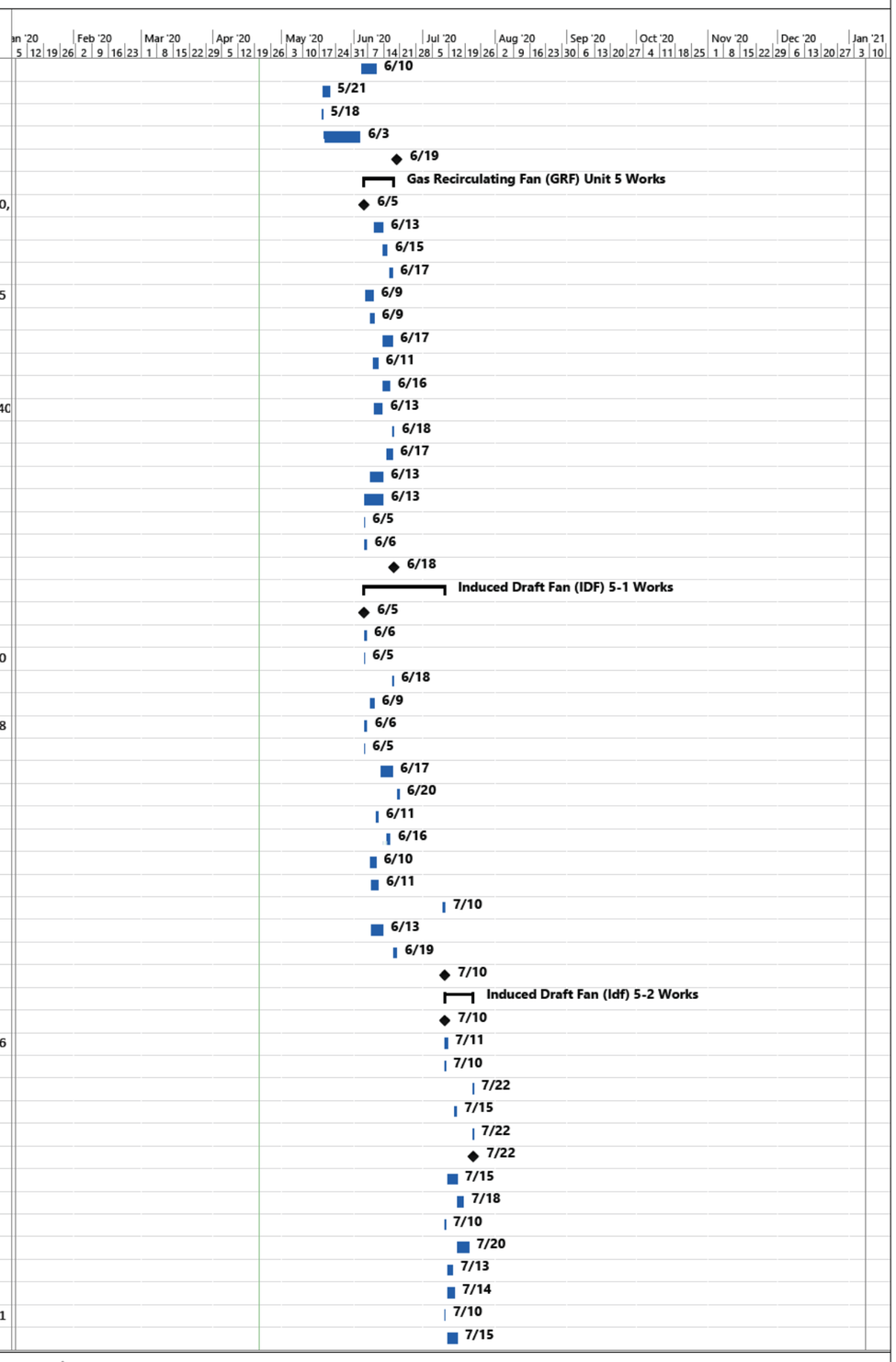
ID	Work Stream ID	Task Name	% Complete	Baseline1 Start	Baseline1 Finish	Rounded Duration	Start	Finish	Finish Variance KPI	Finish Variance Days	Predecessors	Successors
343		Empaquetar Valvula de succion de la BCWP 5-3	0%	Wed 5/27/20	Wed 5/27/20	0days	Wed 5/27/20	Wed 5/27/20		0	345,337	351,344SS
344		Inspect/Lubricate & Test BCWP 5-3 Suction Valve Actuator	0%	Wed 5/27/20	Wed 5/27/20	0days	Wed 5/27/20	Wed 5/27/20		0	343SS	210,351
345		Empaquetar ambas Valvulas de descarga de la BCWP 5-3	0%	Tue 5/26/20	Wed 5/27/20	1days	Tue 5/26/20	Wed 5/27/20		0	346	343,349,350
346		Destapar y/o remplazar Coils de Enfriamiento del OBB del motor (BCWP	0%	Mon 5/25/20	Tue 5/26/20	2days	Mon 5/25/20	Tue 5/26/20		0	348SS	351,345
347		RED TAG BCWP 5-3	0%	Mon 5/25/20	Mon 5/25/20	0days	Mon 5/25/20	Mon 5/25/20		0	342	348,350
348		Inspect Mechanical Seal Cooling Water Lines (In/Out) : Replace if Necesar	0%	Mon 5/25/20	Tue 5/26/20	2days	Mon 5/25/20	Tue 5/26/20		0	342,347	346SS
349		Clean, Paint & Identify Boiler Circulating Water Pump (BCWP) 5-3 & Mot	0%	Wed 5/27/20	Wed 6/3/20	4days	Wed 5/27/20	Wed 6/3/20		0	345	351
350		Calibrate BCWP 5-3 Suction Torque Switch	0%	Wed 5/27/20	Wed 5/27/20	0days	Wed 5/27/20	Wed 5/27/20		0	347,345	351
351		<< FINISH BOILER CIRCULATING WATER PUMP 5-3 WORK	0%	Wed 6/3/20	Wed 6/3/20	0days	Wed 6/3/20	Wed 6/3/20		0	350,343,344,3	465
352		**Deareator Pump 5-1**	**0%**	**Mon 7/13/20**	**Thu 7/16/20**	**2days**	**Mon 7/13/20**	**Thu 7/16/20**		**0**		
353		>> START DEAREATOR PUMP 5-1 ACTIVITIES	0%	Mon 7/13/20	Mon 7/13/20	0days	Mon 7/13/20	Mon 7/13/20		0	63,294,229	356
354		<< FINISH DEAREATOR PUMP 5-1 ACTIVITIES	0%	Thu 7/16/20	Thu 7/16/20	0days	Thu 7/16/20	Thu 7/16/20		0	355	358,465
355		Cambiar Aceite a Deareator Pump 5-1 / Limpiar Cooler Thrust Bearing	0%	Wed 7/15/20	Thu 7/16/20	1days	Wed 7/15/20	Thu 7/16/20		0	356	354
356		RED TAG DEAREATOR PUMP 5-1	0%	Mon 7/13/20	Wed 7/15/20	1days	Mon 7/13/20	Wed 7/15/20		0	353	355
357		**Deareator Pump 5-2**	**0%**	**Thu 7/16/20**	**Mon 7/20/20**	**4days**	**Thu 7/16/20**	**Mon 7/20/20**		**0**		
358		>> START DEAREATOR PUMP 5-2 ACTIVITIES	0%	Thu 7/16/20	Thu 7/16/20	0days	Thu 7/16/20	Thu 7/16/20		0	354,63	360
359		Cambiar Aceite a Deareator Pump 5-2 / Limpiar Cooler Thrust Bearing	0%	Fri 7/17/20	Mon 7/20/20	1days	Fri 7/17/20	Mon 7/20/20		0	360	361
360		RED TAG DEAREATOR PUMP 5-2	0%	Thu 7/16/20	Fri 7/17/20	1days	Thu 7/16/20	Fri 7/17/20		0	358	359
361		<< FINISH DEAREATOR PUMP 5-2 ACTIVITIES	0%	Mon 7/20/20	Mon 7/20/20	0days	Mon 7/20/20	Mon 7/20/20		0	359	465
362		**Forced Draft Fan (FDF) 5-1 Works**	**0%**	**Mon 5/4/20**	**Wed 5/20/20**	**15days**	**Mon 5/4/20**	**Wed 5/20/20**		**0**		
363		>> START FORCED DRAFT FAN (FDF) 5-1 WORK	0%	Mon 5/4/20	Mon 5/4/20	0days	Mon 5/4/20	Mon 5/4/20		0	63FS+24 hrs,2	372
364		Control Vanes (FDF's) Control Drives	0%	Mon 5/18/20	Tue 5/19/20	1days	Mon 5/18/20	Tue 5/19/20		0	366	367
365		Remove FDF 5-1 Thermocouples	0%	Tue 5/5/20	Tue 5/5/20	0days	Tue 5/5/20	Tue 5/5/20		0	373	379,366,368
366		Inspect/Repair (FDF 5-1) Inlet Vanes	0%	Mon 5/11/20	Sat 5/16/20	6days	Mon 5/11/20	Sat 5/16/20		0	374,365	364
367		Balance (FDF) 5-1 Fan Wheel (If Necesary)	0%	Tue 5/19/20	Wed 5/20/20	1days	Tue 5/19/20	Wed 5/20/20		0	374,364	375
368		Inspect Motor & Fan Bearings (FDF) 5-1	0%	Wed 5/6/20	Mon 5/11/20	4days	Wed 5/6/20	Mon 5/11/20		0	365	370,371
369		Clean FDF 5-1 Housing	0%	Tue 5/5/20	Thu 5/7/20	2days	Tue 5/5/20	Thu 5/7/20		0	373	374
370		Install FDF 5-1 Thermocouples	0%	Mon 5/11/20	Mon 5/11/20	0days	Mon 5/11/20	Mon 5/11/20		0	368	
371		Inspect, Repair or replace FDF 5-1Cooling Water Lines as necesary	0%	Tue 5/12/20	Sat 5/16/20	4days	Tue 5/12/20	Sat 5/16/20		0	368	
372		RED TAG FORCED DRAFT FAN (FDF) 5-1	0%	Mon 5/4/20	Mon 5/4/20	0days	Mon 5/4/20	Mon 5/4/20		0	363	373
373		Open Forced Draft Fan 5-1	0%	Mon 5/4/20	Tue 5/5/20	1days	Mon 5/4/20	Tue 5/5/20		0	372	365,369
374		Inspect Fan Housing & FDF 5-1 Wheel	0%	Thu 5/7/20	Fri 5/8/20	1days	Thu 5/7/20	Fri 5/8/20		0	369	366,367
375		<< FINISH FORCED DRAFT FAN (FDF) 5-1 WORK	0%	Wed 5/20/20	Wed 5/20/20	0days	Wed 5/20/20	Wed 5/20/20		0	367	379,465,388
376		**Forced Draft Fan (FDF) 5-2 Works**	**0%**	**Wed 5/20/20**	**Fri 6/5/20**	**15days**	**Wed 5/20/20**	**Fri 6/5/20**		**0**		
377		Inspect/Repair (FDF 5-2) Inlet Vanes	0%	Wed 5/27/20	Tue 6/2/20	6days	Wed 5/27/20	Tue 6/2/20		0	382,381	385
378		Balance (FDF) 5-2 Fan Wheel (If Necesary)	0%	Thu 6/4/20	Fri 6/5/20	1days	Thu 6/4/20	Fri 6/5/20		0	381,385	389
379		Inspect Motor & Fan Bearings (FDF) 5-2	0%	Thu 5/21/20	Tue 5/26/20	4days	Thu 5/21/20	Tue 5/26/20		0	365,375	383SS+10 hrs
380		Open Forced Draft Fan 5-2	0%	Wed 5/20/20	Thu 5/21/20	1days	Wed 5/20/20	Thu 5/21/20		0	387	386,382
381		Inspect Fan Housing & FDF 5-2 Wheel	0%	Mon 5/25/20	Tue 5/26/20	1days	Mon 5/25/20	Tue 5/26/20		0	386	377,378
382		Remove FDF 5-2 Thermocouples	0%	Thu 5/21/20	Thu 5/21/20	0days	Thu 5/21/20	Thu 5/21/20		0	380	377
383		Inspect, Repair or Replace FDF 5-2 Cooling Water Lines as necesary	0%	Fri 5/22/20	Wed 5/27/20	4days	Fri 5/22/20	Wed 5/27/20		0	379SS+10 hrs	
384		Install FDF 5-2 Thermocouples	0%	Tue 5/26/20	Tue 5/26/20	0days	Tue 5/26/20	Tue 5/26/20		0	379	
385		Control Vanes (FDF's) Control Drives	0%	Wed 6/3/20	Thu 6/4/20	1days	Wed 6/3/20	Thu 6/4/20		0	377	378
386		Clean FDF 5-2 Housing	0%	Thu 5/21/20	Mon 5/25/20	3days	Thu 5/21/20	Mon 5/25/20		0	380	381,391
387		RED TAG FORCED DRAFT FAN (FDF) 5-2	0%	Wed 5/20/20	Wed 5/20/20	0days	Wed 5/20/20	Wed 5/20/20		0	388	380
388		>> START FORCED DRAFT FAN (FDF) 5-2 WORK	0%	Wed 5/20/20	Wed 5/20/20	0days	Wed 5/20/20	Wed 5/20/20		0	63,375,229	387
389		<< FINISH FORCED DRAFT FAN (FDF) 5-2 WORK	0%	Fri 6/5/20	Fri 6/5/20	0days	Fri 6/5/20	Fri 6/5/20		0	378	406,465,424
390		**Steam Coil Repairs**	**0%**	**Mon 5/25/20**	**Sat 5/30/20**	**5days**	**Mon 5/25/20**	**Sat 5/30/20**		**0**		
391		>> START STEAM COIL ACTIVITIES	0%	Mon 5/25/20	Mon 5/25/20	0days	Mon 5/25/20	Mon 5/25/20		0	386	392
392		Erect Scaffolding at Steam Coils 5-1 & 5-2	0%	Mon 5/25/20	Tue 5/26/20	1days	Mon 5/25/20	Tue 5/26/20		0	391	393
393		Clean Steam Coils 5-1 & 5-2	0%	Tue 5/26/20	Wed 5/27/20	1days	Tue 5/26/20	Wed 5/27/20		0	392	394,395SS
394		Remove Scaffolding at Steam Coils 5-1 & 5-2	0%	Wed 5/27/20	Wed 5/27/20	0days	Wed 5/27/20	Wed 5/27/20		0	393	396
395		Maintenace to Steam Coil 5-1 & 5-2 Control Valves	0%	Tue 5/26/20	Sat 5/30/20	4days	Tue 5/26/20	Sat 5/30/20		0	393SS	396
396		<< FINISH STEAM COIL ACTIVITIES	0%	Sat 5/30/20	Sat 5/30/20	0days	Sat 5/30/20	Sat 5/30/20		0	394,395	
397		**Cooling Tower Activities**	**0%**	**Mon 5/18/20**	**Fri 6/19/20**	**30days**	**Mon 5/18/20**	**Fri 6/19/20**		**0**		
398		>> START UNIT 5 COOLING TOWER ACTIVITIES	0%	Mon 5/18/20	Mon 5/18/20	0days	Mon 5/18/20	Mon 5/18/20		0	514	401,402
399		Inspect Cooling Tower Fan 5-1 & 5-2/ Maintenance as Necesary	0%	Thu 6/4/20	Fri 6/19/20	9days	Thu 6/4/20	Fri 6/19/20		0	400SS	404



Date: Tue 4/21/20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

ID	Work Stream ID	Task Name	% Complete	Baseline1 Start	Baseline1 Finish	Rounded Duration	Start	Finish	Finish Variance KPI	Finish Variance Days	Predecessors	Successors
400		Inspeccionar Header de retorno	0%	Thu 6/4/20	Wed 6/10/20	4days	Thu 6/4/20	Wed 6/10/20		0	403	399SS,404
401		Clean Cooling Tower Basin	0%	Mon 5/18/20	Thu 5/21/20	3days	Mon 5/18/20	Thu 5/21/20		0	402,514,398	404,403SS
402		RED TAG UNIT 5 COOLING TOWER	0%	Mon 5/18/20	Mon 5/18/20	0days	Mon 5/18/20	Mon 5/18/20		0	398	401,403
403		Inspect/Repair Cooling Water Pump Check Valves	0%	Mon 5/18/20	Wed 6/3/20	15days	Mon 5/18/20	Wed 6/3/20		0	401SS,402	400,404
404		<< FINISH UNIT 5 COOLING TOWER ACTIVITIES	0%	Fri 6/19/20	Fri 6/19/20	0days	Fri 6/19/20	Fri 6/19/20		0	401,403,399,4	465
405		**Gas Recirculating Fan (GRF) Unit 5 Works**	**0%**	**Fri 6/5/20**	**Thu 6/18/20**	**11days**	**Fri 6/5/20**	**Thu 6/18/20**		**0**		
406		>> START GAS RECIRCULATION FAN (GRF) ACTIVITIES	0%	Fri 6/5/20	Fri 6/5/20	0days	Fri 6/5/20	Fri 6/5/20		0	63,389,229	175,419,420,
407		Repair GRF Fan Housing (If necesary)	0%	Wed 6/10/20	Sat 6/13/20	4days	Wed 6/10/20	Sat 6/13/20		0	410	417
408		Inspect & Lubricate GRF Coupling	0%	Sat 6/13/20	Mon 6/15/20	1days	Sat 6/13/20	Mon 6/15/20		0	415	422
409		Install Guards GRF	0%	Tue 6/16/20	Wed 6/17/20	1days	Tue 6/16/20	Wed 6/17/20		0	414	422
410		Open & Clean GRF Housing	0%	Sat 6/6/20	Tue 6/9/20	2days	Sat 6/6/20	Tue 6/9/20		0	126,420	407,413,415
411		GRF aspas dampers y probar abanicos	0%	Mon 6/8/20	Tue 6/9/20	2days	Mon 6/8/20	Tue 6/9/20		0	418SS	422
412		Inspect, Repair and/or Replace GRF Cooling Water Lines as necesary	0%	Sat 6/13/20	Wed 6/17/20	3days	Sat 6/13/20	Wed 6/17/20		0	415	416
413		Inspect GRF Anchor Bolts	0%	Tue 6/9/20	Thu 6/11/20	2days	Tue 6/9/20	Thu 6/11/20		0	410	414SS
414		Inspect and/or Repair GRF Pedestals	0%	Sat 6/13/20	Tue 6/16/20	2days	Sat 6/13/20	Tue 6/16/20		0	413SS,415FF	409
415		Maintenance to GRF Lub-Oil System	0%	Tue 6/9/20	Sat 6/13/20	3days	Tue 6/9/20	Sat 6/13/20		0	410	414FF,412,40
416		Install GRF Thermocouples	0%	Wed 6/17/20	Thu 6/18/20	0days	Wed 6/17/20	Thu 6/18/20		0	412	422
417		Control Vanes GRF Control Drive	0%	Mon 6/15/20	Wed 6/17/20	3days	Mon 6/15/20	Wed 6/17/20		0	407	422
418		Inspect and / or Repair GRF Air Damper System	0%	Mon 6/8/20	Sat 6/13/20	4days	Mon 6/8/20	Sat 6/13/20		0	421	422,411SS
419		Inspect / Repair GRF Outlet Damper as Necesary	0%	Fri 6/5/20	Sat 6/13/20	4days	Fri 6/5/20	Sat 6/13/20		0	421SS,81,406	163,422
420		RED TAG GAS RECIRCULATING FAN	0%	Fri 6/5/20	Fri 6/5/20	1days	Fri 6/5/20	Fri 6/5/20		0	406	410
421		Inspect / Repair GRF Inlet Damper as Necesary	0%	Fri 6/5/20	Sat 6/6/20	1days	Fri 6/5/20	Sat 6/6/20		0	81,406	418,419SS
422		<< FINISH GAS RECIRCULATING FAN ACTIVITIES	0%	Thu 6/18/20	Thu 6/18/20	0days	Thu 6/18/20	Thu 6/18/20		0	411,419,408,4	465
423		**Induced Draft Fan (IDF) 5-1 Works**	**0%**	**Fri 6/5/20**	**Fri 7/10/20**	**32days**	**Fri 6/5/20**	**Fri 7/10/20**		**0**		
424		>> START INDUCED DRAFT FAN (IDF) 5-1 WORKS	0%	Fri 6/5/20	Fri 6/5/20	0days	Fri 6/5/20	Fri 6/5/20		0	63,389,229	426
425		Remove/Clean & Store IDF 5-1 Vibration Sensors	0%	Fri 6/5/20	Sat 6/6/20	0days	Fri 6/5/20	Sat 6/6/20		0	426	430SS
426		RED TAG INDUCED DRAFT FAN (IDF) 5-1	0%	Fri 6/5/20	Fri 6/5/20	1days	Fri 6/5/20	Fri 6/5/20		0	424	425,429,430
427		Install IDF 5-1 Thermocouples	0%	Wed 6/17/20	Thu 6/18/20	0days	Wed 6/17/20	Thu 6/18/20		0	431	439SS,437
428		Inspect (IDF) 5-1 Anchor Bolts	0%	Mon 6/8/20	Tue 6/9/20	2days	Mon 6/8/20	Tue 6/9/20		0	429	435SS
429		Open & Clean IDF 5-1 Housing	0%	Fri 6/5/20	Sat 6/6/20	1days	Fri 6/5/20	Sat 6/6/20		0	430,426	428,436,438
430		Remove IDF 5-1 Thermocouples	0%	Fri 6/5/20	Fri 6/5/20	0days	Fri 6/5/20	Fri 6/5/20		0	425SS,426	429
431		Inspect, Repair and/or Replace IDF 5-1 Cooling Water Lines as necesary	0%	Fri 6/12/20	Wed 6/17/20	4days	Fri 6/12/20	Wed 6/17/20		0	436	427
432		Inspect & Lubricate IDF 5-1 Coupling	0%	Fri 6/19/20	Sat 6/20/20	1days	Fri 6/19/20	Sat 6/20/20		0	439	437
433		Install Guards (IDF) 5-1	0%	Wed 6/10/20	Thu 6/11/20	1days	Wed 6/10/20	Thu 6/11/20		0	435	440
434		Control Vanes (IDF 5-1) Control Drive	0%	Sat 6/13/20	Tue 6/16/20	2days	Sat 6/13/20	Tue 6/16/20		0	438	437
435		Inspect and/or Repair (IDF) 5-1 Pedestals	0%	Mon 6/8/20	Wed 6/10/20	2days	Mon 6/8/20	Wed 6/10/20		0	428SS	433,437
436		Maintenance to IDF 5-1 Lub-Oil System	0%	Mon 6/8/20	Thu 6/11/20	3days	Mon 6/8/20	Thu 6/11/20		0	429	431
437		Balance IDF 5-1 Fan Wheel (if necesary)	0%	Thu 7/9/20	Fri 7/10/20	1days	Thu 7/9/20	Fri 7/10/20		0	432,464,427,4	440
438		Repair IDF 5-1 Fan Housing (if necesary)	0%	Mon 6/8/20	Sat 6/13/20	5days	Mon 6/8/20	Sat 6/13/20		0	429	434
439		Install IDF 5-1 Vibration Sensors	0%	Thu 6/18/20	Fri 6/19/20	2days	Thu 6/18/20	Fri 6/19/20		0	427SS	432,437
440		<< TERMINAR ABANICO TIRO INDUCIDO (IDF) 5-1	0%	Fri 7/10/20	Fri 7/10/20	0days	Fri 7/10/20	Fri 7/10/20		0	437,433	465,442
441		**Induced Draft Fan (Idf) 5-2 Works**	**0%**	**Fri 7/10/20**	**Wed 7/22/20**	**11days**	**Fri 7/10/20**	**Wed 7/22/20**		**0**		
442		>> START INDUCED DRAFT FAN (IDF) 5-2 WORKS	0%	Fri 7/10/20	Fri 7/10/20	0days	Fri 7/10/20	Fri 7/10/20		0	63,229,440	455
443		Open & Clean IDF 5-2 Housing	0%	Fri 7/10/20	Sat 7/11/20	1days	Fri 7/10/20	Sat 7/11/20		0	451,455	449,453,456
444		Remove/Clean & Store IDF 5-2 Vibration Sensors	0%	Fri 7/10/20	Fri 7/10/20	0days	Fri 7/10/20	Fri 7/10/20		0	455	451SS
445		Inspect & Lubricate IDF 5-2 Coupling	0%	Wed 7/22/20	Wed 7/22/20	1days	Wed 7/22/20	Wed 7/22/20		0	458	
446		Install Guards (IDF) 5-2	0%	Tue 7/14/20	Wed 7/15/20	1days	Tue 7/14/20	Wed 7/15/20		0	454	447
447		Balance IDF 5-2 Fan Wheel (if necesary)	0%	Wed 7/22/20	Wed 7/22/20	1days	Wed 7/22/20	Wed 7/22/20		0	449,458,464,4	448
448		<< TERMINAR ABANICO TIRO INDUCIDO (IDF) 5-2	0%	Wed 7/22/20	Wed 7/22/20	0days	Wed 7/22/20	Wed 7/22/20		0	447	465
449		Repair IDF 5-2 Fan Housing (If Necesary)	0%	Sat 7/11/20	Wed 7/15/20	4days	Sat 7/11/20	Wed 7/15/20		0	443	447,459SS
450		Verificar abanico sistema enfriamiento aceite en IDF 5-2	0%	Wed 7/15/20	Sat 7/18/20	3days	Wed 7/15/20	Sat 7/18/20		0	456	
451		Remove IDF 5-2 Thermocouples	0%	Fri 7/10/20	Fri 7/10/20	0days	Fri 7/10/20	Fri 7/10/20		0	444SS,455	443
452		Inspect, Repair and/or Replace IDF 5-2 Cooling Water Lines as necesary	0%	Wed 7/15/20	Mon 7/20/20	4days	Wed 7/15/20	Mon 7/20/20		0	456	457
453		Inspect (IDF) 5-2 Anchor Bolts	0%	Sat 7/11/20	Mon 7/13/20	2days	Sat 7/11/20	Mon 7/13/20		0	443	454SS
454		Inspect and/or Repair (IDF) 5-2 Pedestals	0%	Sat 7/11/20	Tue 7/14/20	2days	Sat 7/11/20	Tue 7/14/20		0	453SS	446,447
455		RED TAG INDUCED DRAFT FAN (IDF) 5-2	0%	Fri 7/10/20	Fri 7/10/20	0days	Fri 7/10/20	Fri 7/10/20		0	442	443,444,451
456		Maintenance to IDF 5-2 Lub-Oil System	0%	Sat 7/11/20	Wed 7/15/20	3days	Sat 7/11/20	Wed 7/15/20		0	443	450,452

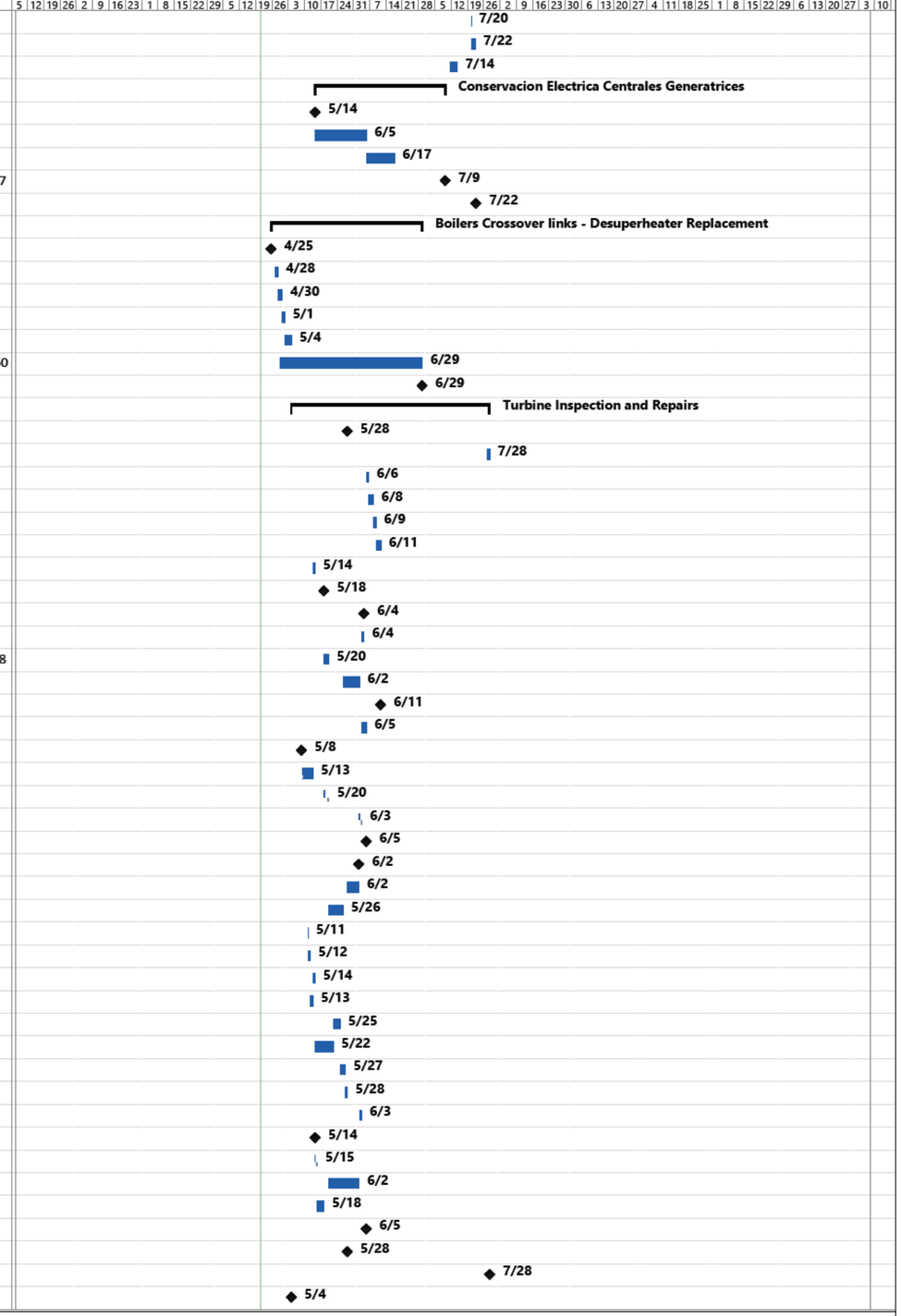


Date: Tue 4/21/20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

Costa Sur Damage Assessment and Repairs | UPDATE #1 (AS OF 04/21/2020)

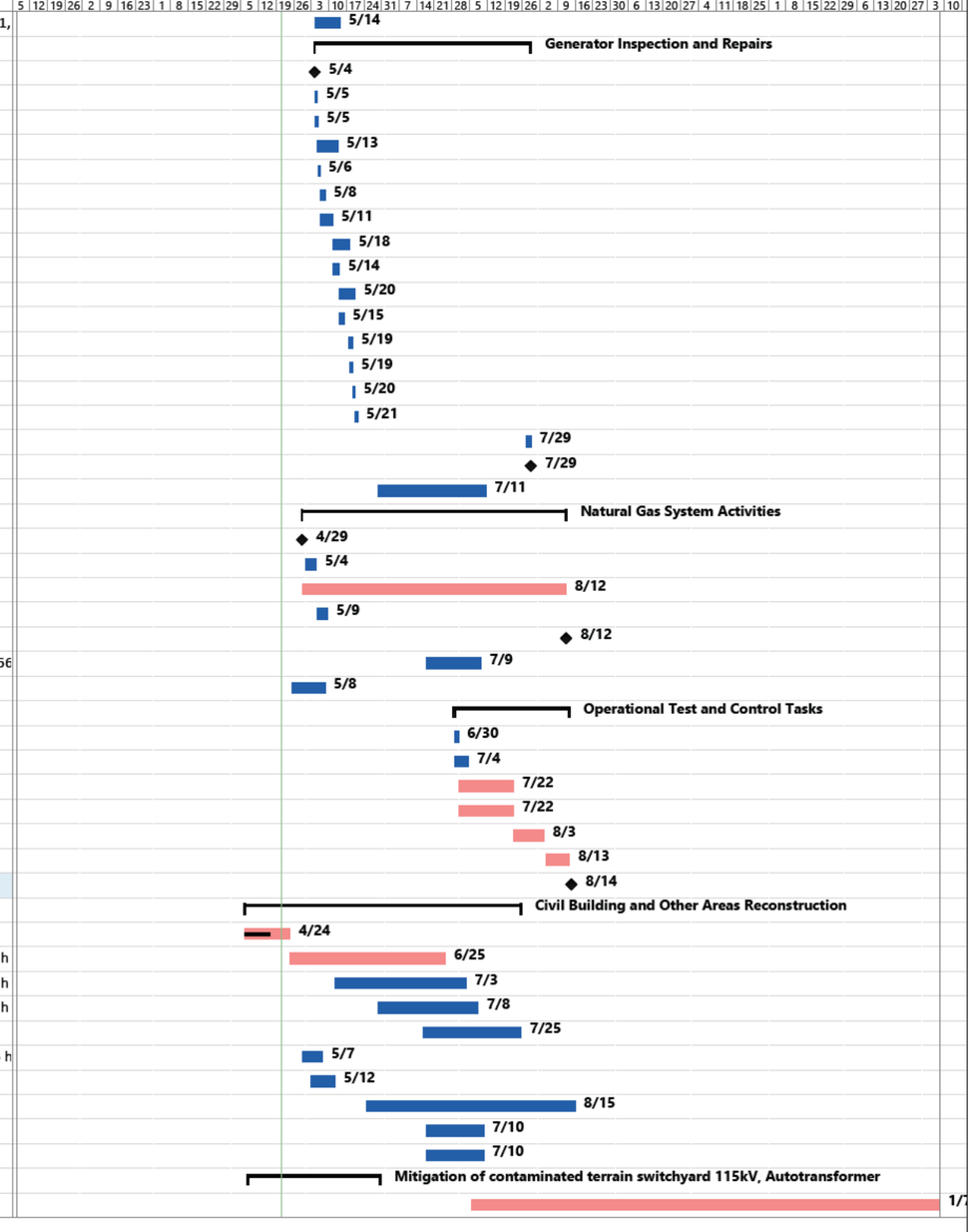
ID	Work Stream ID	Task Name	% Complete	Baseline1 Start	Baseline1 Finish	Rounded Duration	Start	Finish	Finish Variance KPI	Finish Variance Days	Predecessors	Successors
457		Install IDF 5-2 Thermocouples	0%	Mon 7/20/20	Mon 7/20/20	0days	Mon 7/20/20	Mon 7/20/20		0	452	447,458SS
458		Install IDF 5-2 Vibration Sensors	0%	Mon 7/20/20	Wed 7/22/20	2days	Mon 7/20/20	Wed 7/22/20		0	457SS	445,447
459		Control Vanes (IDF 5-2) Control Drive	0%	Sat 7/11/20	Tue 7/14/20	3days	Sat 7/11/20	Tue 7/14/20		0	449SS	447
460		**Conservacion Electrica Centrales Generatrices**	**0%**	**Thu 5/14/20**	**Thu 7/9/20**	**50days**	**Thu 5/14/20**	**Thu 7/9/20**		**0**		
461		>> COMIENZO DE TRABAJOS DE CONSERVACION ELECTRICA CENTRALES C	0%	Thu 5/14/20	Thu 5/14/20	0days	Thu 5/14/20	Thu 5/14/20		0	514,63	462
462		Inspect and Repair Breakers 4160 Volts AND 480	0%	Thu 5/14/20	Fri 6/5/20	13days	Thu 5/14/20	Fri 6/5/20		0	461	464,463
463		Inspect and Repir Barras A, B y Emergencia de Unidad 5	0%	Fri 6/5/20	Wed 6/17/20	6days	Fri 6/5/20	Wed 6/17/20		0	462	464,540
464		<< FIN DE TRABAJOS DE CONSERVACION ELECTRICA CENTRALES GENERA	0%	Thu 7/9/20	Thu 7/9/20	0days	Thu 7/9/20	Thu 7/9/20		0	462,463,540	447,476,437
465		<< FINISH AUXILIARIES WORK	0%	Wed 7/22/20	Wed 7/22/20	0days	Wed 7/22/20	Wed 7/22/20		0	351,294,243,4	
466	**30**	**Boilers Crossover links - Desuperheater Replacement**	**0%**	**Sat 4/18/20**	**Mon 6/29/20**	**58days**	**Sat 4/25/20**	**Mon 6/29/20**		**0**		
467	30	>>START BOILER SUPER HEATERS REPAIR	0%	Sat 4/18/20	Sat 4/18/20	0days	Sat 4/25/20	Sat 4/25/20		7	73	468
468	30	Inspect / Repair Super Heater Spray Valve (North Side)	0%	Mon 4/20/20	Tue 4/21/20	1days	Mon 4/27/20	Tue 4/28/20		7	467	469
469	30	Replace By-pass Valve Super Heater Spray Norte	0%	Tue 4/21/20	Thu 4/23/20	1days	Tue 4/28/20	Thu 4/30/20		7	468	473,470
470	30	Inspect primer drenaje despues de reguladora de Reheater Spray Norte	0%	Thu 4/23/20	Fri 4/24/20	1days	Thu 4/30/20	Fri 5/1/20		7	469	473,471
471	30	Inspect Segundo drenaje del Super Heater Spray Norte	0%	Fri 4/24/20	Mon 4/27/20	1days	Fri 5/1/20	Mon 5/4/20		7	470	473
472	30	Install Crossover Link Desuperheater	0%	Wed 4/29/20	Mon 6/29/20	55days	Wed 4/29/20	Mon 6/29/20		0	81	473,60SS+60
473	30	>>FINISH BOILER SUPER HEATERS ACTIVITIES	0%	Mon 6/29/20	Mon 6/29/20	0days	Mon 6/29/20	Mon 6/29/20		0	470,471,469,4	209
474		**Turbine Inspection and Repairs**	**0%**	**Mon 5/4/20**	**Tue 7/28/20**	**77days**	**Mon 5/4/20**	**Tue 7/28/20**		**0**		
475		>> START TURBINE CONTROL VALVES ACTIVITIES	0%	Thu 5/28/20	Thu 5/28/20	0days	Thu 5/28/20	Thu 5/28/20		0	511,514SS+56	495
476		TURBINE ON TURNING GEAR (START UP)	0%	Mon 7/27/20	Tue 7/28/20	1days	Mon 7/27/20	Tue 7/28/20		0	494,493,483,4	512,531SS
477		Remove Turbine Full-Arc By-Pass Mechanism System	0%	Fri 6/5/20	Sat 6/6/20	1days	Fri 6/5/20	Sat 6/6/20		0	510	478
478		Clean & Inspect Full-Arc By-Pass Mechanism	0%	Sat 6/6/20	Mon 6/8/20	1days	Sat 6/6/20	Mon 6/8/20		0	477	479
479		Repair Full-Arc By-Pass Mechanism If Necesary	0%	Mon 6/8/20	Tue 6/9/20	1days	Mon 6/8/20	Tue 6/9/20		0	478	480
480		Assemble & Install Full-Arc By-Pass Mechanism	0%	Tue 6/9/20	Thu 6/11/20	2days	Tue 6/9/20	Thu 6/11/20		0	479	487
481		Empaquetar trampas before y after lado sur	0%	Wed 5/13/20	Thu 5/14/20	1days	Wed 5/13/20	Thu 5/14/20		0	490	511
482		>> START TURBINE LUB-OIL SYSTEM WORK	0%	Mon 5/18/20	Mon 5/18/20	0days	Mon 5/18/20	Mon 5/18/20		0	514FS+24 hrs	485
483		<< FINISH TURBINE LUB-OIL SYSTEM WORK	0%	Thu 6/4/20	Thu 6/4/20	0days	Thu 6/4/20	Thu 6/4/20		0	484	476
484		Turbine Lub-Oil Sytem Verification	0%	Wed 6/3/20	Thu 6/4/20	1days	Wed 6/3/20	Thu 6/4/20		0	505	483
485		Drain Turbine Main Oil Tank	0%	Mon 5/18/20	Wed 5/20/20	2days	Mon 5/18/20	Wed 5/20/20		0	482	486,496,508
486		Clean Turbine Main Oil Tank and Bowser	0%	Tue 5/26/20	Tue 6/2/20	6days	Tue 5/26/20	Tue 6/2/20		0	485,496	505
487		<<FINISH TURBINE FULL ARC BY-PASS MECHANISM WORK	0%	Thu 6/11/20	Thu 6/11/20	0days	Thu 6/11/20	Thu 6/11/20		0	480	
488		Install Front Standard Cover	0%	Wed 6/3/20	Fri 6/5/20	2days	Wed 6/3/20	Fri 6/5/20		0	492,508	493
489		>> START TURBINE STOP VALVES REPAIRS	0%	Fri 5/8/20	Fri 5/8/20	0days	Fri 5/8/20	Fri 5/8/20		0	514SS+48 hrs	490,497
490		Verify Stop Valves Operational Function	0%	Fri 5/8/20	Wed 5/13/20	4days	Fri 5/8/20	Wed 5/13/20		0	489	481,511
491		Uncouple Zurn and Inspect	0%	Mon 5/18/20	Wed 5/20/20	3days	Mon 5/18/20	Wed 5/20/20		0	509	296,492
492		Test Zurn for Operation	0%	Tue 6/2/20	Wed 6/3/20	1days	Tue 6/2/20	Wed 6/3/20		0	491,508	488,493FF
493		<< FINISH TURBINE FRONT STANDARD WORKS	0%	Fri 6/5/20	Fri 6/5/20	0days	Fri 6/5/20	Fri 6/5/20		0	488,492FF	476,510
494		<< FINISH TURBINE CONTROL VALVES WORKS	0%	Tue 6/2/20	Tue 6/2/20	0days	Tue 6/2/20	Tue 6/2/20		0	495	476
495		Verify Control Valves Operational Function / Calibrate if Necesary	0%	Thu 5/28/20	Tue 6/2/20	4days	Thu 5/28/20	Tue 6/2/20		0	475	494
496		Clean Main Oil Tank Coolers	0%	Wed 5/20/20	Tue 5/26/20	4days	Wed 5/20/20	Tue 5/26/20		0	485	486
497		Instalar Andamio para trabajos en la "U" de la Turbina	0%	Mon 5/11/20	Mon 5/11/20	0days	Mon 5/11/20	Mon 5/11/20		0	489	498
498		Remover aislacion en "U" de la Turbina	0%	Mon 5/11/20	Tue 5/12/20	1days	Mon 5/11/20	Tue 5/12/20		0	497	500
499		Realizar pruebas no-destructivas a soldaduras de la "U"de la Turbina	0%	Wed 5/13/20	Thu 5/14/20	1days	Wed 5/13/20	Thu 5/14/20		0	500	501,502
500		Remover Gamma Plugs para pruebas no-destructivas	0%	Tue 5/12/20	Wed 5/13/20	1days	Tue 5/12/20	Wed 5/13/20		0	498	499
501		Preparar e Instalar Gamma Plugs en "U"de la Turbina	0%	Fri 5/22/20	Mon 5/25/20	1days	Fri 5/22/20	Mon 5/25/20		0	499,502	503
502		Reparar soldadura de "U" de la Turbina (de ser necesario)	0%	Thu 5/14/20	Fri 5/22/20	4days	Thu 5/14/20	Fri 5/22/20		0	499	501
503		Instalar aislacion en la "U" de la Turbina	0%	Mon 5/25/20	Wed 5/27/20	2days	Mon 5/25/20	Wed 5/27/20		0	501	504
504		Remover andamio instalado para trabajos en la "U" de la Turbina	0%	Wed 5/27/20	Thu 5/28/20	0days	Wed 5/27/20	Thu 5/28/20		0	503	511
505		Fill Turbine Main Oil Tank & Bowser	0%	Tue 6/2/20	Wed 6/3/20	1days	Tue 6/2/20	Wed 6/3/20		0	486	484
506		>> START TURBINE FRONT STANDARD WORKS	0%	Thu 5/14/20	Thu 5/14/20	0days	Thu 5/14/20	Thu 5/14/20		0	514	507
507		Open & Remove Front Standard Cover	0%	Thu 5/14/20	Fri 5/15/20	1days	Thu 5/14/20	Fri 5/15/20		0	506	509
508		Correct Turbine Front Standard Oil Leaks	0%	Wed 5/20/20	Tue 6/2/20	12days	Wed 5/20/20	Tue 6/2/20		0	514SS+72 hrs,	488,492
509		Uncouple G Coupling and Inspect	0%	Fri 5/15/20	Mon 5/18/20	2days	Fri 5/15/20	Mon 5/18/20		0	507	491
510		>> START TURBINE FULL-ARC BY-PASS MECHANISM WORK	0%	Fri 6/5/20	Fri 6/5/20	0days	Fri 6/5/20	Fri 6/5/20		0	514,493	477
511		<< FINISH TURBINE STOP VALVE ACTIVITIES	0%	Thu 5/28/20	Thu 5/28/20	0days	Thu 5/28/20	Thu 5/28/20		0	504,490,481	475
512		<< FINISH TURBINE TURNING GEAR ACTIVITIES	0%	Tue 7/28/20	Tue 7/28/20	0days	Tue 7/28/20	Tue 7/28/20		0	476	
513		>> START TURBINE TURNING GEAR ACTIVITIES	0%	Mon 5/4/20	Mon 5/4/20	0days	Mon 5/4/20	Mon 5/4/20		0	229	514SS



Date: Tue 4/21/20

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split	
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress	
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress	

ID	Work Stream ID	Task Name	% Complete	Baseline1 Start	Baseline1 Finish	Rounded Duration	Start	Finish	Finish Variance KPI	Finish Variance Days	Predecessors	Successors
514		TURBINE ON TURNING GEAR (COOLDOWN)	0%	Mon 5/4/20	Thu 5/14/20	10days	Mon 5/4/20	Thu 5/14/20		0	513SS	296,270,461,
515		**Generator Inspection and Repairs**	**0%**	**Mon 5/4/20**	**Wed 7/29/20**	**78days**	**Mon 5/4/20**	**Wed 7/29/20**		**0**		
516		>> START GENERATOR UNIT 5 WORKS	0%	Mon 5/4/20	Mon 5/4/20	0days	Mon 5/4/20	Mon 5/4/20		0	229	517
517		Degas Generator Unit #5	0%	Mon 5/4/20	Tue 5/5/20	1days	Mon 5/4/20	Tue 5/5/20		0	516,229	518SS,519
518		Disassemble & Remove Generator Lagging	0%	Mon 5/4/20	Tue 5/5/20	1days	Mon 5/4/20	Tue 5/5/20		0	517SS	520
519		Remove / Clean & Install Generator Hydrogen Coolers	0%	Tue 5/5/20	Wed 5/13/20	5days	Tue 5/5/20	Wed 5/13/20		0	517	526
520		Remove Exciter Lagging	0%	Tue 5/5/20	Wed 5/6/20	0days	Tue 5/5/20	Wed 5/6/20		0	518	521,522
521		Remove Brush Holder Rigging & Steady Bearing	0%	Wed 5/6/20	Fri 5/8/20	2days	Wed 5/6/20	Fri 5/8/20		0	520	
522		Limpieza de cables de Excitacion	0%	Wed 5/6/20	Mon 5/11/20	3days	Wed 5/6/20	Mon 5/11/20		0	520	524,523
523		Inspect Generator Excitation System	0%	Mon 5/11/20	Mon 5/18/20	4days	Mon 5/11/20	Mon 5/18/20		0	522	528
524		Install Brush Holder Rigging & Steady Bearing	0%	Mon 5/11/20	Thu 5/14/20	2days	Mon 5/11/20	Thu 5/14/20		0	522	525,528
525		TURBO/GEN SET ON TURNING GEAR	0%	Thu 5/14/20	Wed 5/20/20	4days	Thu 5/14/20	Wed 5/20/20		0	524	526SS
526		Generator Air Test	0%	Thu 5/14/20	Fri 5/15/20	4days	Thu 5/14/20	Fri 5/15/20		0	519,525SS	527
527		Fill Generator with H2	0%	Mon 5/18/20	Tue 5/19/20	1days	Mon 5/18/20	Tue 5/19/20		0	526	531
528		Make-Up Exciter Electrical Connection	0%	Mon 5/18/20	Tue 5/19/20	1days	Mon 5/18/20	Tue 5/19/20		0	523,524	529
529		Install Generator Lagging	0%	Tue 5/19/20	Wed 5/20/20	0days	Tue 5/19/20	Wed 5/20/20		0	528	530
530		Gas Generator	0%	Wed 5/20/20	Thu 5/21/20	1days	Wed 5/20/20	Thu 5/21/20		0	529	532
531		Generator Start Up	0%	Mon 7/27/20	Wed 7/29/20	2days	Mon 7/27/20	Wed 7/29/20		0	527,476SS	532
532		<< FINISH GENERATOR UNIT 5 WORKS	0%	Wed 7/29/20	Wed 7/29/20	0days	Wed 7/29/20	Wed 7/29/20		0	531,530	
533	42	**Inspection on High Energy Supports (Pipe Hangers)**	0%	Fri 5/29/20	Sat 7/11/20	39days	Fri 5/29/20	Sat 7/11/20		0	60SS+150 hrs	
534	**47**	**Natural Gas System Activities**	**0%**	**Tue 4/28/20**	**Wed 8/12/20**	**95days**	**Wed 4/29/20**	**Wed 8/12/20**		**0**		**549**
535	47	>> START NATURAL GAS SYSTEM ACTIVITIES	0%	Tue 4/28/20	Tue 4/28/20	0days	Wed 4/29/20	Wed 4/29/20		1	81,63	536,537
536	47	Inspect Unit 5 Natural Gas System (PRV-3)	0%	Thu 4/30/20	Mon 5/4/20	2days	Thu 4/30/20	Mon 5/4/20		0	535	538
537	47	Repair on Structural Support Natural Gas Line Pipe	0%	Wed 4/29/20	Wed 8/12/20	95days	Wed 4/29/20	Wed 8/12/20		0	535	539
538	47	Clean PRV3 Filter / Replace if Necesary	0%	Tue 5/5/20	Sat 5/9/20	3days	Tue 5/5/20	Sat 5/9/20		0	536	539
539	47	<< FINISH NATURAL GAS SYSTEM ACTIVITIES	0%	Wed 8/12/20	Wed 8/12/20	0days	Wed 8/12/20	Wed 8/12/20		0	538,537	216,211
540	48	**Inspection and Test MPT and Repair Dikes**	0%	Wed 6/17/20	Thu 7/9/20	20days	Wed 6/17/20	Thu 7/9/20		0	463	464,559SS,56
541	49	**Reestablish of Potable Water System**	0%	Sat 4/25/20	Fri 5/8/20	12days	Sat 4/25/20	Fri 5/8/20		0	222SS+225 hrs	
542		**Operational Test and Control Tasks**	**0%**	**Mon 6/29/20**	**Fri 8/14/20**	**42days**	**Mon 6/29/20**	**Thu 8/13/20**		**-1**		
543	50	Reestablish of Compressed Gases, Sulfuric Acid, CO2 and Caustic Soda Syste	0%	Mon 6/29/20	Tue 6/30/20	2days	Mon 6/29/20	Tue 6/30/20		0	544SS	
544	51	Blow off Pumps Test	0%	Mon 6/29/20	Sat 7/4/20	6days	Mon 6/29/20	Sat 7/4/20		0		543SS
545	44	DCS Foxboro Inspection - Boilers	0%	Wed 7/1/20	Wed 7/22/20	19days	Wed 7/1/20	Wed 7/22/20		0		546SS
546	45	Mark VI Turbines Inspection	0%	Wed 7/1/20	Wed 7/22/20	19days	Wed 7/1/20	Wed 7/22/20		0	545SS	547
547	46	Trip Test Boilers and Turbine	0%	Wed 7/22/20	Mon 8/3/20	11days	Wed 7/22/20	Mon 8/3/20		0	546	548
548	56	Unit 5 Star Up and Commissioning Test	0%	Tue 8/4/20	Fri 8/14/20	9days	Tue 8/4/20	Thu 8/13/20		-1	547,54,55,56,	549
549		**Unit 5 Start Up Completed**	**0%**	**Fri 8/14/20**	**Fri 8/14/20**	**0days**	**Fri 8/14/20**	**Fri 8/14/20**		**0**	**548,534,61,57**	
550		**Civil Building and Other Areas Reconstruction**	**4%**	**Mon 4/6/20**	**Mon 7/20/20**	**100days**	**Mon 4/6/20**	**Sat 7/25/20**		**5**		
551		Procurement for Civil Works	54%	Mon 4/6/20	Sat 4/18/20	17days	Mon 4/6/20	Fri 4/24/20		6	11SS+13.47 da	552
552	26	Civil and Interior Works at Unit 5 Control Room	0%	Mon 4/20/20	Fri 6/19/20	55days	Fri 4/24/20	Thu 6/25/20		6	551	553SS+150 h
553	27	Compressor Room Demolition and Reconstruction	0%	Thu 5/7/20	Sat 6/27/20	47days	Tue 5/12/20	Fri 7/3/20		6	552SS+150 hrs	554SS+150 h
554	28	Engineering Room Demolition and Reconstruction	0%	Mon 5/25/20	Thu 7/2/20	36days	Fri 5/29/20	Wed 7/8/20		6	553SS+150 hrs	555SS+150 h
555	29	Civil Repair Work Shift Engineer Room	0%	Thu 6/11/20	Mon 7/20/20	36days	Tue 6/16/20	Sat 7/25/20		5	554SS+150 hrs	
556	53	Temporary Laboratory Preparation and Commissioning Trailer	0%	Wed 4/29/20	Thu 5/7/20	8days	Wed 4/29/20	Thu 5/7/20		0	81	557SS+37.5 h
557	54	Temporary Office for Shift Engineer Trailer	0%	Sat 5/2/20	Tue 5/12/20	8days	Sat 5/2/20	Tue 5/12/20		0	556SS+37.5 hr	
558	55	New Laboratory and Administration Building	0%	Mon 5/25/20	Sat 8/15/20	76days	Mon 5/25/20	Sat 8/15/20		0		
559	57	MPT 4 Secondary Containment repairs	0%	Wed 6/17/20	Fri 7/10/20	21days	Wed 6/17/20	Fri 7/10/20		0	540SS	
560	58	MPT 6 Secondary Contaiment repairs	0%	Wed 6/17/20	Fri 7/10/20	21days	Wed 6/17/20	Fri 7/10/20		0	540SS	
561	59	Mitigation of contaminated terrain switchyard 115kV, Autotransformer	0%	Mon 3/23/20	Mon 3/23/20	48days	Wed 4/8/20	Sat 5/30/20		68	11	
565	60	Structural Concrete Repairs Discharge Channel	0%	Mon 7/6/20	Thu 1/7/21	168days	Mon 7/6/20	Thu 1/7/21		0	11	



Date: Tue 4/21/20

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split	
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress	
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress	

Unit 6 Repair - Costa Sur Power Plant

Item	Description	Number of Weeks	Predecessors Task	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6				Month 7				Month 8				Month 9				Month 10			
				W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
1	Boiler Repairs	14		X	X	X	X	X	X	X	X	X	X	X	X	X	X																										
1.1	Environmental Outage	12		X	X	X	X	X	X	X	X	X	X	X	X																												
1.2	Desuperheater Link Piping Installation	9							X	X	X	X	X	X	X	X	X																										
1.3	Boiler Structure Repairs Phase 2	12							X	X	X	X	X	X	X	X	X	X	X	X																						
1.4	Pipe Hanger Maintenance	4	1.3														X	X	X	X																						
1.5	Air Heater Maintenance and Basket Replacement	12	1.3														X	X	X	X	X	X	X	X	X	X	X															
1.6	Boiler Systems Maintenance and Repairs (Soot Blower, Burners, Ducts, Expansion Joint, Dampers, Safety Valves, Insulation, Pressure Parts, etc.)	16							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																		
2	Steam Turbine Generator	8		X	X	X	X	X	X	X	X																																
2.1	Inspection and Maintenance	4		X	X	X	X																																				
2.2	Hydrogen Seals inspection and replacement	4	2.1					X	X	X	X																																
3	Steam Turbine	10			X	X	X	X	X	X	X	X	X	X																													
3.1	Remove Hp/IP/LP rotors	3			X	X	X																																				
3.2	Install refurbished HP/IP/LP rotors	5	3.1					X	X	X	X	X																																
3.3	Alignment of Turbine Rotors and Generator	2	3.2										X	X																													
4	Condensate Storage Tank 6	24		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
4.1	Demolition	3		X	X	X																																				
4.2	Design	3		X	X	X																																				
4.3	Construction	21	4.1, 4.2				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
5	Demineralized Water Tank 5 & 6	36		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
5.1	Repair of Tank 5	18		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																						
5.2	Repair of Tank 6	18	5.1																			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
6	Circulating Water System	9		X	X	X	X	X	X	X	X	X																															
6.1	Condenser Cleaning	3		X	X	X																																				
6.2	Circulating Water Piping Rehabilitation	6	6.1				X	X	X	X	X	X																														
6.3	Water Intake Channel Cleaning	3	6.1				X	X	X																																	
6.4	Circulating Water Pump Replacement/Repair	4		X	X	X	X																																			
7	Balance of Plant	10		X	X	X	X	X	X																																	
7.1	Heat Exchanger Cleaning	4		X	X	X	X																																			
7.2	Boiler Feed Pump Maintenance	3		X	X	X																																				
7.3	Force/Induce Draft Fans Maintenance	3					X	X	X																																	
7.4	Miscellaneous Equipment Maintenance	6		X	X	X	X	X	X																																	
7.5	Replacement of Opacimeter	3		X	X	X																																				
7.6	High Pressure Water Heater #5 Valve Repair	3						X	X	X																																
7.7	Low Presure Water Heaer 3- Retubing	10		X	X	X	X	X	X	X	X	X	X																													

Attachment C

Damage Inventory

Disaster Number:	4473DR	**Program Delivery Manager (PDMG) Name:**	ORTEGA NARVAEZ, VILMARY
Applicant Name:	PR ELECTRIC POWER AUTHORITY (000-UA2QU-00)	**Program Delivery Manager (PDMG) Phone:**	(202) 710-4176
Applicant FIPS:	000-UA2QU-00	**Program Delivery Manager (PDMG) Email:**	VILMARY.ORTEGANARVAEZ@FEMA.DHS.GOV
Applicant Point of Contact Name:	Deliz Velez, Arturo		
Applicant Point of Contact Phone:	(787) 306-3440		
Applicant Point of Contact Email:	ARTURO.DELIZ@prepa.com		

Category	Name of damage/facility	Address 1	Address 2	City	State	Zip	Latitude	Longitude	Describe Damage	Primary Cause of Damage	Approx. Cost	% Work Complete	Labor Type	Has received PA grant(s) on this facility in a past?	Applicant priority
B	Costa Sur Central	PR-127		Guayanilla	PR	00656	18.0012	-66.7530	On January 7, 2020, a magnitude 6.4 earthquake, Puerto Rico's most destructive quake in a century, caused major damage to private and public structures and infrastructure, including structural and mechanical damage to PREPA's Costa Sur power plant. Costa Sur, an 820 MW power plant, provides over 26% of the electric power on the island. The island suffered a complete electric power blackout as a result of the earthquake and the Costa Sur power plant failure. On January 11, 2020 a magnitude 5.9 aftershock once again rattled Puerto Rico's southwestern coast exacerbating previous damages to the plant. As a result, PREPA was forced to use the peaking generators to provide power to critical facilities and functions, including hospitals, police departments, fire departments, emergency centers, water facilities, vulnerable populations and the like to safeguard life and safety and to prevent further property damage. This resulted in these units no longer being used for their intended purpose as peaking units, where they would supplement the power provided by the base units, but instead they have been run much more constantly to provide base power for critical facilities and functions and as an emergency protective measure to restore power. PREPA's peaking units consist of diesel fueled combustion turbine generators whose purpose is to provide temporary additional power when spikes in demand occur. These units are designed for rapid start-ups and short-term use to meet peak load needs effectively. The units are expensive to run and are not designed, nor well suited, to supply power for a prolonged period of time. The peaking generators consist of units located in Aguirre, Cambalache, Mayaguez, Daguao, Vega Baja, Yabucoa, Palo Seco and Jobos. Other peaking units are located at Costa Sur, and in Vieques and Culebra, but these units are not operational. Due to this emergency, these units are not being used for their intended purpose, nor in their traditional manner during the post-earthquake period. Considering that PREPA can't predict the elimination of the peaking units as base generation, the amount included herein represent an estimate for a period of 6 months. Uploaded documentation demonstrate cost incurred during the monthly period of January 2020.	Earthquake	$437,902,868	33%	FA	Y	Urgent

Labor Key: **MAA** - Mutual Aid Agreement; **MOU** - Memorandum of Understanding; **FA** - Force Account; **C** - Contract; **FA/C** - Both FA and C; **DR** - Donated Resources

[redacted]

Amounts

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

PREPA - Peaking Generator Analysis for Earthquakes
For the period - January 2020 to February 2020



PREPA - Peaking Generator Analysis for Earthquakes
For the period - January 2020 to February 2020

Description	1/31/2020 Aguirre	2/29/2020 Aguirre	1/31/2020 Cambalache	2/29/2020 Cambalache	1/31/2020 Mayaguez	2/29/2020 Mayaguez	1/31/2020 Daguao	2/29/2020 Daguao	1/31/2020 Vega Baja	2/29/2020 Vega Baja	1/31/2020 Yabucoa	2/29/2020 Yabucoa
	January	February	January	February	January	February	January	February	January	February	January	February
[redacted]												
[redacted]												
[redacted]												
[redacted]												
[redacted]												
[redacted]												
[redacted]												
[redacted]												

PREPA - Peaking Generator Analysis for Earthquakes
For the period - January 2020 to February 2020

Description	1/31/2020	2/29/2020	1/31/2020	2/29/2020
	Palo Seco		Jobos	
	January	February	January	February
[redacted]				

Exhibit B

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January 14, 2020

By Electronic Mail

Ms. Susan Bodine
Assistant Administrator
Office of Enforcement & Compliance Assurance
U.S. Environmental Protection Agency
Mail Code 2201A
1200 Pennsylvania Ave, N.W.
Washington, DC 20460

Mr. Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement
U.S. Environmental Protection Agency
Mail Code 2242A
1200 Pennsylvania Ave, N.W.
Washington, DC 20460

Re: No-Action Assurance Extension Request – Puerto Rico Electric Power Authority – Earthquakes

Dear Ms. Bodine and Mr. Brooks:

I write on behalf of the Puerto Rico Electric Power Authority ("PREPA") to request that the United States Environmental Protection Agency ("EPA") issue a no-action assurance due to the extreme circumstances that have arisen in the Commonwealth of Puerto Rico caused by a series of earthquakes occurring in and around the Guanica municipal area in the southwest region of Puerto Rico. On January 7, 2020, the Governor of Puerto Rico issued an executive order declaring a state of emergency for the Commonwealth of Puerto Rico to facilitate the deployment of resources necessary to respond to the widespread destruction caused by the earthquakes. Specifically, PREPA writes requesting that EPA exercise its discretion to not enforce the requirements of PREPA's Clean Air Act permits,[1] the Mercury and Air Toxics Standards ("MATS"),[2] the Puerto Rico

[1] The applicable Title V permits include permit numbers PFE-TV-4911-63-0212-0244 (Aguirre Power Station), PFE-TV-4911-70-1196-0015 (Palo Seco Steam Power Plant), TV-4911-70-1196-0015 TV-4911-31-0397-0021 (South Coast Steam Power Plant), PFE-TV-4911-65-1196-0016 (San Juan Steam Power Plant), TV-4911-63-1196-0014 (Mayaguez), PFTE-TV-4911-07-0897-0043 (Cambalache Combustion Turbine Plant), PFE-TV-4911-19-0306-0447 (Daguao Turbine Power Block), PFE-TV-4911-30-1107-0991 (Jobos Turbine Power Block), , and PFE-TV-4911-77-0707-0759 (Yabucoa Gas Turbine Power Block). The applicable permits and authorizations also include a letter from the Puerto Rico Department of Natural and Environmental Resources RE "Solicitude de Dispensa de Emergencia," TV-4911-70-1196-0015 (approval of waiver request to install and operate three gas turbines at Palo Seco Steam Power Plant), Modified Construction Permit for San Juan Power Plant PFE-65-0499-0365-I-II-C (Natural Gas Conversion project), and the letter from U.S. EPA to PREPA RE "Prevention of Significant Deterioration of

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State Implementation Plan ("SIP"),[3] other applicable provisions of or regulations under the Clean Air Act, and the provisions of the 1999 Consent Decree between the United States of America and PREPA. A no-action assurance is necessary to protect public welfare as the Commonwealth of Puerto Rico and PREPA respond to the extreme circumstances created by the series of earthquakes that have occurred in and around Puerto Rico since the end of December 2019, which includes at least six earthquakes of a 5.0 magnitude or greater.

The Costa Sur power plant in the southern town of Guayanilla, located near the epicenter of the January 7, 2020 earthquakes of 6.4- and 5.6-magnitude, experienced significant damage to Costa Sur units nos. 5 (410 megawatts (MW)) and 6 (410MW), and to ancillary equipment serving those units. Due to ongoing earthquake activity, and the instability of the Costa Sur power complex, PREPA personnel have not been permitted on-site to fully assess the impact of the earthquakes. Current estimates are that it will take months to affect repairs to the damaged units and equipment, which could remain offline for up to one year. The damaged units provide approximately 25% of the baseload generated electricity used by homes and businesses on the island.

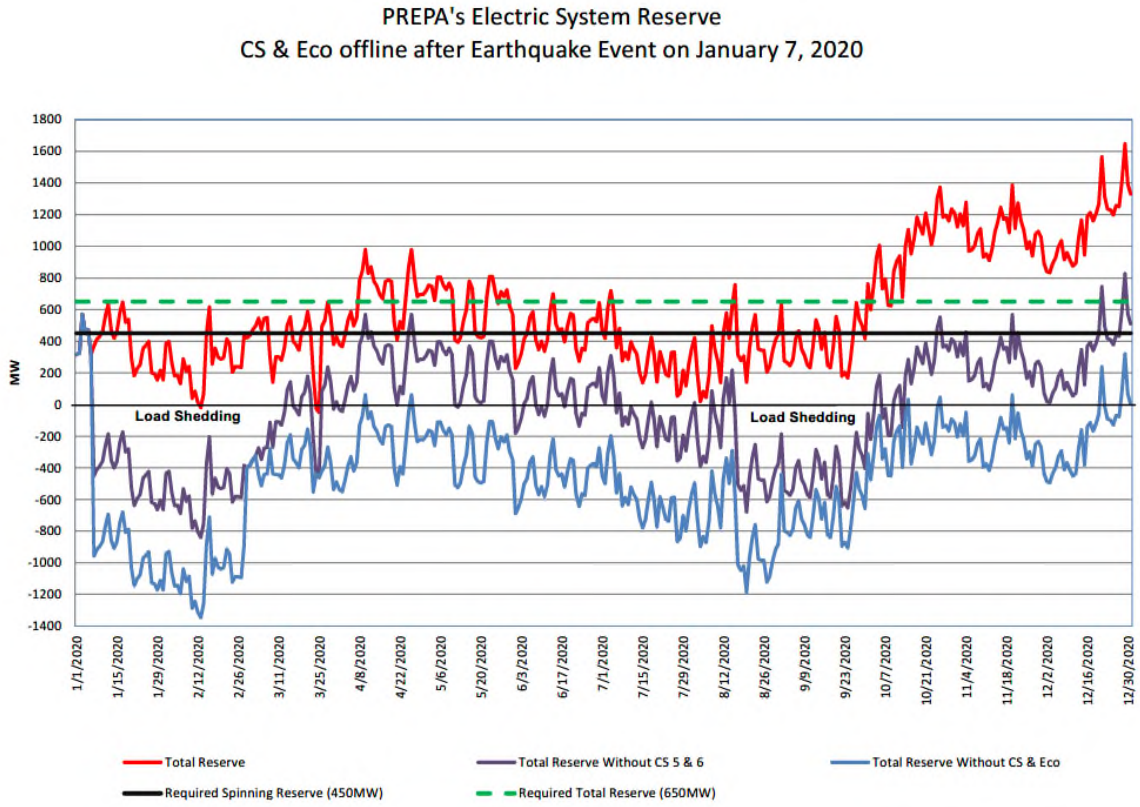
With Costa Sur out of service due to the impact of the earthquakes, Puerto Rico needs to rely on its other power plants to operate almost at full capacity to meet demand and to ensure the protection of public health.[4] As of the writing of this letter, PREPA has restored power to approximately 98% of Puerto Rico's approximately 1.4 million customers. Nonetheless, once the power is fully restored, Puerto Rico will have no reserve capacity, and there will be little leeway for any of its plants to go offline, which could lead to possible blackouts or brownouts. At this time, PREPA is considering emergency measures, including the rationing of power amongst the island's power sector grids, to ensure the maintenance of power. The graph below projects PREPA's generation deficit from January 1, 2020 through December 2020 under three operating scenarios.

Air Quality (PSD) Non-Applicability Analysis of San Juan Units 5 and 6 Fuel Conversion Project," dated July 19, 2019.

[2] *See generally* 40 C.F.R. Part 63, Subpart UUUU; *see also id.* tbl 2 (listing a filterable particulate matter limit of 0.03 lb/MMBtu for liquid oil-fired non-continental generating units).

[3] *See generally* 40 C.F.R. Part 52, Subpart BBB.

[4] Private power providers, such as EcoEléctrica, also remain offline due to the emergency situation caused by the earthquake.



In the above graph, the green dotted line shows PREPA's required 650 MW total grid reserve, while the bold black line shows PREPA's required 450 MW spinning reserve or "synchronous reserve." Under normal operating conditions, the 450 MW spinning reserve is provided by units already in service or "synched" to the grid, while the additional 200 MW spinning reserve is "non-synchronous" and is covered by offline peaking plants. When the reserve is at 0 MW, it means that PREPA has no reserve, and when the reserve is negative, it means that if PREPA experiences a further disturbance that causes it to lose generation, or is not able to bring other generating units online, that lost generation will result in load shedding.

With that context, the red line shows the reserve from PREPA's baseline power generation, reflecting business as usual prior to the earthquakes. In particular, the red line considers Costa Sur units nos. 5 and 6 in operation, and all operating units in compliance with applicable Clean Air Act requirements, permit conditions, and consent decree obligations. The purple line shows the reserve from PREPA's baseline load generation with Costa Sur units nos. 5 and 6 out of operation as a result of the earthquakes. The blue line shows the reserve from PREPA's baseload generation if Costa Sur units nos. 5 and 6 as well as EcoEléctrica are out of operation.

At this time, PREPA is still gathering information on the full extent of the flexibility needed to provide power to the island, and it will continue to provide further information to EPA as it becomes

available. Based on the foregoing, and the need to ensure that the citizens of Puerto Rico have electricity, PREPA requests a no action assurance as set forth in Table 1:

TABLE 1: Clean Air Act Requirements

Facility	Unit	Clean Air Act Requirements and Title V Permit Obligations
San Juan	5 (160MW)	For performance of conditions under the Modified Construction Permit, PFE-65-0499-0365-I-II-C (Natural gas conversion project). Further, under the circumstances, PREPA expects significant delays in required performance testing, maintenance obligations, and associated notification, recordkeeping and reporting obligations.
San Juan	6 (160MW)	For performance of conditions under the Modified Construction Permit, PFE-65-0499-0365-I-II-C (Natural gas conversion project). Further, under the circumstances, PREPA expects significant delays in required performance testing, maintenance obligations, and associated notification, recordkeeping and reporting obligations.
San Juan	7 (100MW)	This unit is as a designated MATS limited use unit. PREPA will be required to run this unit beyond the limited use restrictions imposed by MATS. For performance under the 1999 Consent Decree.
San Juan	8 (100MW)	This unit is designated as a MATS limited use unit. PREPA will be required to run this unit beyond the limited use restrictions imposed by MATS. For performance under the 1999 Consent Decree.
San Juan	9 (100MW)	MATS requirements related to particulate matter (“PM”) emissions limitation of 0.030 lb/MMBTU, associated performance testing requirements, and work practice standards. For performance under the 1999 Consent Decree.
Costa Sur	5 (410MW)	For performance under the 1999 Consent Decree related to required reporting obligations. For safety reasons, PREPA has limited and restricted access to the site, including restricted access to data and systems necessary to complete reporting obligations.
Costa Sur	6 (410MW)	For performance under the 1999 Consent Decree related to required reporting obligations. For safety reasons, PREPA has

Facility	Unit	Clean Air Act Requirements and Title V Permit Obligations
		limited and restricted access to the site, including restricted access to data and systems necessary to complete reporting obligations.
Palo Seco	1 (85MW)	This unit is designated as a MATS limited use unit. PREPA will be required to run this unit beyond the limited use restrictions imposed by MATS. For performance under the 1999 Consent Decree Palo Seco Title V Permit conditions related to MATS compliance and the 1999 Consent Decree requirements incorporated into the Title V permit.
Palo Seco	3 (216MW)	MATS requirements related to particulate matter ("PM") emissions limitation of 0.030 lb/MMBTU, associated performance testing requirements, and work practice standards. For performance under the 1999 Consent Decree. Palo Seco Title V Permit conditions related to MATS compliance and the 1999 Consent Decree requirements incorporated into the Title V permit.
Palo Seco	4 (216MW)	MATS requirements related to particulate matter ("PM") emissions limitation of 0.030 lb/MMBTU, associated performance testing requirements, and work practice standards. For performance under the 1999 Consent Decree. Palo Seco Title V Permit conditions related to MATS compliance and the 1999 Consent Decree requirements incorporated into the Title V permit.
Palo Seco	GT 1-1 (21MW)	Palo Seco Title V permit conditions related to fuel quality requirements and fuel consumption limits (barrels per year), which will directly impact annual emissions.
Palo Seco	GT 1-2 (21MW)	Palo Seco Title V permit conditions related to fuel quality requirements and fuel consumption limits (barrels per year), which will directly impact annual emissions.
Palo Seco	GT 3-1 (21MW)	Palo Seco Title V permit conditions related to fuel quality requirements and fuel consumption limits (barrels per year), which will directly impact annual emissions.

Facility	Unit	Clean Air Act Requirements and Title V Permit Obligations
Palo Seco	Mobile Pack 1 (1411) (23MW)	For compliance with itemized conditions under the letter from the Puerto Rico Department of Natural and Environmental Resources RE "Solicitude de Dispensa de Emergencia," dated October 24, 2019, TV-4911-70-1196-0015, approving a waiver request to install and operate three gas turbines at the Palo Seco Steam Power Plant ("Emergency Waiver"), and the Prevention of Significant Deterioration ("PSD") emissions thresholds that are expected to be exceeded. When the Emergency Waiver expires, for performance under the Puerto Rico Regulation for Control of Atmospheric Pollution (40 C.F.R. § 52.2723) related to permit requirements and emissions limits. For performance under other applicable Clean Air Act requirements, including but not limited to 40 C.F.R. Part 60, Subpart KKKK and 40 C.F.R. Part 63, Subpart YYYY.
Palo Seco	Mobile Pack 1 (1410) (23MW)	For compliance with itemized conditions under the letter from the Puerto Rico Department of Natural and Environmental Resources RE "Solicitude de Dispensa de Emergencia," dated October 24, 2019, TV-4911-70-1196-0015, approving a waiver request to install and operate three gas turbines at the Palo Seco Steam Power Plant ("Emergency Waiver"), and the Prevention of Significant Deterioration ("PSD") emissions thresholds that are expected to be exceeded. When the Emergency Waiver expires, for performance under the Puerto Rico Regulation for Control of Atmospheric Pollution (40 C.F.R. § 52.2723) related to permit requirements and emissions limits. For performance under other applicable Clean Air Act requirements, including but not limited to 40 C.F.R. Part 60, Subpart KKKK and 40 C.F.R. Part 63, Subpart YYYY.
Palo Seco	Mobile Pack 1 (1412) (23MW)	For compliance with itemized conditions under the letter from the Puerto Rico Department of Natural and Environmental Resources RE "Solicitude de Dispensa de Emergencia," dated October 24, 2019, TV-4911-70-1196-0015, approving a waiver request to install and operate three gas turbines at the Palo Seco Steam Power Plant ("Emergency Waiver"), and the Prevention of Significant Deterioration ("PSD") emissions thresholds that are expected to be exceeded.

Facility	Unit	Clean Air Act Requirements and Title V Permit Obligations
		When the Emergency Waiver expires, for performance under the Puerto Rico Regulation for Control of Atmospheric Pollution (40 C.F.R. § 52.2723) related to permit requirements and emissions limits. For performance under other applicable Clean Air Act requirements, including but not limited to 40 C.F.R. Part 60, Subpart KKKK and 40 C.F.R. Part 63, Subpart YYYY.
Aguirre	1 (450MW)	MATS requirements related to the particulate matter ("PM") emissions limit of 0.030 lb/MMBTU, associated performance testing requirements, and work practice standards. For performance under the 1999 Consent Decree.
Aguirre	Combined cycle gas turbine "CCGT" 1-1 (50MW)	Aguirre Title V permit conditions related to fuel quality requirements, and fuel consumption limits (barrels per year), which will directly impact annual emissions.
Aguirre	CCGT 1-2 (50MW)	Aguirre Title V permit conditions related to fuel quality requirements and fuel consumption limits (barrels per year), which will directly impact annual emissions.
Aguirre	CCGT 1-3 (50MW)	Aguirre Title V permit conditions related to fuel quality requirements, and fuel consumption limits (barrels per year), which will directly impact annual emissions.
Aguirre	CCGT 1-4 (50MW)	Aguirre Title V permit conditions related to fuel quality requirements and fuel consumption limits (barrels per year), which will directly impact annual emissions.
Aguirre	CCGT 2-1 (50MW)	Aguirre Title V permit conditions related to fuel quality requirements and fuel consumption limits (barrels per year), which will directly impact annual emissions.
Aguirre	CCGT 2-3 (50MW)	Aguirre Title V permit conditions related to fuel quality requirements and fuel consumption limits (barrels per year), which will directly impact annual emissions.
Aguirre	CCGT 2-4 (50MW)	Aguirre Title V permit conditions related to fuel quality requirements and fuel consumption limits (barrels per year), which will directly impact annual emissions.

Facility	Unit	Clean Air Act Requirements and Title V Permit Obligations
Mayaguez	GT-5 (54MW)	Mayaguez Title V permit conditions related to fuel quality requirements, and fuel consumption limits (barrels per year), which will directly impact annual emissions and other permit conditions (e.g., emissions control).
Mayaguez	GT-6 (54MW)	Mayaguez Title V permit conditions related to fuel quality requirements and fuel consumption limits (barrels per year), which will directly impact annual emissions.
Mayaguez	GT-7 (54MW)	Mayaguez Title V permit conditions related to fuel quality requirements and fuel consumption limits (barrels per year), which will directly impact annual emissions and other permit conditions (e.g., emissions control).
Mayaguez	GT-8 (54MW)	Mayaguez Title V permit conditions related to fuel quality requirements and fuel consumption limits (barrels per year), which will directly impact annual emissions and other permit conditions (e.g. emissions control).
Cambalache Peakers	2 (83MW)	Cambalache Title V permit conditions related to fuel quality requirements and fuel consumption limits (barrels per year), which will directly impact annual emissions.
Cambalache Peakers	3 (83MW)	Cambalache Title V permit conditions related to fuel quality requirements and fuel consumption limits (barrels per year), which will directly impact annual emissions.
Daguao Peakers	GT 1-1 (21MW)	Daguao Title V permit conditions related to fuel quality requirements fuel consumption limits (barrels per year), which will directly impact annual emissions; and noise control requirements (hours operating restrictions) required by Commonwealth ordinance and PR Rule for the Control of Noise Pollution.
Daguao Peakers	GT 1-2 (21MW)	Daguao Title V permit conditions related to fuel quality; fuel consumption limits (barrels per year), which will directly impact annual emissions; and noise control requirements (hours operating restrictions) required by Commonwealth ordinance PR Rule for the Control of Noise Pollution.
Yabucoa Peakers	GT 1-1 (21MW)	Yabucoa Title V permit conditions related to fuel quality requirements fuel consumption limits (barrels per year), which will directly impact annual emissions; and noise control requirements

Facility	Unit	Clean Air Act Requirements and Title V Permit Obligations
		(hours operating restrictions) required by Commonwealth ordinance PR Rule for the Control of Noise Pollution.
Jobos Peakers	GT 1-2 (21MW)	Jobos Title V permit conditions related to fuel quality requirements fuel consumption limits (barrels per year), which will directly impact annual emissions; and noise control requirements (hours operating restrictions) required by Commonwealth ordinance PR Rule for the Control of Noise Pollution.
	Internal Combustion Engines	PREPA will be required to run these combustion engines in excess of this limit.

PREPA identifies in Table 1 the basic Clean Air Act-related requirements that are implicated by PREPA's need to operate the listed units at or near their full capacity. PREPA will address any variations in operating unit conditions. PREPA is not now seeking to cover with this request for a no action assurance(s) PREPA power generating units that are currently offline but that are expected to return to service. Should those units become available, PREPA may need to seek additional relief from EPA in the form of further no action assurance(s). Under the circumstances, PREPA cannot reasonably predict the precise timeframe in which it will require additional regulatory flexibility, but PREPA will use its best efforts to keep EPA abreast of the restoration of its grid and its progress towards a resumption of normal operation.

PREPA knows that EPA is taking all possible measures to assist the Commonwealth in responding to, and recovering from, the earthquakes, and we stand ready to support the agency in those measures. We look forward to hearing from you soon.

Respectfully submitted,



Adam M. Kushner

Partner
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D +1 202 637 5724

Cc: Mr. Eric Schaaf, EPA Region 2 Counsel
Ms. Carmen Guerrero, EPA Caribbean Office
Mr. Armando Otero, Acting Secretary, Puerto Rico Department of Natural and Environmental Resources

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C., 20460

ASSISTANT ADMINISTRATOR
FOR ENFORCEMENT AND
COMPLIANCE ASSURANCE

FEB 13 2020

Adam Kushner
Hogan Lovells US LLP
Columbia Square
555 Thirteenth Street, NW
Washington, D.C. 20004

RE: No Action Assurance for the Puerto Rico Electric Power Authority (PREPA) Emergency Request for Generating Units Subject to the Mercury and Air Toxics Standard (MATS)

Dear Mr. Kushner:

This letter is in response to your January 14, 2020, request, on behalf of the Puerto Rico Electric Power Authority (PREPA), for No Action Assurance (NAA) regarding the operation of certain electric generating units operated by PREPA in Puerto Rico. More specifically, this letter responds to that portion of PREPA's request that seeks relief for units that are subject to the National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units (40 CFR Part 63, Subpart UUUUU), also referred to as the Mercury and Air Toxics Standards (MATS). Beginning on or about December 28, 2019, and continuing since, Puerto Rico has experienced multiple earthquakes and aftershocks that have caused extreme damage to its power grid. Among other things, the earthquakes have rendered the Costa Sur Power station, a critical baseload station, inoperable. On January 7, 2020, the Governor of Puerto Rico signed an Executive Order decreeing a state of emergency throughout Puerto Rico; on January 16, 2020, the President signed a major disaster declaration for Puerto Rico.

Your January 14, 2020, letter requests NAA for electric generating units subject to MATS for: (1) operating above the 8% capacity factor specified in the "limited use liquid oil-fired subcategory;" (2) exceeding the particulate matter (PM) emission limit, or otherwise not meeting applicable performance testing standards, and work practice standards; and (3) violating the related Title V permit requirements.

PREPA currently operates and is seeking relief for the following three (3) electric generating units classified under the Subpart UUUUU "limited-use liquid oil fired subcategory": San Juan Unit 7, San Juan Unit 8, and Palo Seco Unit 1. In order to qualify for the "limited-use liquid oil fired subcategory," an electric generating unit must have an annual capacity factor, when burning oil, of less than 8% of its maximum or nameplate heat input, whichever is greater, averaged over a 24-month block contiguous period commencing on the first of the month following the compliance date. 40 CFR § 63.10042. Electric generating units that qualify for the "limited-use liquid oil fired subcategory" are not subject to the emission limits in Tables 1 and 2 of Subpart UUUUU. 40 CFR § 63.10000(c)(2)(iv). In order to

provide power during the emergency declaration, however, the electric generating units need to operate above the 8% capacity factor and therefore would no longer qualify for the "limited-use liquid oil fired subcategory." PREPA is requesting that the three (3) electric generating units listed above, previously classified as "limited-use liquid oil fired" units, continue to be classified as "limited-use liquid oil fired" units even though they will exceed the 8% capacity factor as a result of operation during the state of emergency.

PREPA is also seeking relief from the MATS Subpart UUUUU requirements for the following five (5) electric generating units: San Juan Unit 9, Palo Seco Unit 3, Palo Seco Unit 4, Aguirre Unit 1, and Aguirre Unit 2. Specifically, PREPA is seeking relief from the PM emission limit and related performance testing and work practice requirements in Subpart UUUUU during the state of emergency.

PREPA requested NAA in order to maintain the supply of electricity to customers and critical facilities in Puerto Rico, and to facilitate the expeditious restoration of lost electrical service caused by the earthquakes. In light of the existing emergency in Puerto Rico, the U.S. Environmental Protection Agency will exercise its discretion with respect to San Juan Unit 7, San Juan Unit 8, San Juan Unit 9, Palo Seco Unit 1, Palo Seco Unit 3, Palo Seco Unit 4, Aguirre Unit 1, and Aguirre Unit 2 not to pursue enforcement for violations of the MATS provisions cited above, along with the related Title V requirements, that occur during the period covered by this NAA, subject to the following conditions:

1. This NAA applies only to MATS violations that occur as a result of EGU operations that are necessitated because of the impacts from the earthquakes.

2. Electric generating units listed above must return to normal operations as soon as practicable.

3. For the purpose of determining compliance with the 8% capacity factor following the termination of this NAA, PREPA will exclude the days during the time period of this NAA from the calculation of the average 24-month block specified in the annual capacity factor definition in 40 CFR § 63.100042.

4. PREPA will continue to calculate the 30-day total particulate emission limits for San Juan Unit 9, Palo Seco Unit 3, Palo Seco Unit 4, Aguirre Unit 1, and Aguirre Unit 2 pursuant to the relevant requirements of Subpart UUUUU, or best available information.

5. With respect to electric generating units for which PREPA will seek relief from the 8% capacity factor limit described above, PREPA must maintain records of the fuel burned, and hours operated during the time period of this NAA.

PREPA must submit a report to the EPA within two weeks of the termination of the NAA containing the following information:

1. The name, address, and contact information for the person submitting the report.

2. For each of the three (3) electric generating units identified as limited use and covered by this NAA (San Juan Unit 7, San Juan Unit 8, Palo Seco Unit 1), the hours operated, the fuel burned, and calculations of the excess emissions generated.

3. For each of the five (5) electric generating units covered by this NAA (San Juan Unit 9, Palo Seco Unit 3, Palo Seco Unit 4, Aguirre Unit 1, and Aguirre Unit 2), a calculation of the total PM emissions during the period of the NAA.

4. A description of how the energy was used, including any benefits provided to the public.

The notifications identified above should be sent to the EPA via email to Harish Patel at patel.harish@epa.gov.

The issuance of an NAA for this period of time is in the public interest. Through today's NAA, the EPA is continuing its commitment to address the very difficult circumstances caused by the earthquakes. The EPA intends to use the period of the NAA to evaluate the appropriate longer-term approach for addressing this situation. Nothing in this NAA is intended to override state or local authorities.

The NAA terminates at 11:59 PM Atlantic Standard Time, April 30, 2020. The EPA reserves the right to extend, revoke or modify the NAA if the EPA believes that such action is necessary to protect public health and the environment. This NAA does not apply to any other federal requirements that may apply to regulated activities at these facilities other than those listed above.

Nothing in this exercise of enforcement discretion relieves any person of the obligation under law, if any, to report emissions from the operation of equipment covered by this action. If you have any questions please contact Gregory Fried, at 202-564-7016 or fried.gregory@epa.gov.

Sincerely,



Susan Parker Bodine

cc: Peter D. Lopez, Regional Administrator, EPA Region 2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C., 20460

ASSISTANT ADMINISTRATOR
FOR ENFORCEMENT AND
COMPLIANCE ASSURANCE

JAN 3 1 2020

Adam Kushner
Hogan Lovells US LLP
Columbia Square
555 Thirteenth Street, NW
Washington, D.C. 20004

RE: No Action Assurance for Puerto Rico Power Authority for Fuel Consumption and Analysis

Dear Mr. Kushner:

This letter is in response to your January 14, 2020, request, on behalf of the Puerto Rico Electric Power Authority (PREPA), for No Action Assurance (NAA) regarding the operation of certain electric generating units operated by PREPA in Puerto Rico. More specifically, this letter responds to that portion of PREPA's request that seeks relief for the fuel consumption limits and fuel quality and quality analysis requirements described below. Beginning on or about December 28, 2019, and continuing through at least January 7, 2020, Puerto Rico has experienced multiple earthquakes and aftershocks that have caused extreme damage to its power grid. Among other things, the earthquakes have rendered the Costa Sur power station, a critical baseload station, inoperable. On January 7, 2020, the Governor of Puerto Rico signed an Executive Order delaring a state of emergency throughout Puerto Rico; on January 16, 2020, the President signed a major disaster declaration for Puerto Rico.

The U.S. Environmental Protection Agency has determined that issuance of this NAA is necessary to enable PREPA to supply electricity to residential and business customers. Because the request for an NAA covers multiple units in varying operating circumstances, after discussions with counsel for PREPA the EPA has determined that the most appropriate way to timely address the requested action is to issue this NAA covering a subset of the units identified in the January 14, 2020 request. To that end, as set forth below, this NAA addresses the generating units identified in Table 1 below for the permit provisions and requirements of law specifically identified in the Table.

The EPA has determined that issuing an NAA, as detailed below, is in the public interest given the conditions in Puerto Rico. Through the issuance of this NAA, the EPA is continuing its commitment to address the very difficult circumstances caused by recent earthquakes.

Nothing in this exercise of enforcement discretion relieves any person of the obligation under law, if any, to report emissions from the operation of equipment covered by this action. Pursuant to this NAA, the EPA will not enforce violations of the following requirements that occur during the period of this NAA:

- The fuel consumption limits identified in Table 1 for the identified Generating Unit; and
- The fuel quality and quality analysis requirements identified in Table 1 for the identified Generating Unit, to the extent that the requirements mandate that the analysis of the fuel sample must be completed prior to firing of the fuel in the Generating Unit.

This NAA is subject to the following conditions:

1. Fuel consumption limits: Once the NAA terminates, in calculating the 365-day rolling total fuel consumption, PREPA may exclude fuel consumption data from days it operated pursuant to this NAA and instead calculate the 365-day rolling total fuel consumption by including 365 days of fuel consumption data from consecutive days immediately prior to the effective date and immediately after the termination date of this NAA, but excluding each day that PREPA operated a covered Generating Unit pursuant to this NAA. PREPA must, however, also provide the Puerto Rico Department of Natural and Environmental Resources with the 365-day rolling total fuel consumption calculation using the total fuel consumption data during the time it operated pursuant to this NAA;
2. Fuel quality and quality analysis: Where results of the fuel quality analysis are not available prior to the need to burn the fuel, PREPA will rely on bulk analysis documentation from the fuel supplier regarding the content of the fuel to show that the fuel is compliant with the required standard. PREPA will also not blend the newly received fuel with other fuel not known to be compliant prior to receipt of its own fuel quality analysis results. In the event PREPA becomes aware that it is burning noncompliant fuel, through receiving lab results or otherwise, PREPA will notify the EPA immediately and timely take any actions required by EPA to address the noncompliant fuel;
3. To the best of its ability, while the NAA is in effect PREPA will report on fuel consumption for the 365 days prior to this NAA in accordance with any reporting requirement in an applicable permit or regulation;
4. PREPA informs the EPA within 48 hours that it has obtained sufficient generation from units compliant with the Clean Air Act and all applicable permits to allow discontinuation of operation of covered Generating Units under this NAA; and
5. PREPA complies with all conditions imposed by territory or local authorities on these emergency operations.

PREPA must submit a report to the EPA within thirty (30) days of the termination of the NAA containing the following information:

1. The name, address, and contact information for the person submitting the report;
2. A description of the amount of fuel used for each covered Generating Unit during the period this NAA is in effect;
3. A description of how the energy was used, including any benefits provided to the public; and
4. A description of any instances in which fuel quality analysis results received after PREPA began burning newly-received fuel indicated that the fuel was not compliant.

The report referenced above must be sent by email to Gregory Fried, Chief, Stationary Source Enforcement Branch, within EPA's Air Enforcement Division, at fried.gregory@epa.gov. The report

must be in portable document format (PDF) and be clearly labeled as "Report for PREPA Generators Operated Pursuant to the No Action Assurance First Issued (insert date of issuance of this NAA)." Where the information for these reports is not available due to the emergency circumstances, the EPA would accept instead an explanation of those circumstances and specifically how they prevented the collection or transmission of that information.

This NAA terminates at 11:59 PM Atlantic Standard Time, April 30, 2020. The EPA will assess whether an extension to or revision of this NAA is necessary and appropriate. The EPA reserves the right to revoke or modify the NAA if the EPA believes that such action is necessary to protect public health and the environment. This NAA does not apply to any other federal requirements that may apply to regulated activities at this facility other than those listed above. The EPA intends to use the period of the NAA to evaluate the appropriate longer-term approach for addressing this situation.

The issuance of an NAA for this period of time is in the public interest. Through today's NAA, the EPA is continuing its commitment to address the very difficult circumstances caused by the recent earthquakes. Nothing in this NAA is intended to over-ride Puerto Rico or local authorities.

Please contact Gregory Fried, Chief, Stationary Source Enforcement Branch, with questions. Mr. Fried can be reached at (202) 564-7016 or fried.gregory@epa.gov.

Sincerely,

Susan Parker Bodine

cc: Peter D. Lopez, Regional Administrator, EPA Region 2

TABLE 1: Covered Generating Units and Associated Clean Air Act Permit Requirements

Facility	Generating Unit	Clean Air Act Permit Requirements
Palo Seco	GT 1-1 (21MW)	Palo Seco Title V permit No. PFE-TV-4911-70-1196-0015 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B) and V(B)(c)–(d).
Palo Seco	GT 1-2 (21MW)	Palo Seco Title V permit No. PFE-TV-4911-70-1196-0015 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B) and V(B)(c)–(d).
Palo Seco	GT 3-1 (21MW)	Palo Seco Title V permit No. PFE-TV-4911-70-1196-0015 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B) and V(B)(c)–(d).
Aguirre	Combined cycle gas turbine "CCGT" 1-1 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B), V(B)(c)–(d), and V(C).
Aguirre	CCGT 1-2 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B), V(B)(c)–(d), and V(C).
Aguirre	CCGT 1-3 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B), V(B)(c)–(d), and V(C).
Aguirre	CCGT 1-4 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B), V(B)(c)–(d), and V(C).
Aguirre	CCGT 2-1 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B),

Facility	Generating Unit	Clean Air Act Permit Requirements
		V(B)(c)–(d), and V(C).
Aguirre	CCGT 2-3 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B), V(B)(c)–(d), and V(C).
Aguirre	CCGT 2-4 (50MW)	Aguirre Title V permit No. PFE-TV-4911-63-0212-0244 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(B), V(B)(c)–(d), and V(C).
Mayaguez	GT-5 (54MW)	Mayaguez construction permit no. PFE-50-0307-0286-I-II-C for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions II; and III(A)(31)–(33) and (37).
Mayaguez	GT-6 (54MW)	Mayaguez construction permit no. PFE-50-0307-0286-I-II-C for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions II; and III(A)(31)–(33) and (37).
Mayaguez	GT-7 (54MW)	Mayaguez construction permit no. PFE-50-0307-0286-I-II-C for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions II; and III(A)(31)–(33) and (37).
Mayaguez	GT-8 (54MW)	Mayaguez construction permit no. PFE-50-0307-0286-I-II-C for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions II; and III(A)(31)–(33) and (37).
Cambalache Peakers	2 (83MW)	Cambalache PSD Permit Modification for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Attachment I (general description); and Attachment II, Conditions VII(1), (2), (5), and X.
Cambalache Peakers	3 (83MW)	Cambalache PSD Permit Modification for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Attachment I (general description); and Attachment II, Conditions VII(1), (2), (5), and X.

Facility	Generating Unit	Clean Air Act Permit Requirements
Daguao Peakers	GT 1-1 (21MW)	Daguao Title V permit No. PFE-TV-4911-63-0212-0447 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(A)(1) and V(A)(1)(c)–(d).
Daguao Peakers	GT 1-2 (21MW)	Daguao Title V permit No. PFE-TV-4911-63-0212-0447 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(A)(1) and V(A)(1)(c)–(d).
Yabucoa Peakers	GT 1-1 (21MW)	Yabucoa Title V permit No. PFE-TV-4911-77-0707-0759 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(A)(1) and V(A)(1)(c)–(d).
Jobos Peakers	GT 1-2 (21MW)	Jobos Title V permit No. PFE-TV-4911-30-1107-0991 for conditions pertaining to fuel quality testing and fuel consumption limits (barrels per year) at Conditions V(A)(1) and V(A)(1)(c)–(d).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C., 20460

ASSISTANT ADMINISTRATOR
FOR ENFORCEMENT AND
COMPLIANCE ASSURANCE

JAN 3 1 2020

Adam Kushner
Hogan Lovells US LLP
Columbia Square
555 Thirteenth Street, NW
Washington, D.C. 20004

RE: No Action Assurance for Puerto Rico Electric Power Authority for Internal Combustion Engines

Dear Mr. Kushner:

This letter is in response to your January 14, 2020, request, on behalf of the Puerto Rico Electric Power Authority (PREPA), for No Action Assurance (NAA) regarding the operation of certain electric generating units operated by PREPA in Puerto Rico. More specifically, this letter responds to that portion of PREPA's request that seeks relief for the operation of internal combustion engines (ICE) in service at the following PREPA facilities in Puerto Rico: Aguirre, San Juan, Palo Seco, Costa Sur, Mayaguez, Cambalache, Daguao, Yabucoa, and Jobos. Beginning on or about December 28, 2019, and continuing through at least January 7, 2020, Puerto Rico has experienced multiple earthquakes and aftershocks that have caused extreme damage to its power grid. Among other things, the earthquakes have rendered the Costa Sur power station, a critical baseload station, inoperable. On January 7, 2020, the Governor of Puerto Rico signed an Executive Order delaring a state of emergency throughout Puerto Rico; on January 16, 2020, the President signed a major disaster declaration for Puerto Rico.

On January 11, 2020, Puerto Rico issued a waiver regarding, among other things, the use of electric generators at industrial or institutional facilities, to help fill those facilities' need for electricity and thus support PREPA's ability to provide electricity to residences and businesses in its service area. Specifically, the Puerto Rico Department of Natural and Environmental Resources (DNER) waived compliance with state law requirements limiting electric generators' hours of operation and fuel consumption, where the limits are exceeded due to the ongoing emergency.

The U.S. Environmental Protection Agency has determined that issuance of this NAA is necessary to further enable PREPA to supply electricity to residential and business customers. This NAA only addresses one portion of PREPA's initial NAA request; as PREPA's original request for NAA covers multiple units in varying operating circumstances. After discussions with counsel for PREPA the EPA has determined that the most appropriate way to timely address the requested action is to issue this NAA covering a subset of the units identified in the January 14, 2020 request. This NAA addresses permit provisions and requirements of law for 24 existing internal combustion engines listed in the attached

Table 1 serving the following facilities: Aguirre, San Juan, Palo Seco, Costa Sur, Mayaguez, Cambalache, Daguao, Yabucoa, and Jobos. These engines are being used for purposes such as support for auxiliary equipment and the facility complexes, and to assist the primary generating units in startup.

The EPA has determined that issuing anNAA, as detailed below, is in the public interest given the conditions in Puerto Rico. Through the issuance of this NAA, the EPA is continuing its commitment to address the very difficult circumstances caused by recent earthquakes.

Nothing in this exercise of enforcement discretion relieves any person of the obligation under law, if any, to report emissions from the operation of equipment covered by this action. Pursuant to this NAA, the EPA will not enforce violations, for each internal combustion engine listed in Table 1, of the 500-hour annual engine operating limit (whether measured on a per-year or on a per-12-consecutive-month-period) in the relevant facility's Title V permit or other federally enforceable permit issued pursuant to Puerto Rico's approved State Implementation Plan.

This NAA is subject to the following conditions:

1. In calculating the total annual operating hours for a year that includes the NAA, PREPA may exclude the days it operates pursuant to the NAA;
2. To the best of its ability, while the NAA is in effect PREPA reports hours of operation for the 365 days prior to this NAA as required by its permits or any applicable regulations;
3. PREPA complies with all conditions imposed by territory or local authorities on these emergency operations;
4. PREPA complies with all other conditions related to these ICE in its Title V permits and in applicable regulations;
5. PREPA must comply with all applicable provisions of 40 C.F.R. Part 60, Subparts IIII and JJJJ and/or 40 C.F.R. Part 63, Subpart ZZZZ; and
6. PREPA maintains records documenting the hours of operation of each ICE while the NAA remains in effect.

PREPA must submit a report to the EPA within two weeks of the termination of the NAA containing the following information:

1. The name, address, and contact information for the person submitting the report;
2. A description of the total hours of operation and total fuel used for each covered ICE during the period this NAA is in effect; and
3. A description of how the energy was used, including any benefits provided to the public.

The report referenced above must be sent by email to Gregory Fried, Chief, Stationary Source Enforcement Branch, within EPA's Air Enforcement Division, at fried.gregory@epa.gov. The report must be in portable document format (PDF) and be clearly labeled as "Report for PREPA ICE NAA." Where the information for these reports is not available due to the emergency circumstances, the EPA would accept instead an explanation of those circumstances and specifically how they prevented the collection or transmission of that information.

This NAA terminates at 11:59 PM Atlantic Standard Time, on April 30, 2020. The EPA will assess whether an extension to or revision of this NAA is necessary and appropriate. The EPA reserves the right to revoke or modify the NAA if the EPA believes that such action is necessary to protect public health and the environment. This NAA does not apply to any other federal requirements that may apply to regulated activities at this facility other than those listed above. Given PREPA's estimates that Costa Sur could remain offline for up to one year, the EPA intends to use the period of the NAA to discuss and develop with PREPA the appropriate longer-term approach for addressing this situation.

The issuance of an NAA for this period of time is in the public interest. Through today's NAA, the EPA is continuing its commitment to address the very difficult circumstances caused by the recent earthquakes. Nothing in this NAA is intended to over-ride Puerto Rico or local authorities.

Please contact Gregory Fried, Chief, Stationary Source Enforcement Branch, with questions. Mr. Fried can be reached at (202) 564-7016 or fried.gregory@epa.gov.

Sincerely,

Susan Parker Bodine

cc: Peter D. Lopez, Regional Administrator, EPA Region 2

Table 1: Internal Combustion Engines at PREPA Facilities Covered by the NAA

Facility	Internal Combustion Engine(s)
Aguirre	GE-AUX-AG1 GE-CCAM-AG2 GE-PREPANET-AG5 GE-SISTINF-AG6 GE-CICLO-AG7 GE-ADM-AG8
San Juan	GE-AUX-SJ5 GE-AUX-SJ6 GE-AUX-SJ1 GE-AUX-SJ2 GE-GIS-SJ1 GE-TMGN-SJ GE-COM-SJ GE-CCAM-SJ
Palo Seco	GE-PS-1 GE-PS-2 GE-GIS-PS-1
Costa Sur	GE-AUX-CS3-6
Mayaguez	Black start emergency generator
Cambalache	CAMB DG1 CAMB DG2
Daguao	GE-DA-1
Yabucoa	GE-YA-1
Jobos	GE-JOB-1

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April 29, 2020

By Electronic Mail

Ms. Susan Bodine
Assistant Administrator
Office of Enforcement & Compliance Assurance
U.S. Environmental Protection Agency
Mail Code 2201A
1200 Pennsylvania Ave, N.W.
Washington, DC 20460

Mr. Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement
U.S. Environmental Protection Agency
Mail Code 2242A
1200 Pennsylvania Ave, N.W.
Washington, DC 20460

Re: No-Action Assurance Extension Request – Puerto Rico Electric Power Authority – Earthquakes

Dear Ms. Bodine and Mr. Brooks:

I write on behalf of the Puerto Rico Electric Power Authority ("PREPA") to request that the United States Environmental Protection Agency ("EPA") issue an extension of limited aspects of the no-action assurances that were issued by EPA in response to the extreme circumstances caused by a series of earthquakes in the southwest region of Puerto Rico. Beginning on or about December 28, 2019, and continuing into 2020, Puerto Rico has experienced thousands of earthquakes, including multiple large earthquakes and aftershocks that have caused extreme damage to its generation infrastructure, including at least six earthquakes of a 5.0 magnitude or greater.

In particular, the Costa Sur Power Plant was located near the epicenter of earthquakes of 6.4 and 5.6 magnitude that occurred on January 7, 2020—the largest to hit the island in more than 100 years. As a result, Costa Sur Unit 5 (410 MW) and Unit 6 (410 MW), as well as ancillary equipment serving those units, suffered heavy damage, rendering the Costa Sur Power Plant inoperable. Among other things, the Costa Sur Power Plant experienced significant structural damage, including damage to the boiler and turbine support structures, as well as damage to the control room, administrative building, auxiliary utilities pipe for demineralized water, water tanks, natural gas supply connection, and metering station, among other things. In addition to Costa Sur, two of the

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Mayaguez combustion turbines (54 MW each) experienced damage caused by the earthquakes (turbine bearing failures), and have also not yet returned to service.

In response to the earthquakes, on January 7, 2020, the Governor of Puerto Rico signed an Executive Order declaring a state of emergency throughout Puerto Rico; on January 16, 2020, the President signed a major disaster declaration for Puerto Rico. In addition, on January 11, 2020, the Puerto Rico Department of Natural and Environmental Resources ("DNER") issued a waiver regarding, among other things, the use of electric generators at industrial or institutional facilities, to help fill those facilities' need for electricity and support PREPA's ability to provide electricity to residences and businesses in its service area. Specifically, DNER waived compliance with state law requirements limiting electric generators' hours of operation and fuel consumption, where the limits are exceeded due to the ongoing emergency.

Moreover, in recognition of the extraordinary circumstances resulting from the earthquakes and the resulting strain on PREPA's generation resources, on January 31, 2020, EPA issued two no-action assurances ("NAA") to PREPA, which covered fuel quality testing and fuel consumption limits at various PREPA power plants, as well as the operation of various internal combustion engines at PREPA power plants. On February 13, 2020, EPA issued a third NAA to PREPA covering compliance with the Mercury and Air Toxics Standards ("MATS").

Through this letter, PREPA requests an extension of certain limited aspects of the NAAs identified above, such that EPA will continue to exercise its discretion to not enforce the specified requirements of PREPA's Clean Air Act Title V permits,[1] MATS,[2] the Puerto Rico State Implementation Plan ("SIP"),[3] and other applicable provisions of or regulations under the Clean Air Act. A limited no-action assurance extension is necessary to protect public welfare and to allow for PREPA to respond to the extreme circumstances created by the earthquakes.

Due to ongoing earthquake activity, and the instability of the Costa Sur power complex, PREPA personnel have had limited access to the site. PREPA engaged contractors and engineers to complete an assessment of the site, including GE Power, the original equipment manufacturer ("OEM") of the boilers and generators for Units 5 and 6. The OEM has the structural engineering expertise necessary to repair the power plant. Current estimates are that it will take months to effect repairs to the damaged units and equipment. While current estimates indicate that one of the two Costa Sur units (Costa Sur Unit 5) is on track to potentially return to service by mid-August 2020, the

[1] The applicable Title V permits include permit numbers PFE-TV-4911-63-0212-0244 (Aguirre Power Station), PFE-TV-4911-70-1196-0015 (Palo Seco Steam Power Plant), TV-4911-70-1196-0015 TV-4911-31-0397-0021 (South Coast Steam Power Plant), PFE-TV-4911-65-1196-0016 (San Juan Steam Power Plant), TV-4911-63-1196-0014 (Mayaguez), PFTE-TV-4911-07-0897-0043 (Cambalache Combustion Turbine Plant), PFE-TV-4911-19-0306-0447 (Daguao Turbine Power Block), PFE-TV-4911-30-1107-0991 (Jobos Turbine Power Block), and PFE-TV-4911-77-0707-0759 (Yabucoa Gas Turbine Power Block), PFE-TV-4911-74-0106-0021 (Vega Baja Turbine Power Block).

[2] *See generally* 40 C.F.R. Part 63, Subpart UUUUU; *see also id.* tbl 2 (listing a filterable particulate matter limit of 0.03 lb/MMBtu for liquid oil-fired non-continental generating units).

[3] *See generally* 40 C.F.R. Part 52, Subpart BBB.

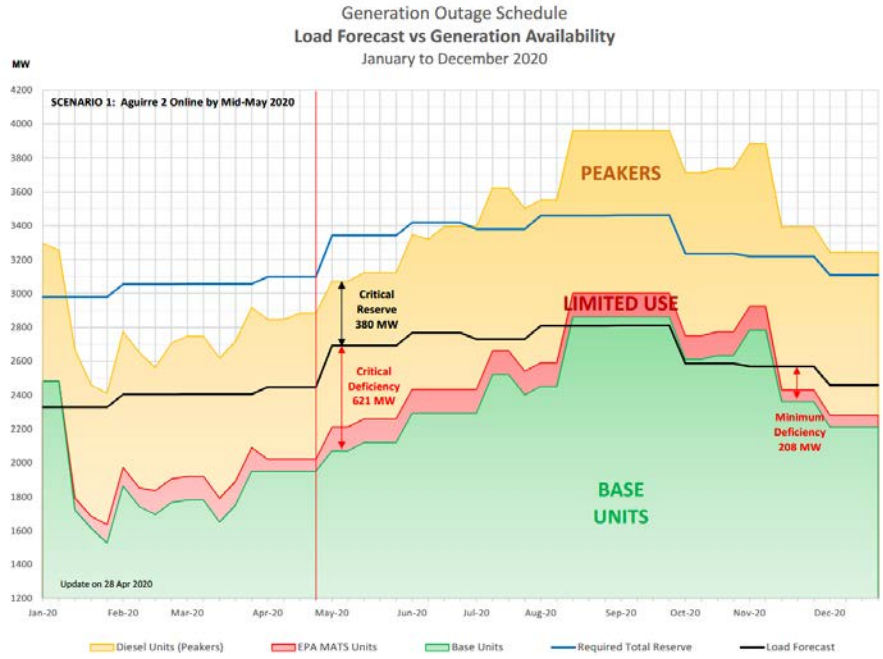
repairs could extend into September-October 2020 if there are delays. PREPA is working under an integrated master schedule to bring Costa Sur Unit 5 online as soon as possible. There is currently no estimate for Costa Sur Unit 6.

Costa Sur is a critical baseload power plant that provides approximately 25% of the baseload generated electricity used by homes and businesses on the island, and PREPA's inability to operate Costa Sur Units 5 and 6 has required PREPA to utilize nearly all other available generation units to compensate for the 820 MW in lost generation. This includes operation of all available PREPA peaker units, including in excess of permitted limits, as well as the operation of MATS limited-use units.[4]

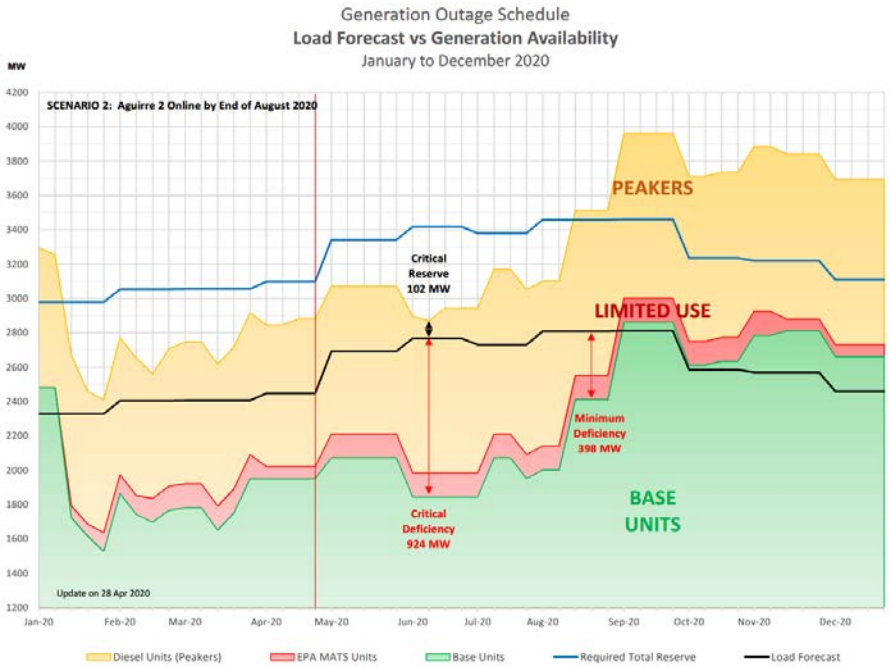
The below graphs illustrate PREPA's forecast of electric system reserve and generation deficit through December 2020, assuming a scenario in which Costa Sur Unit 5 can be returned to service by mid-August 2020, which optimistically assumes that there will not be delays in the necessary repairs. PREPA has provided two graphs below due to uncertainty as to when Aguirre Unit 2 will return to service. PREPA plans to attempt to return the unit to service in mid-May, but significant uncertainty remains as to whether that effort will be successful due to problems PREPA has experienced with bearing vibrations and the generator cooling system. After returning the unit to service, PREPA will need to monitor the condition of the unit to make sure it can remain in service. If problems persist, PREPA will need to take the unit out of service to fix the bearing vibrations and generator, and the necessary repairs are anticipated to take until the end of August 2020. Accordingly, PREPA provides two graphs below—one which optimistically shows Aguirre Unit 2 returning in mid-May 2020, and a second showing the unit returning to service at the end of August 2020. The assumptions underlying these graphs are provided in Attachment A.

[4] PREPA notes that, leading up to the earthquakes, its limited-use units were all out-of-service, and had not been operated for months. San Juan Unit 7 had last operated on September 24, 2019, San Juan Unit 8 had last operated on April 29, 2019, and Palo Seco Unit 1 had last operated on July 25, 2019.

Graph 1: Scenario with Costa Sur Unit 5 Returning to Service by Mid-August 2020 and Aguirre Unit 2 Returning to Service by Mid-May 2020



Graph 2: Scenario with Costa Sur Unit 5 Returning to Service by Mid-August 2020 and Aguirre Unit 2 Returning to Service by the End of August 2020



In the above graphs, the black line shows PREPA's load forecast, and the blue line shows PREPA's required 650 MW total grid reserve (i.e., the blue line shows PREPA's forecasted load plus 650 MW for required reserve). The green line shows the generation available from PREPA's base load units, which is far below the load forecast at most times during the year. If Aguirre Unit 2 is unable to return to service until end of August 2020, Graph 2 shows that the deficiency in generation would reach 924 MW if PREPA was relying solely on its baseload units. And, until Costa Sur Unit 5 or Aguirre Unit 2 is able to return to service, that deficiency is projected to be 398 MW or greater. In order to meet load and reserve, the above graphs thus assume that PREPA is operating all available peaker units, as well as operating two of its MATS limited-use units (Palo Seco Unit 1 and San Juan Unit 7) as baseload units. Generation availability with the operation of the MATS limited-use units is shown by the red line, while the additional operation of the peaker units is shown by the yellow line.

As Graph 2 indicates, even operating available peaker units and the MATS limited-use units, PREPA's reserve is anticipated to range from only 102 MW to ~400 MW during the critical summer months until Costa Sur Unit 5 or Aguirre Unit 2 returns to service.[5] This means that the loss of even one unit could result in PREPA having negative load. Even after both Costa Sur Unit 5 and Aguirre Unit 2 return to service, PREPA would only have enough reserve accounting for its MATS limited-use units and peaker units (likely in excess of permitted limits).

If the reserve drops to 0 MW, it means that PREPA has no reserve, and when the reserve is negative, it means that if PREPA experiences a disturbance that causes it to lose generation, or is not able to bring other generating units online, that lost generation will result in load shedding. Indeed, since the blackout caused by the earthquakes, PREPA has experienced load shedding on approximately 9 additional occasions.

Even in Graph 1—which shows a best-case scenario—PREPA will only be able to meet load until Costa Sur Unit 5 returns to service by operating its peaker and limited-use units. Even after Costa Sur Unit 5 returns, PREPA's reserve will still need to be met primarily by operation of its limited-use units and peakers.

Given the significant reserve deficit shown above, PREPA must continue to operate two of its limited-use units (Palo Seco Unit 1 and San Juan Unit 7) as well as its peakers in order to avoid compromising the electrical system's safety and reliability. Even with these units in service, PREPA is currently operating the grid with little to no reserve at certain times of day, and the situation will only worsen if other unforeseen problems arise or if PREPA encounters additional earthquakes or extreme weather during the hurricane season. Based on the foregoing, and the need to ensure that the citizens of Puerto Rico have electricity, PREPA requests a limited extension of the NAAs issued by EPA in the aftermath of the earthquakes, as described in Table 1 below.

[5] If the repairs to those units are further delayed, PREPA will continue to lack sufficient reserve.

Notably, PREPA is not seeking an extension of the NAAs issued by EPA for:

- The operation of internal combustion engines at PREPA facilities.
- Fuel quality testing at PREPA facilities.
- The MATS limited-use limit for San Juan Unit 8.
- MATS performance testing requirements.
- MATS work practice standards, except as otherwise specified in Table 1 below.

The specific requirements[6] for which PREPA seeks an extension of the NAAs are set forth below in Table 1:

TABLE 1: Clean Air Act Requirements

Facility	Unit	Clean Air Act Requirements and Title V Permit Obligations
San Juan	7 (100 MW)	MATS limited-use restrictions.[7]
	9 (100 MW)	MATS requirements related to particulate matter ("PM") emissions limitation of 0.030 lb/MMBTU.
Costa Sur	5 (410 MW) 6 (410 MW)	Reporting obligations under PREPA's Title V Permit for Costa Sur, MATS, and other applicable Clean Air Act reporting requirements.[8] For safety reasons, PREPA continues to have limited and restricted access to the site, including restricted access to data and systems necessary to complete reporting obligations.
Palo Seco	1 (85 MW)	MATS limited-use restrictions,[9] as well as associated Palo Seco Title V Permit conditions related to MATS compliance.

[6] PREPA identifies in Table 1 the basic Clean Air Act-related requirements that are implicated by PREPA's need to operate the listed units at or near their full capacity.

[7] Prior to the earthquakes, San Juan Unit 7 had been out-of-service for several months; the unit was taken offline on September 24, 2019, having exceeded the 8% heat-input limit. The unit returned to service on January 9, 2020, in response to the earthquakes.

[8] In its initial January 14, 2020 NAA request for Costa Sur, PREPA referenced reporting requirements under the 1999 Consent Decree. However, PREPA also requires relief for non-Consent Decree reporting requirements for Costa Sur, and respectfully requests that EPA extend the NAA to cover the reporting requirements identified in Table 1.

[9] Prior to the earthquakes, Palo Seco Unit 1 had been out-of-service since July 25, 2019, and had not exceeded the heat-input limit for the block period. In response to the earthquakes, Palo Seco Unit 1 came back online on January 25, 2020.

Facility	Unit	Clean Air Act Requirements and Title V Permit Obligations
	3 (216 MW)	MATS requirements related to PM emissions limitation of 0.030 lb/MMBTU, and the tune-up work practice standard, as well as associated Palo Seco Title V Permit conditions related to MATS compliance.
	4 (216 MW)	MATS requirements related to PM emissions limitation of 0.030 lb/MMBTU, as well as associated Palo Seco Title V Permit conditions related to MATS compliance.
Palo Seco GTs	GT 1-1 (21 MW) GT 1-2 (21 MW)	Palo Seco Title V permit conditions related to fuel consumption limits (barrels per year), which will directly impact annual emissions.
Aguirre	1 (450 MW) 2 (450 MW)	MATS requirements related to the particulate matter ("PM") emissions limit of 0.030 lb/MMBTU, and the startup/shutdown work practice standard, as well as associated Aguirre Title V Permit conditions related to MATS compliance.
Aguirre combined cycle gas turbines ("CCGT")	CCGT 1-1 (50 MW) CCGT 1-2 (50 MW) CCGT 1-3 (50MW) CCGT 1-4 (50 MW) CCGT 2-1 (50 MW) CCGT 2-3 (50 MW) CCGT 2-4 (50 MW)	Aguirre Title V permit conditions related to fuel consumption limits (barrels per year), which will directly impact annual emissions.
Aguirre GTs	GT 2-2 (21 MW)*	Aguirre Title V permit conditions related to fuel consumption limits (barrels per year), which will directly impact annual emissions.
Mayaguez	GT-5 (54 MW) GT-6 (54 MW) GT-7 (54 MW) GT-8 (54 MW)	Mayaguez Title V permit conditions related to fuel consumption limits (barrels per year), which will directly impact annual emissions.
Cambalache Peakers	2 (83 MW) 3 (83 MW)	Cambalache Title V permit conditions related to fuel consumption limits (barrels per year), which will directly impact annual emissions.

Facility	Unit	Clean Air Act Requirements and Title V Permit Obligations
Daguao Peakers	GT 1-1 (21 MW) GT 1-2 (21 MW)	Daguao Title V permit conditions related to fuel consumption limits (barrels per year), which will directly impact annual emissions.
Yabucoa Peakers	GT 1-1 (21 MW)	Yabucoa Title V permit conditions related to fuel consumption limits (barrels per year), which will directly impact annual emissions.
Jobos Peakers	GT 1-2 (21 MW)	Jobos Title V permit conditions related to fuel consumption limits (barrels per year), which will directly impact annual emissions.
Vega Baja Peakers	GT 1-2 (21 MW)*	Vega Baja Title V permit conditions related to fuel consumption limits (barrels per year), which will directly impact annual emissions.

In its original January 14, 2020 NAA request, PREPA explained that it was not, at that time, seeking to cover PREPA generation units that were currently offline, but that were expected to return to service in the near future. PREPA stated that, if those units should become available, PREPA might need to seek additional relief from EPA in the form of further no action assurance(s). Since PREPA's original NAA request, several additional generation units have come back online. PREPA requests that these units be included in the NAA extension, as identified in Table 1 above. These additional units include Vega Baja Unit GT 1-2 and Aguirre Unit GT 2-2, and are demarcated with an asterisk.

Additional generation units may return to service. PREPA is not including those units in this request, but notes that it may need to seek additional relief from EPA should those units become available. PREPA will use its best efforts to keep EPA abreast of the restoration of its generation units and its progress towards a resumption of normal operation.

PREPA knows that EPA is taking all possible measures to assist the Commonwealth in responding to, and recovering from, the earthquakes, and we stand ready to support the agency in those measures. We look forward to hearing from you soon.

Respectfully submitted,



Adam M. Kushner

Partner
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Enclosures: Attachment A – Generation Outage Schedule as of April 28, 2020

Cc: Mr. Eric Schaaf, Regional Counsel, United States Environmental Protection Agency, Region 2

Ms. Carmen Guerrero, Director, Caribbean Environmental Protection Division, United States Environmental Protection Agency, Region 2

Ms. Liliana Villatora, Chief, Air Branch, Office of Regional Counsel, United States Environmental Protection Agency, Region 2

Ms. Sara Froikin, United States Environmental Protection Agency, Region 2

Ms. Mary McHale, United States Environmental Protection Agency, Region 2

Mr. Hector Velez, United States Environmental Protection Agency, Region 2

Mr. Luis Sierra, Puerto Rico Department of Natural and Environmental Resources

ATTACHMENT A
Generation Outage Schedule as of April 28, 2020

Generation Outage Schedule

Update on 28 April 2020

UNIT	DATE OUT	DATE IN	DESCRIPTION	EXPECTED CAP (MW)
CS 5	7-Jan-20	14-Aug-20	Earthquake Repair & Environmental Maintenance	410
MAYA 2	7-Jan-20	5-Jun-20	Turbine Bearing Repair	50
MAYA 4	7-Jan-20	12-Jun-20	Turbine Bearing Repair	50
SJCC STG 6	26-Jan-20	31-Jul-20	Generator Repair	50
SJCC CT 6	29-Feb-20	2-May-20	Natural Gas Conversion & Commissioning	150
AES 2	6-Jun-20	11-Jul-20	Annual Maintenance	227
CAMB 3	14-Jun-20	20-Jun-20	Combustion Inspection	80
SJCC CT 6	26-Jul-20	2-Aug-20	San Juan CC STG 6 Generator Repair	150
PS 3	2-Aug-20	30-Oct-20	Environmental Maintenance & Condenser Repair	180
ECO CT 2	1-Oct-20	10-Oct-20	Annual Maintenance	257
AES 1	18-Oct-20	18-Nov-20	Annual Maintenance [(1)]	227
SJ CC 5	14-Nov-20	14-Feb-21	Catalytic Installation	200
SJ 7	14-Nov-20	3-Jan-21	Environmental Maintenance (Due on 22 Nov 2020)	70
PS 4	12-Dec-20	24-Jan-20	Environmental Maintenance (Due on 12 Dec 2020)	165

(1) Estimate date. Annual maintenance under evaluation for outage reschedule.

SCENARIO 1: Aguirre 2 online on May 2020

UNIT	DATE OUT	DATE IN	DESCRIPTION	EXPECTED CAP (MW)
AG 2	8-Apr-19	16-May-20	Bearing 4 Vibrations Repair	450
AG 1	17-May-20	31-May-20	MPT Maintenance	400
AG 2	14-Nov-20	10-Jan-21	Generator Repair	450

SCENARIO 2: Aguirre 2 online on August 2020

UNIT	DATE OUT	DATE IN	DESCRIPTION	EXPECTED CAP (MW)
AG 2	8-Apr-19	31-Aug-20	Bearing 4 Vibrations Repair & Geneartor Repair	450
AG 1	TDB 2020		MPT Maintenance	400

Repair, Maintenance and Outages under Evaluation

UNIT	DATE OUT	DATE IN	DESCRIPTION	EXPECTED CAP (MW)
AG 1	TBD 2021		Environmental Maintenance (Due on 19 Aug 2020)	450
CS 6	7-Jan-20	TBD	Earthquake Repair, Environmental Maintenance & Turbine Inspection	410

Prepared by Gary F. Soto Fernández, Electric System Operation Division Manager.

Generation Outage Schedule

Update on 28 April 2020

UNIT	TYPE	MAX CAP	AVAIL CAP
SJCC Gas 5	Base	160	150
SJCC STM 5	Base	60	50
SJCC Gas 6	Base	160	150
SJCC STM 6	Base	60	50
SJ 7	Limited Use	100	70
SJ 9	Base	100	90
PS 1	Limited Use	85	70
PS 3	Base	216	150
PS 4	Base	216	150
CS 5	Base	410	410
AG 1	Base	450	400
AG 2	Base	450	450
ECO CT 1	Base	167	167
ECO CT 2	Base	167	167
ECO STG	Base	173	173
AES 1	Base	227	227
AES 2	Base	227	227
		3428	3151

TOTALS

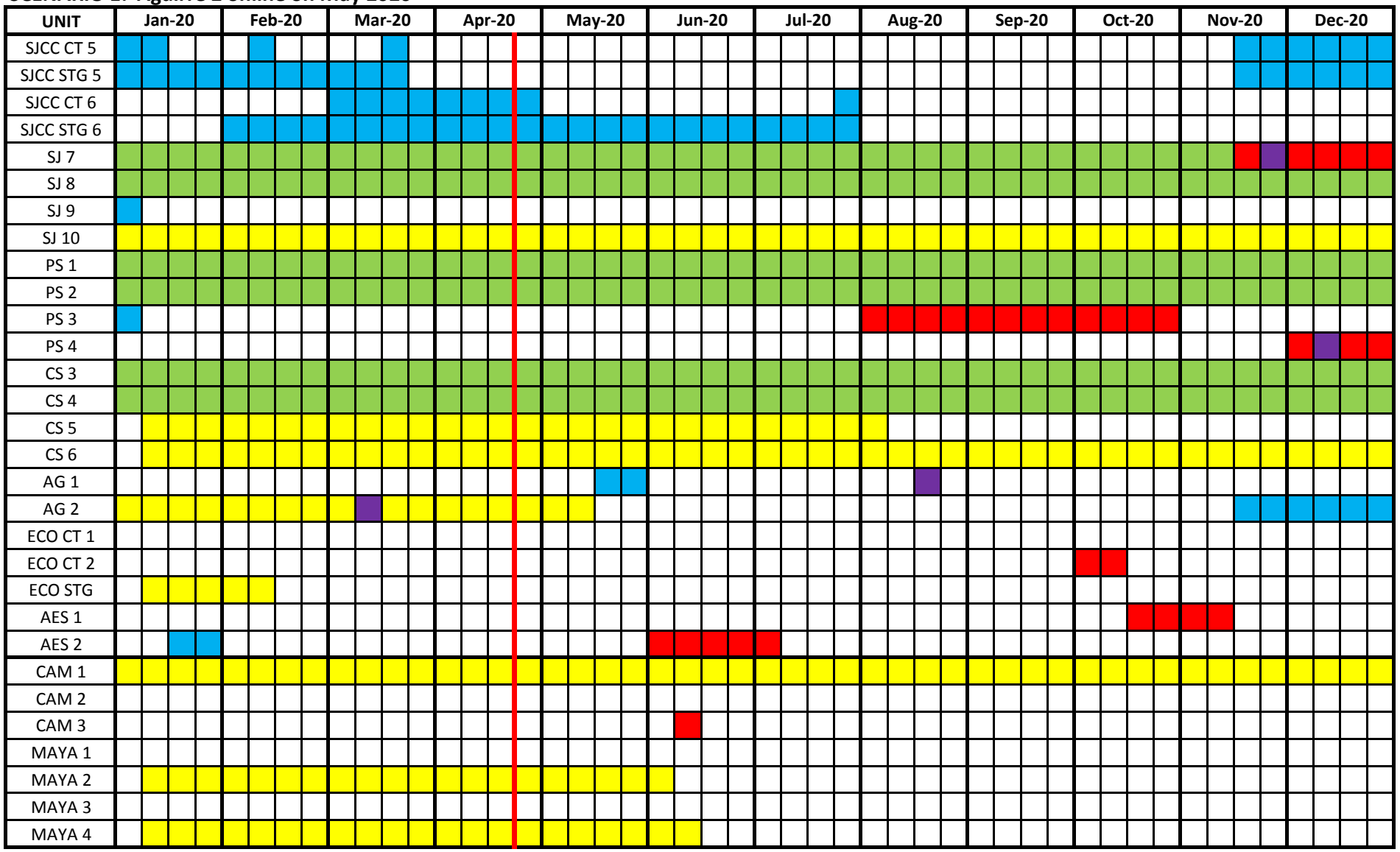
TYPE	MAX CAP	AVAIL CAP
Base	3243	3011
Limited Use	185	140
Peakers	1080	961
	4508	4112

UNIT	TYPE	MAX CAP	AVAIL CAP
AGCC 1-1	Peakers	50	50
AGCC 1-2	Peakers	50	50
AGCC 1-3	Peakers	50	50
AGCC 1-4	Peakers	50	50
AGCC STG 1	Peakers	96	35
AGCC 2-1	Peakers	50	50
AGCC 2-3	Peakers	50	50
AGCC 2-4	Peakers	50	50
CAMB 2	Peakers	83	75
CAMB 3	Peakers	83	75
MAYA 1	Peakers	55	50
MAYA 2	Peakers	55	50
MAYA 3	Peakers	55	50
MAYA 4	Peakers	55	50
DAG 1-1	Peakers	21	20
DAG 1-2	Peakers	21	20
AG 2-2	Peakers	21	20
PS 1-1	Peakers	21	20
PS 1-2	Peakers	21	20
PS MP 1	Peakers	27	22
PS MP 2	Peakers	27	22
PS MP 3	Peakers	27	22
JOB 1-2	Peakers	21	20
YAB 1-1	Peakers	21	20
VB 1-2	Peakers	21	20
		1080	961

Generation Outage Schedule

Update on 28 April 2020

SCENARIO 1: Aguirre 2 online on May 2020



Enviromental Maintenance/Schedule Annual Outage

Forced Outage

Programmed Maintenance

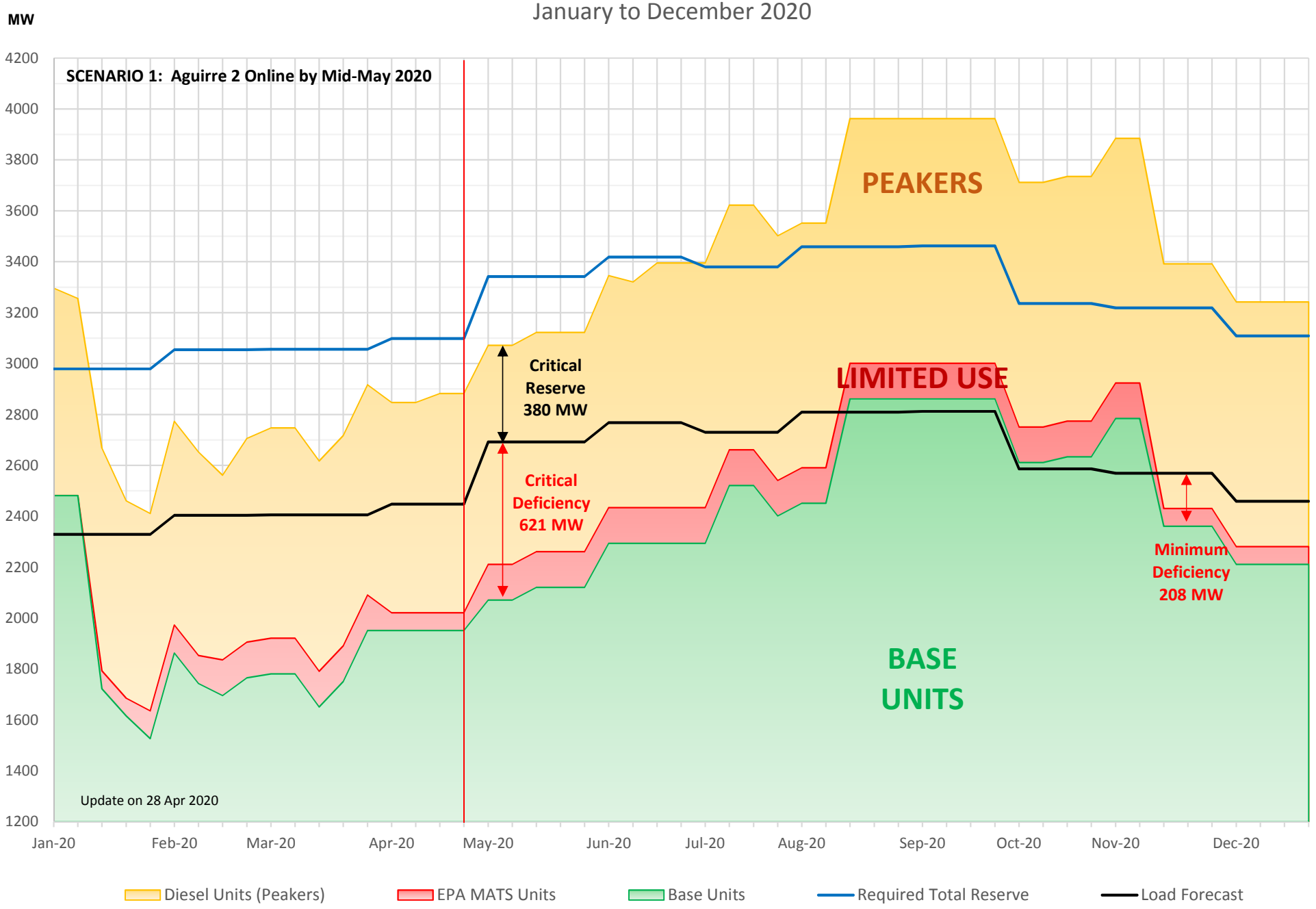
Limited Use EPA MATS Units

Due Week for EPA Required Enviromental Maintenance

Generation Outage Schedule

Load Forecast vs Generation Availability

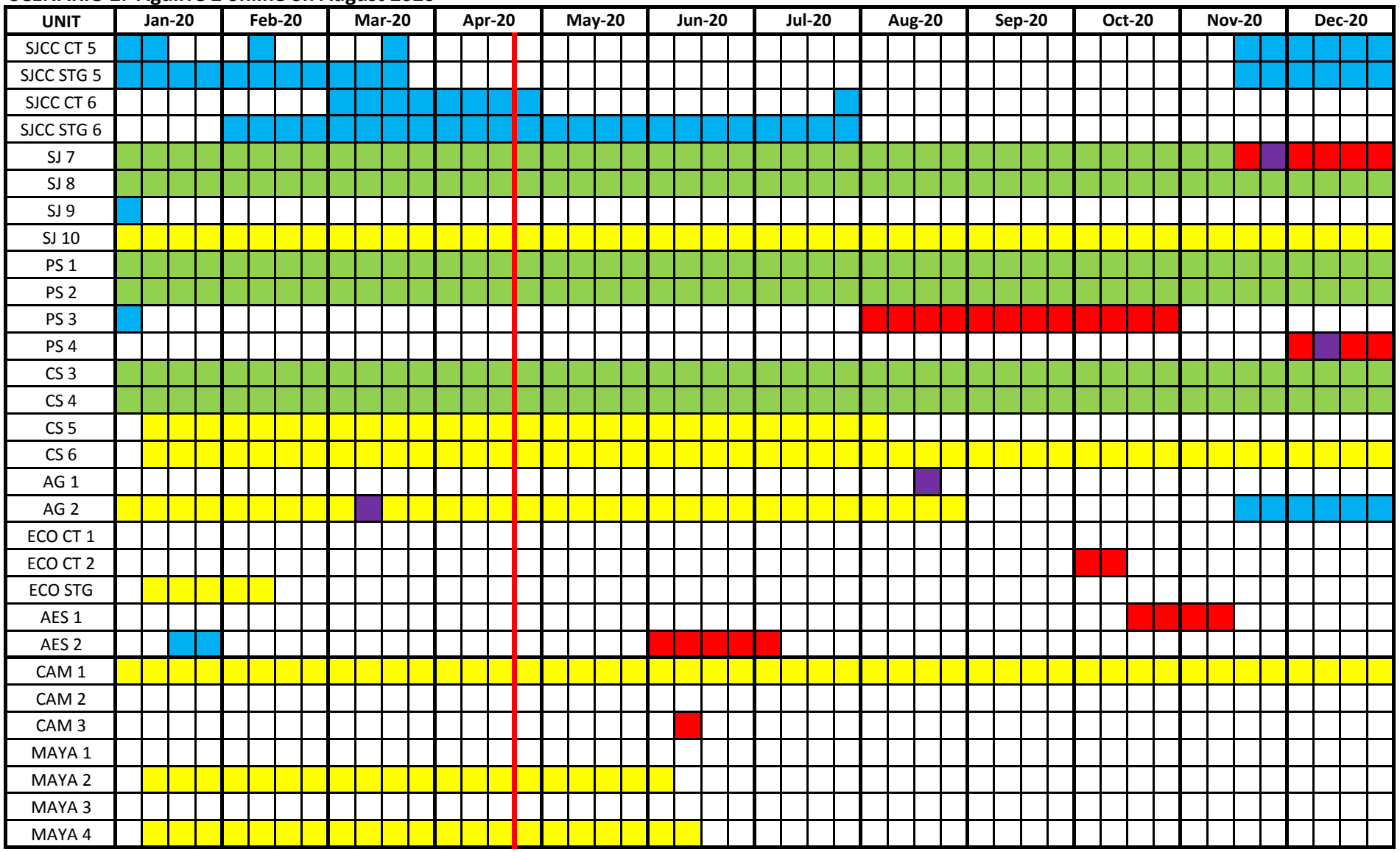
January to December 2020



Generation Outage Schedule

Update on 28 April 2020

SCENARIO 2: Aguirre 2 online on August 2020



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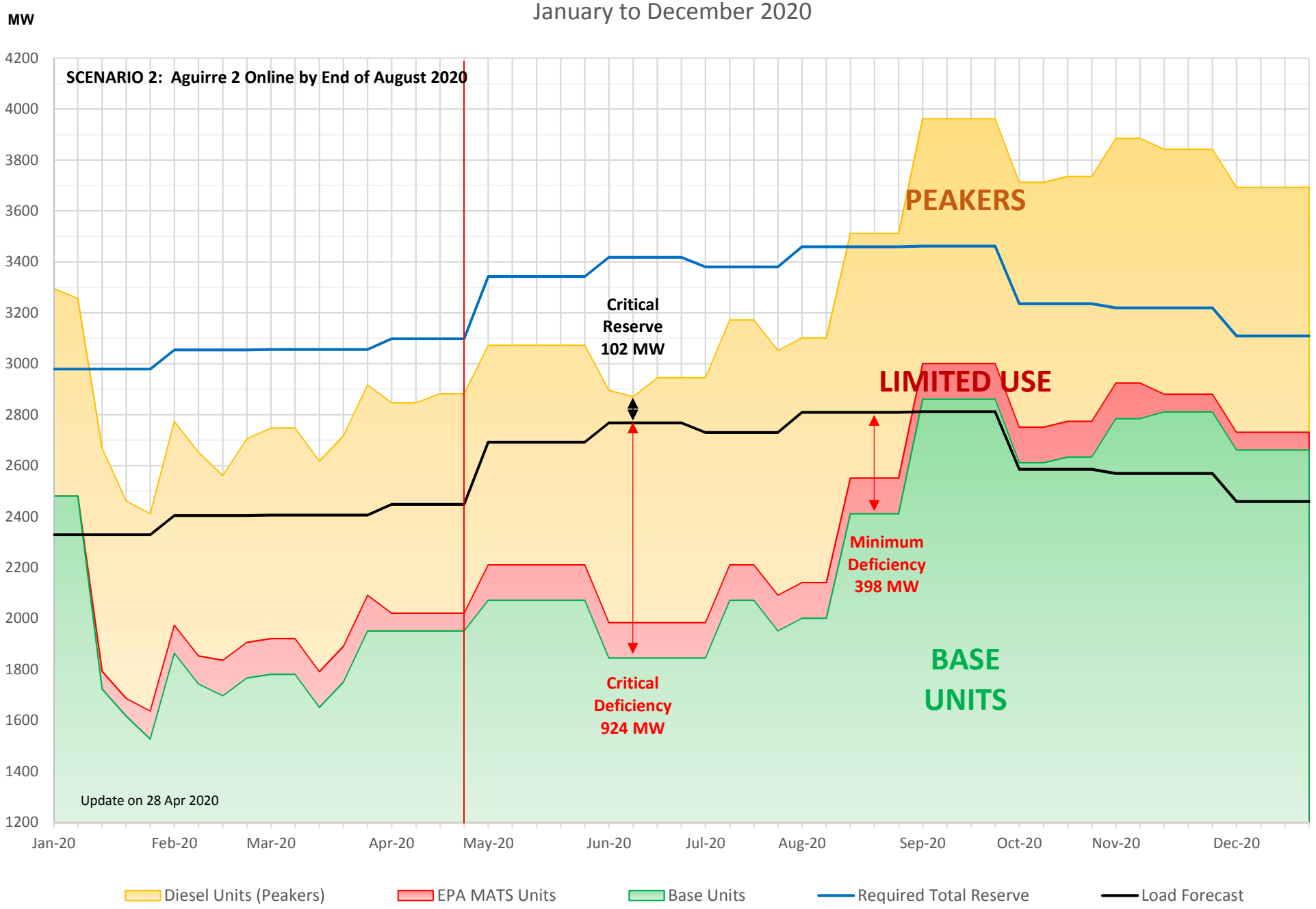

TOLLING AGREEMENT
BETWEEN THE UNITED STATES OF AMERICA AND
THE PUERTO RICO ELECTRIC POWER AUTHORITY
FOR CLAIMS ARISING UNDER THE CLEAN AIR ACT

The United States, on behalf of the United States Environmental Protection Agency, contends that it has civil causes of action against the Puerto Rico Electric Power Authority ("PREPA"), pursuant to the Clean Air Act ("Act"), 42 U.S.C. §§ 7401-7431, relating to alleged violations of 40 CFR Part 63, Subpart UUUUU, the National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-fired Electric Steam Generating Units, at PREPA's Aguirre Power Plant, located in Salinas, Puerto Rico; Costa Sur (also referred to as "South Coast") Power Plant, located in Guayanilla, Puerto Rico; Palo Seco Power Plant, located in Cataño, Puerto Rico; and San Juan Power Plant in San Juan, Puerto Rico (the "Tolled Claims").

The United States and PREPA ("Parties") enter into this Tolling Agreement (the "Tolling Agreement") to facilitate settlement negotiations between the Parties within the time period provided by this Tolling Agreement, without thereby altering the claims or defenses available to any Party hereto, except as specifically provided herein.

The Parties, in consideration of the covenants set out herein, agree as follows:

1. Notwithstanding any other provision of this Tolling Agreement, the period commencing on March 20, 2020, and ending on March 19, 2021, inclusive (the "Tolling Period"), shall not be included in computing the running of any statute of limitations potentially applicable to any action brought by the United States on the Tolled Claims.

2. Any defenses of laches, estoppel, or waiver, or other similar equitable or statutory defenses based upon the running or expiration of any time period shall not include the Tolling Period for the Tolled Claims.

3. PREPA shall not assert, plead, or raise against the United States in any fashion, whether by answer, motion or otherwise, any defense of laches, estoppel, or waiver, or other similar equitable or statutory defense based on the running of any statute of limitations or the passage of time during the Tolling Period in any action brought on the Tolled Claims.

4. This Tolling Agreement does not constitute any admission or acknowledgment of any fact, conclusion of law, or liability by any Party to this Tolling Agreement, nor does this Tolling Agreement constitute any admission or acknowledgment on the part of the United States that any statute of limitations, or similar defense concerning the timeliness of commencing a civil action, is applicable to the Tolled Claims. The United States reserves the right to assert that no statute of limitations applies to any of the Tolled Claims and that no other defense based upon the timeliness of commencing a civil action is applicable.

5. This Tolling Agreement may not be modified except in a writing signed by all the Parties. The Parties acknowledge that this Tolling Agreement may be extended for such period of time as the Parties agree to in writing.

6. It is understood that the United States may terminate settlement negotiations and commence suit at any time, upon provision of written notice by mail to PREPA. Where the United States elects to terminate negotiations under this Paragraph, the Tolling Period shall continue for the duration set forth in Paragraph 1. Nothing herein shall preclude the commencement of any action by the United States to protect the public health, welfare, or the environment without provision of advance notice.

7. This Tolling Agreement does not limit in any way the nature or scope of any claims that could be brought by the United States in a complaint against PREPA or the date on which the United States may file such a complaint, except as expressly stated herein.

8. This Agreement is not intended to affect any claims by or against third parties.

9. PREPA must preserve and maintain, during the pendency of the Tolling Period, and for a minimum of 90 days after termination of the Tolling Period, at least one legible copy of all documents and other materials subject to discovery under the Federal Rules of Civil Procedure and relating to the Tolled Claims, regardless of any corporate or document retention policy to the contrary.

10. This Tolling Agreement is effective upon execution by the Parties, and without the requirement of filing with the Court, and may be signed in counterparts, electronically transmitted or otherwise delivered, each of which will be deemed an original.

11. This Tolling Agreement contains the entire agreement between the Parties, and no statement, promise, or inducement made by any Party to this Tolling Agreement that is not set forth in this Tolling Agreement shall be valid or binding, nor shall it be used in construing the terms of this Tolling Agreement as set forth herein.

12. The undersigned representative of each of the Parties certifies that he or she is fully authorized to enter into the terms and conditions of this Tolling Agreement and to legally bind such party to all terms and conditions of this document. This Agreement shall be binding upon the United States, acting on behalf of the United States Environmental Protection Agency, and upon PREPA and its affiliates, successors and assigns.

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SIGNATURES

The United States, on behalf of the United States Environmental Protection Agency, consents to the terms and conditions of this Tolling Agreement by its duly authorized representatives on this ____ day of March, 2020.

By: _____
Henry Friedman
Assistant Section Chief
Steven A. Keller
Trial Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice

PREPA consents to the terms and conditions of this Tolling Agreement by its undersigned duly authorized representative on this 16 day of March, 2020.

By: _____
[insert name and title]
José F. Ortiz Vázquez
Chief Executive Officer
Puerto Rico Electric Power Authority

Exhibit C

[This exhibit has been submitted under seal.]

Exhibit D

[The .xsls version of this file will be shared via email.]

Generation Outage Schedule

Update on 5 May 2020

These analysis is an overview of current scenarios that have a significant effect in the generation outage schedule for year 2020.

The generation fleet is defined by the following groups:

1. Base Units - Units online all the time, except for forced, programmed or schedule outages.
2. Limited Use - Base units with generation constrains based on EPA MATS Rules.
3. Peakers - Gas turbines or hydroelectric units use mostly to cover the generation necessities during peak demand hours.

For the generation accountability, the maximum capacity of each units includes a 12 % capacity factor.

PREPA requests for EPA waiver are still under evaluation, and units affected don't include these constrains.

Schedule Outages Used on All Scenarios

UNIT	DATE OUT	DATE IN	DESCRIPTION
MAYA 2	7-Jan-20	5-Jun-20	Turbine Bearing Repair
MAYA 4	7-Jan-20	12-Jun-20	Turbine Bearing Repair
SJCC STG 6	26-Jan-20	31-Jul-20	Generator Repair
AES 2	6-Jun-20	11-Jul-20	Annual Maintenance
CAMB 3	14-Jun-20	20-Jun-20	Combustion Inspection
SJCC CT 6	26-Jul-20	2-Aug-20	San Juan CC STG 6 Generator Repair
PS 3	2-Aug-20	30-Oct-20	Environmental Maintenance & Condenser Repair
ECO CT 2	1-Oct-20	10-Oct-20	Annual Maintenance
AES 1	18-Oct-20	18-Nov-20	Annual Maintenance [(1)]
SJ CC 5	14-Nov-20	14-Feb-21	Catalytic Installation
SJ 7	14-Nov-20	3-Jan-21	Environmental Maintenance (Due on 22 Nov 2020)
PS 4	12-Dec-20	24-Jan-20	Environmental Maintenance (Due on 12 Dec 2020)

SCENARIO 1: Aguirre 2 & Costa Sur 5 Out of Service for Year 2020

UNIT	DATE OUT	DATE IN	DESCRIPTION
AG 2	8-Apr-19	-----	Bearing 4 Vibrations Repair & Generator Repair
CS 5	7-Jan-20	-----	Earthquake Repair & Environmental Maintenance
AG 1	-----	-----	MPT & Environmental Maintenance

SCENARIO 2: Aguirre 2 Out of Service for year 2020 & Costa Sur 5 Online by Mid-August

UNIT	DATE OUT	DATE IN	DESCRIPTION
AG 2	8-Apr-19	-----	Bearing 4 Vibrations Repair & Geneartor Repair
CS 5	7-Jan-20	15-Aug-20	Earthquake Repair & Environmental Maintenance
AG 1	14-Nov-20	3-Jan-21	MPT & Environmental Maintenance

SCENARIO 3: Aguirre 2 Online by Mid-September & Costa Sur 5 Online by Mid-August

UNIT	DATE OUT	DATE IN	DESCRIPTION
AG 2	8-Apr-19	20-Sep-20	Bearing 4 Vibrations Repair & Generator Repair
CS 5	7-Jan-20	15-Aug-20	Earthquake Repair & Environmental Maintenance
AG 1	14-Nov-20	3-Jan-21	MPT & Environmental Maintenance

SCENARIO 4: Aguirre 2 Online by Mid-September & Costa Sur 5 Offline for Year 2020

UNIT	DATE OUT	DATE IN	DESCRIPTION
AG 2	8-Apr-19	20-Sep-20	Bearing 4 Vibrations Repair & Generator Repair
CS 5	7-Jan-20	-----	Earthquake Repair & Environmental Maintenance
AG 1	14-Nov-20	3-Jan-21	MPT & Environmental Maintenance

SCENARIO 5: Aguirre 2 Online by Mid-May & Costa Sur 5 Online by Mid-August

UNIT	DATE OUT	DATE IN	DESCRIPTION
AG 2	8-Apr-19	23-May-20	Bearing 4 Vibrations Repair
CS 5	7-Jan-20	15-Aug-20	Earthquake Repair & Environmental Maintenance
AG 1	15-Aug-20	3-Oct-20	MPT & Environmental Maintenance
AG 2	14-Nov-20	10-Jan-21	Generator Repair

SCENARIO 6: Aguirre 2 Online by Mid-May & Costa Sur 5 Offline for Year 2020

UNIT	DATE OUT	DATE IN	DESCRIPTION
AG 2	8-Apr-19	23-May-20	Bearing 4 Vibrations Repair
CS 5	7-Jan-20	-----	Earthquake Repair & Environmental Maintenance
AG 1	15-Aug-20	3-Oct-20	MPT & Environmental Maintenance
AG 2	14-Nov-20	10-Jan-21	Generator Repair

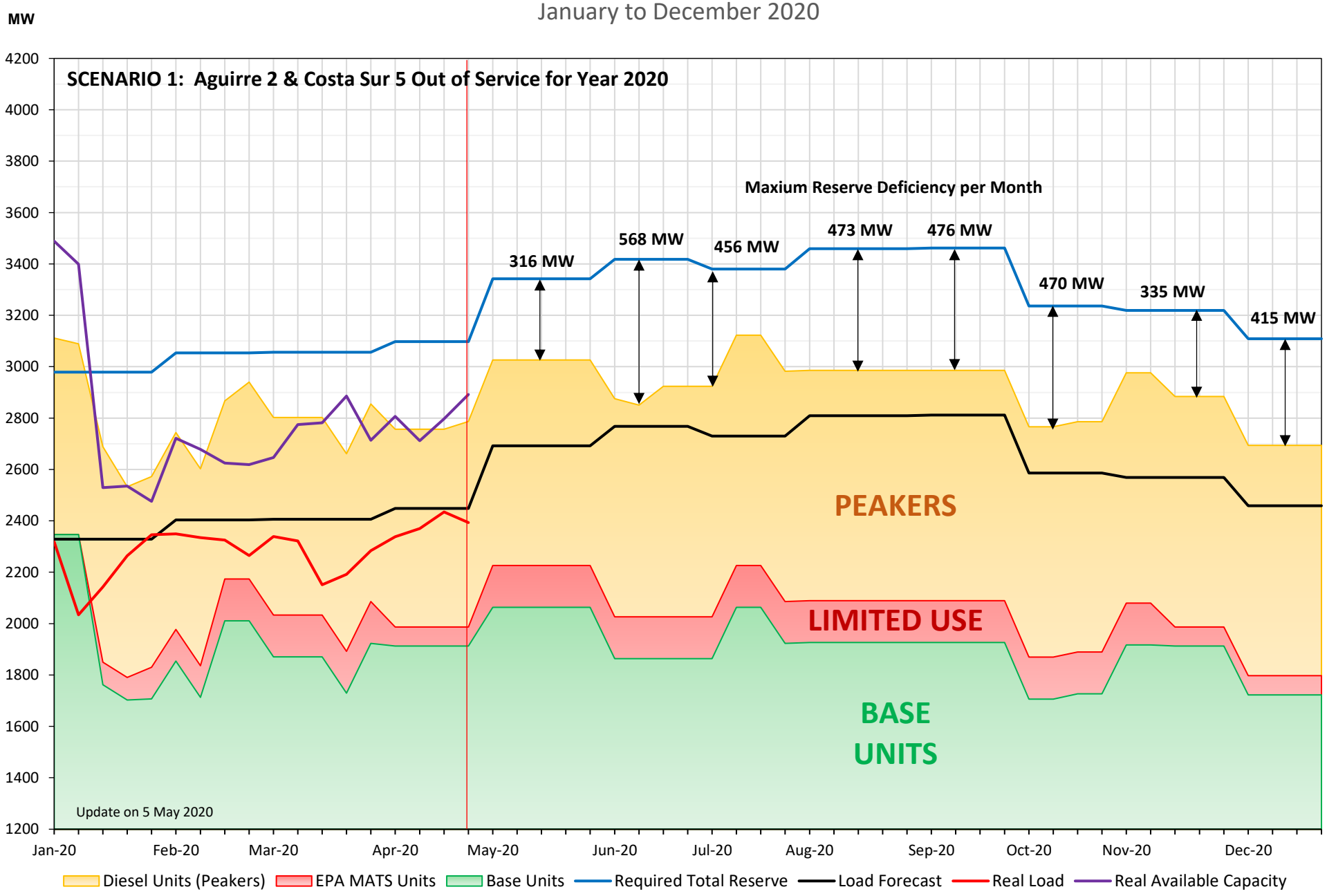
(1) Estimate date. Annual maintenance under evaluation for outage reschedule.

Prepared by Gary F. Soto Fernández, Electric System Operation Division Manager.

Generation Outage Schedule

Load Forecast vs Generation Availability

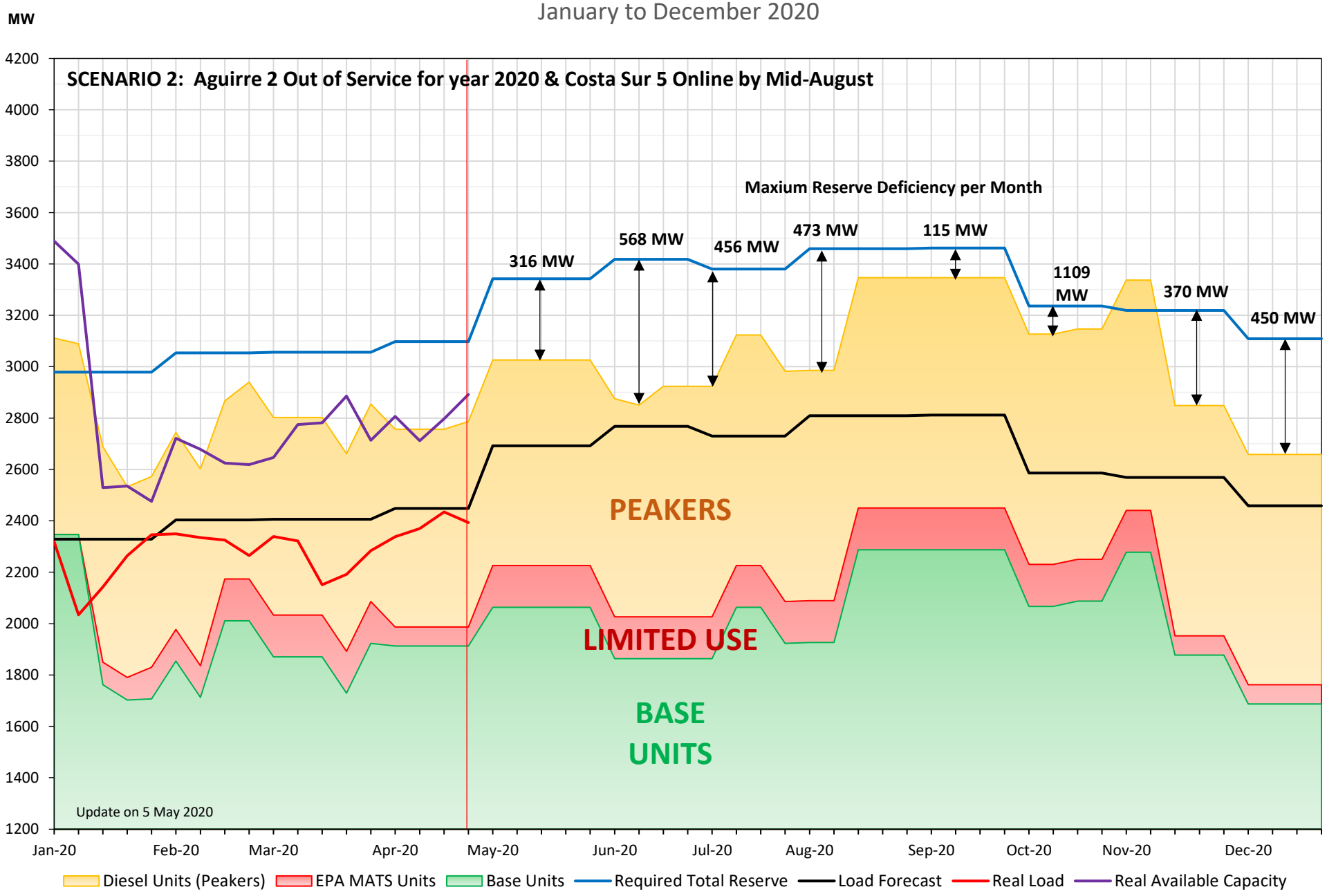
January to December 2020



Generation Outage Schedule

Load Forecast vs Generation Availability

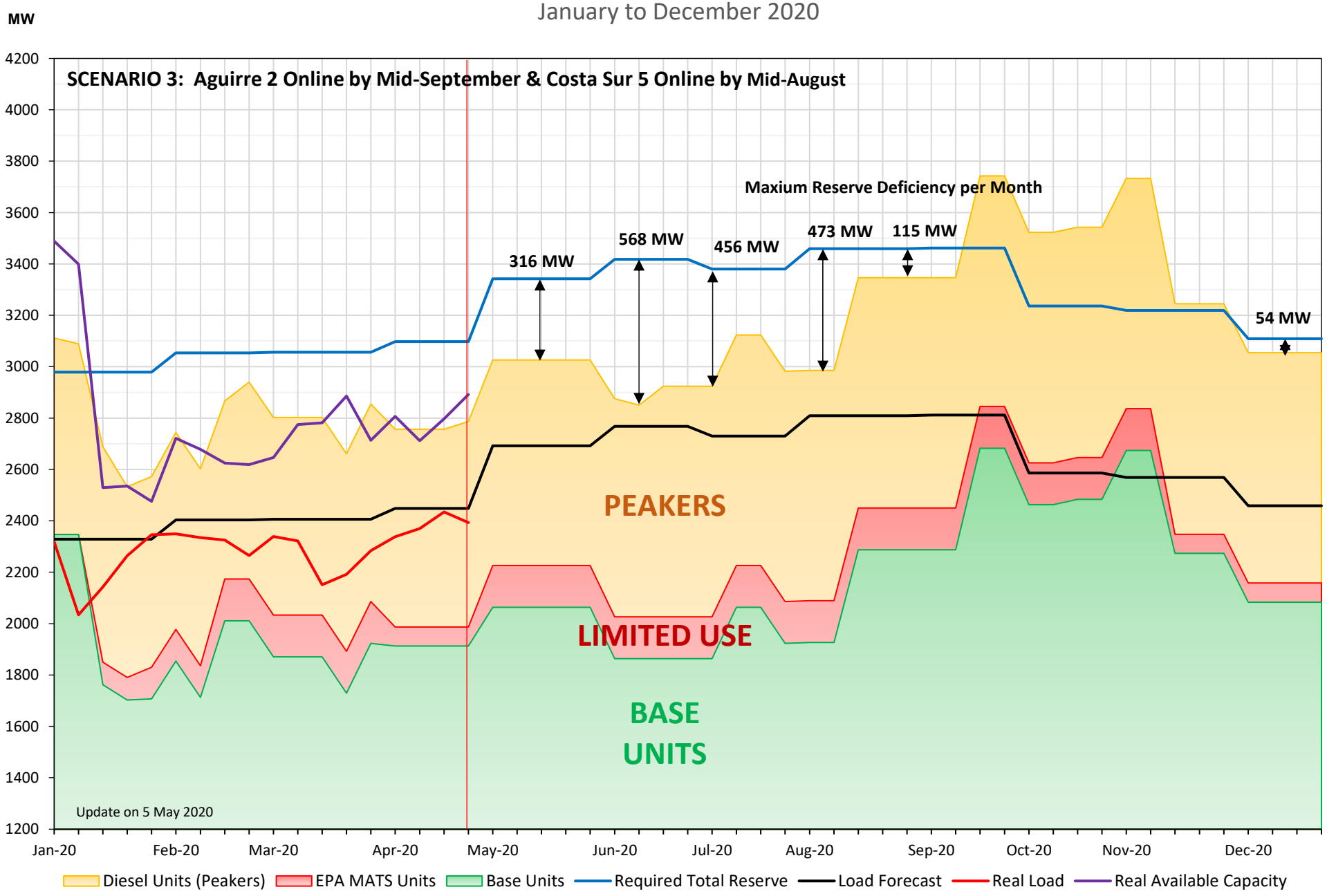
January to December 2020



Generation Outage Schedule

Load Forecast vs Generation Availability

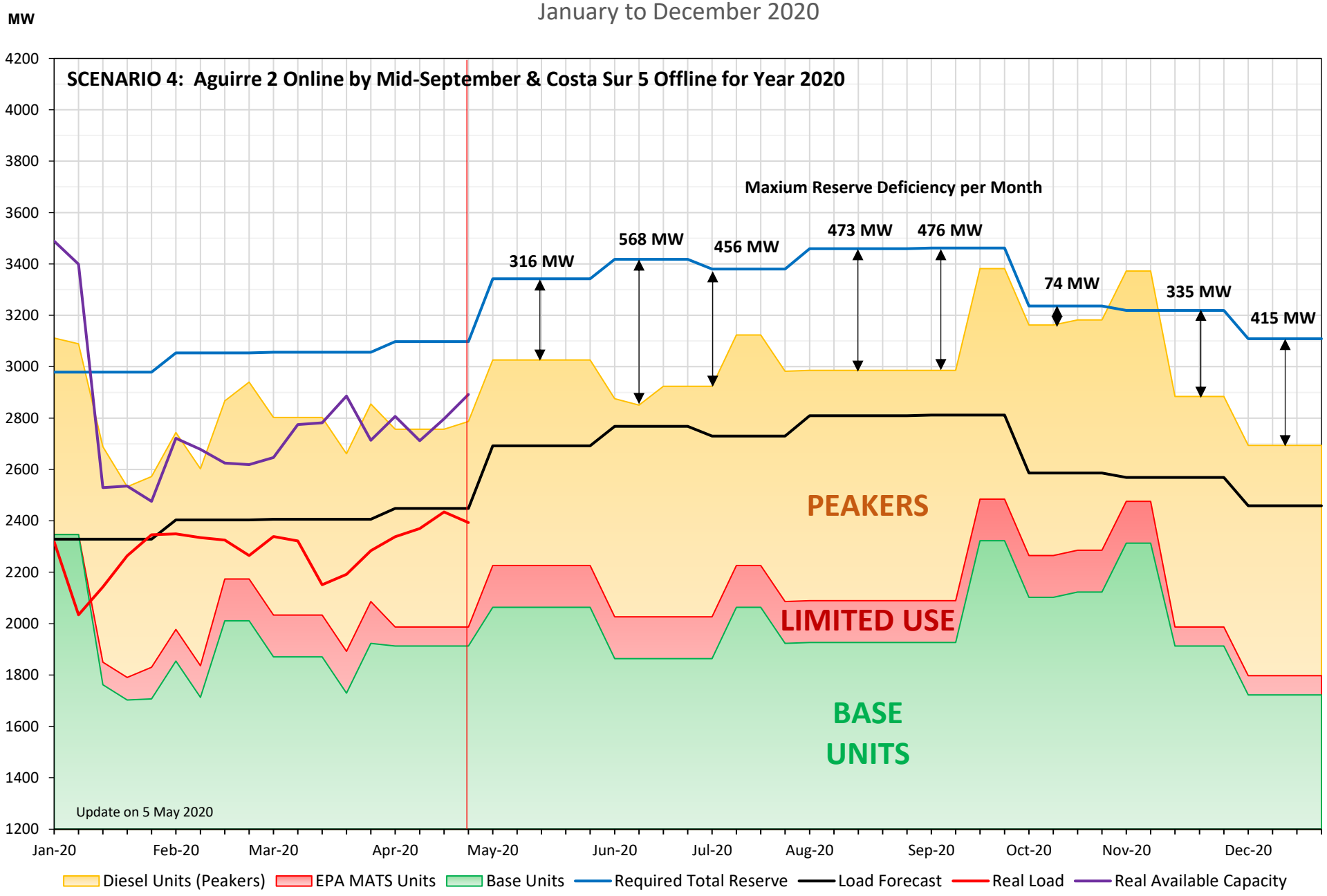
January to December 2020



Generation Outage Schedule

Load Forecast vs Generation Availability

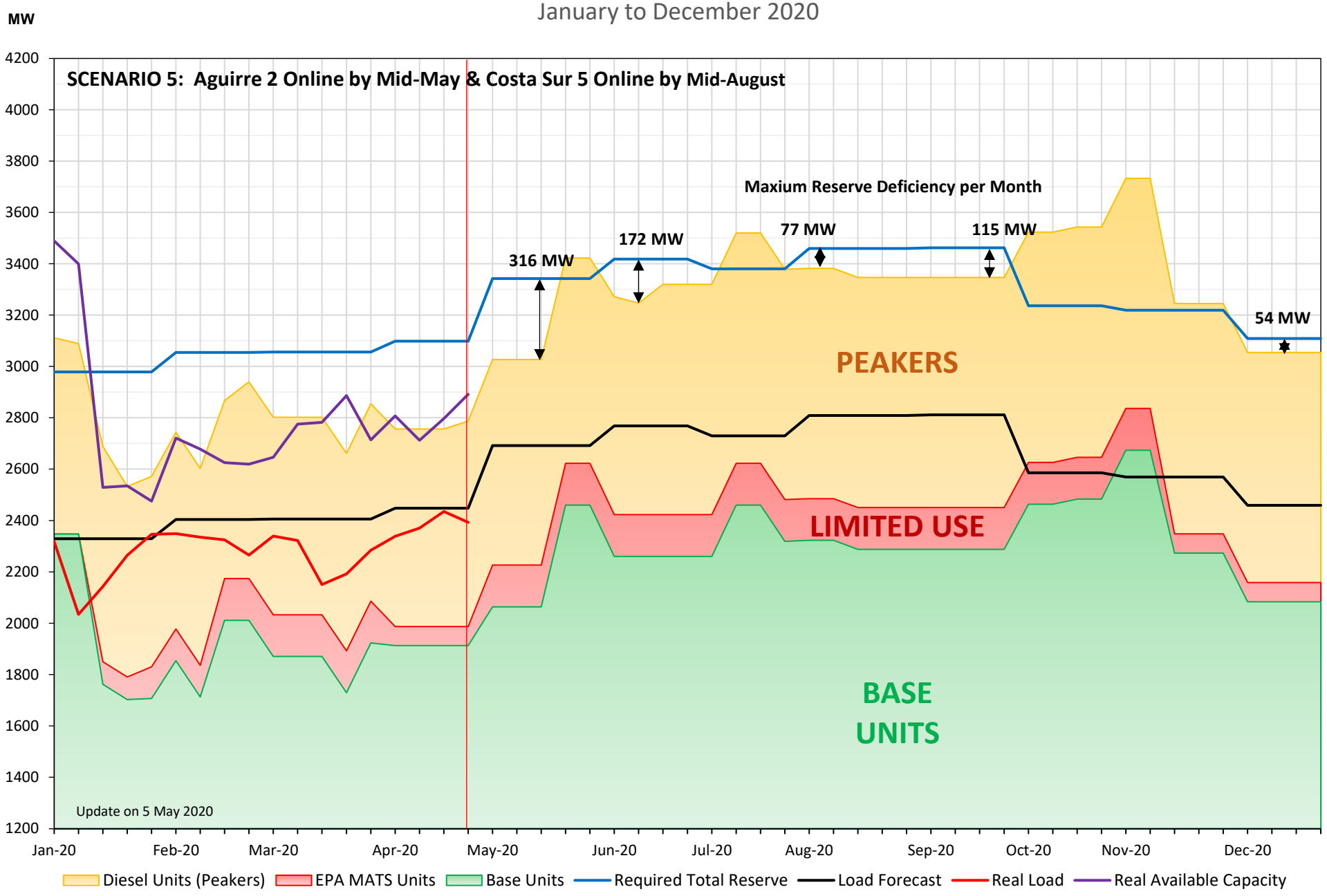
January to December 2020



Generation Outage Schedule

Load Forecast vs Generation Availability

January to December 2020



Generation Outage Schedule

Load Forecast vs Generation Availability

January to December 2020

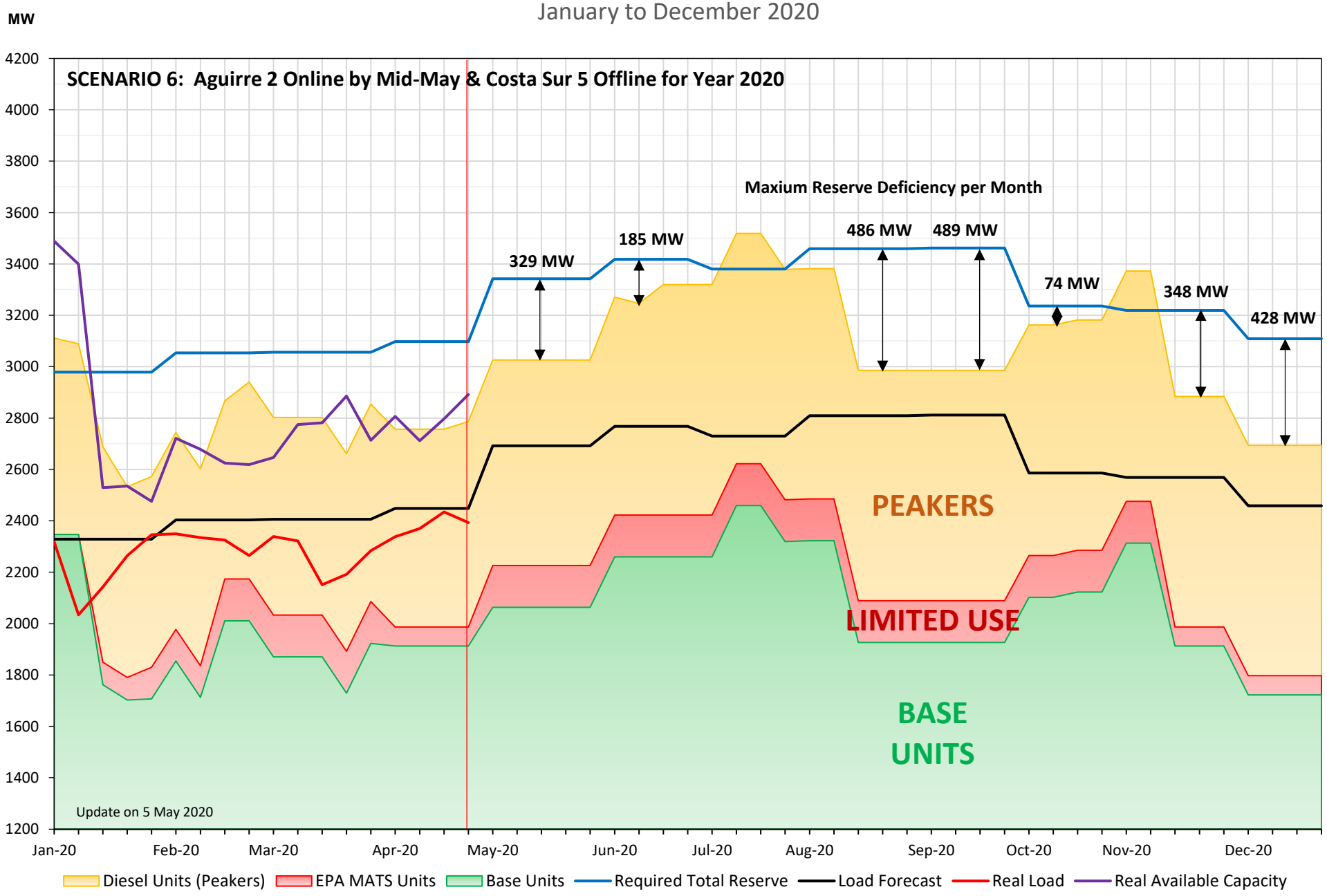


Exhibit E

[The .xsls version of this file will be shared via email.]

Generation Outage Schedule

Update on 5 May 2020

Base Units - Units online all the time, except for forced, programmed or schedule outages.

Limited Use - Base units with generation constrains based on EPA MATS Rules.

Peakers - Gas turbines or hydroelectric units use mostly to cover the generation necessities during peak demand hours.

Under the ACTUAL USE Column, some units are identified as Base Units, considering that those units are maintening an actual 24/7 operation.

Units identified as Peakers under the ACTUAL USE Column, are use on a regular basis for spinning and non-spinning reserve requierements.

Depending on total generation availability, units at the Aguirre Combined Cycle (AGCC) can be considered either way.

UNIT	TYPE	ACTUAL USE	MAX CAP
SJCC Gas 5	Base	Base	160
SJCC STM 5	Base	Base	60
SJCC Gas 6	Base	Base	160
SJCC STM 6	Base	Base	60
SJ 7	Limited Use	Limited Use	100
SJ 9	Base	Base	100
PS 1	Limited Use	Limited Use	85
PS 3	Base	Base	216
PS 4	Base	Base	216
CS 5	Base	Base	410
AG 1	Base	Base	450
AG 2	Base	Base	450
ECO CT 1	Base	Base	167
ECO CT 2	Base	Base	167
ECO STG	Base	Base	173
AES 1	Base	Base	227
AES 2	Base	Base	227
AGCC 1-1	Peakers	*Peakers/Base*	50
AGCC 1-2	Peakers	*Peakers/Base*	50
AGCC 1-3	Peakers	*Peakers/Base*	50
AGCC 1-4	Peakers	*Peakers/Base*	50
AGCC STG 1	Peakers	*Peakers/Base*	96
AGCC 2-1	Peakers	*Peakers/Base*	50
AGCC 2-3	Peakers	*Peakers/Base*	50
AGCC 2-4	Peakers	*Peakers/Base*	50

UNIT	TYPE	ACTUAL USE	MAX CAP
CAMB 2	Peakers	**Peakers**	83
CAMB 3	Peakers	**Peakers**	83
MAYA 1	Peakers	**Peakers**	55
MAYA 2	Peakers	**Peakers**	55
MAYA 3	Peakers	**Peakers**	55
MAYA 4	Peakers	**Peakers**	55
DAG 1-1	Peakers	**Peakers**	21
DAG 1-2	Peakers	**Peakers**	21
AG 2-2	Peakers	**Peakers**	21
PS 1-1	Peakers	Base	21
PS 1-2	Peakers	Base	21
PS MP 1	Peakers	Base	27
PS MP 2	Peakers	Base	27
PS MP 3	Peakers	Base	27
JOB 1-2	Peakers	**Peakers**	21
YAB 1-1	Peakers	**Peakers**	21
VB 1-2	Peakers	**Peakers**	21

Exhibit F

[The .xsls version of this file will be shared via email.]

PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Wednesday, April 1, 2020

UNITS	MAXIMUM CAPACITY	HOUR																							TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	5		1	1	1	1	2	2	2	2	17	1				**18**	**18**
Toro Negro 1-3	1.50									1	1	1	1	5		1	1	1	1	1	2	2	2	16	2				**18**	**18**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																				6	6	6	18	6	3			**27**	**27**
Dos Bocas 3	5.00																				6	6	6	18	6	3			**27**	**27**
Yauco 1-1	25.00																													
Yauco 2-1	4.50												1	1		2	2	2	2	2	2	2	2	17	2	2			**21**	**21**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Rio Blanco 1	2.50																													
Rio Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**2**	**3**	**11**	**4**	**4**	**4**	**4**	**5**	**18**	**18**	**18**	**86**	**17**	**8**			**111**	**111**
THERMOELECTRICS																														
San Juan 7	100.00	69	68	69	69	69	344	69	69	69	69	69	68	68	825	69	69	68	69	68	69	68	68	1373	68	69	68	69	**1647**	**1647**
San Juan 8	100.00																													
San Juan 9	100.00	87	86	87	87	87	434	87	87	87	87	87	87	88	1044	87	87	87	87	87	86	87	86	1738	87	87	87	87	**2086**	**2086**
San Juan 10	100.00																													
Palo Seco 1	85.00	60	60	60	60	60	300	61	61	61	61	61	61	61	727	61	61	61	61	61	61	61	61	1215	61	61	61	61	**1459**	**1459**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**3360**
Palo Seco 4	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**3360**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	240	240	240	240	240	1200	230	240	240	245	235	240	240	2870	260	245	245	300	295	305	300	295	5115	290	285	275	280	**6245**	**6245**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**736**	**734**	**736**	**736**	**736**	**3678**	**727**	**737**	**737**	**742**	**732**	**736**	**737**	**8826**	**757**	**742**	**741**	**797**	**791**	**801**	**796**	**790**	**15041**	**786**	**782**	**771**	**777**	**18157**	**18157**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	40	40	40	30	30	180	30	30	30	31	31	31	31	394	31	30	30	30	30	30	30	38	643	40	30	30	31	**774**	**774**
Aguirre CC Gas 1-2	50.00	40	40	40	30	30	180	30	31	31	31	31	31	31	396	30	30	30	30	30	30	30	39	645	40	30	31	31	**777**	**777**
Aguirre CC Gas 1-3	50.00	30					30								30		28	30	30	30	30	30	38	246	41	30	30	32	**379**	**379**
Aguirre CC Gas 1-4	50.00	28					28								28			8	30	30	30	30	39	195	41	29	30	31	**326**	**326**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00																				18	30	38	86	42	38	30	32	**228**	**228**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	29	19				48								48		27	30	30	30	30	30	34	259	43	37	30	31	**400**	**400**
Aguirre CC Gas 2-4	50.00	29	30	30	30	30	149	29	30	30	30	30	30	30	358	30	30	30	30	30	30	30	34	602	42	38	30	32	**744**	**744**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**196**	**129**	**110**	**90**	**90**	**615**	**89**	**91**	**91**	**92**	**92**	**92**	**92**	**1254**	**91**	**145**	**158**	**180**	**180**	**198**	**210**	**260**	**2676**	**289**	**232**	**211**	**220**	**3628**	**3628**
San Juan GT 5	160.00																													
San Juan STM 5	60.00																													
San Juan GT 6	160.00																													
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.																														
DIESELS																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													
Cambalache 3	82.50																				12	70		82	78	78	79	11	**328**	**328**
TOTAL CAMBALACHE G.P.																					**12**	**70**		**82**	**78**	**78**	**79**	**11**	**328**	**328**
Mayagüez 1	55.00																		1	33	46	47	47	174	48	48	48	48	**366**	**366**
Mayagüez 2	55.00																													
Mayagüez 3	55.00																		17	38	50	51	51	207	51	51	51	51	**411**	**411**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.																			**18**	**71**	**96**	**98**	**98**	**381**	**99**	**99**	**99**	**99**	**777**	**777**
DIESELS																														
Palo Seco 1-1	21.00	21	21	21	22	21	106	21	22	21	22	21	21	21	255	21	21	21	21	21	21	20	21	422	21	21	21	21	**506**	**506**
Palo Seco 1-2	21.00																													
Palo Seco 2-1	21.00																													
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																				16	21	22	59	22	22	16		**119**	**119**
Daguao 1-1	21.00																		9	18	18	18		63	18	2			**83**	**83**
Daguao 1-2	21.00																		3	16	16	16		51	16	2			**69**	**69**
Yabucoa 1-1	21.00																			11	18	18		47	18	14			**79**	**79**
Yabucoa 1-2	21.00																													
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																				18	19	19	56	19	9			**84**	**84**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																		1	18	18	18		55	18	18	13		**104**	**104**
TOTAL GAS TURBINES		**21**	**21**	**21**	**22**	**21**	**106**	**21**	**22**	**21**	**22**	**21**	**21**	**21**	**255**	**21**	**21**	**21**	**21**	**34**	**118**	**130**	**132**	**753**	**132**	**88**	**50**	**21**	**1044**	**1044**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**240**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**240**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**240**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**720**
TOTAL DIESEL		**51**	**51**	**51**	**52**	**51**	**256**	**51**	**52**	**51**	**52**	**51**	**51**	**51**	**615**	**51**	**51**	**51**	**69**	**135**	**244**	**270**	**330**	**1816**	**339**	**295**	**258**	**161**	**2869**	**2869**
COGENERATION																														
AES 1	227.15	228	224	223	223	224	1122	225	224	219	218	219	215	215	2657	215	218	215	214	215	214	221	225	4394	228	228	228	229	**5307**	**5307**
AES 2	227.15	196	193	189	184	184	946	184	185	184	184	184	184	187	2238	185	184	188	189	188	189	192	189	3742	190	191	191	189	**4503**	**4503**
TOTAL AES		**424**	**417**	**412**	**407**	**408**	**2068**	**409**	**409**	**403**	**402**	**403**	**399**	**402**	**4895**	**400**	**402**	**403**	**403**	**403**	**403**	**413**	**414**	**8136**	**418**	**419**	**419**	**418**	**9810**	**9810**
ECOELECTRICA		437	439	401	375	362	2014	376	366	386	409	412	432	478	4873	500	485	492	465	473	400	410	432	8530	388	431	427	437	**10213**	**10213**
TOTAL COGENERATION		**861**	**856**	**813**	**782**	**770**	**4082**	**785**	**775**	**789**	**811**	**815**	**831**	**880**	**9768**	**900**	**887**	**895**	**868**	**876**	**803**	**823**	**846**	**16666**	**806**	**850**	**846**	**855**	**20023**	**20023**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									4	9	13	16	17	59	17	16	15	13	8	3			131					**131**	**131**
San Fermin	20.00									4	9	13	12	15	53	15	16	16	13	9	3			125					**125**	**125**
Horizon	10.00									2	6	7	7	7	29	7	6	7	7	6	2			64					**64**	**64**
Oriana	45.00									7	21	30	30	30	118	30	29	30	30	23	10	1		271					**271**	**271**
Coto Laurel	10.00									2	4	6	5	7	24	9	8	8	6	4	1			60					**60**	**60**
Fonroche	40.00									6	13	21	25	26	91	27	26	25	19	8	3			199					**199**	**199**
TOTAL SOLAR										**25**	**62**	**90**	**95**	**102**	**374**	**105**	**101**	**101**	**88**	**58**	**22**	**1**		**850**					**850**	**850**
Bechara	1.00																													
Pattern Santa Isabel	75.00			1			1			4	10	12	9		36	5	2	3	8	6	7	4	2	73					**73**	**73**
Punta Lima	26.00																													
TOTAL WIND				**1**			**1**			**4**	**10**	**12**	**9**		**36**	**5**	**2**	**3**	**8**	**6**	**7**	**4**	**2**	**73**					**73**	**73**
LandFill Gas Fajardo	2.40	2	1	1	1	1	6	1	1	1	1	1	2	1	14	1	1	1	1	1	1	1	1	17					**17**	**17**
LandFill Gas Toa Baja	2.40	2	2	2	2	2	10	2	2	2	2	2	2	2	24	2	1	1	1	2	2	2	2	37	2	2	2	2	**45**	**45**
TOTAL LANDFILL GAS		**4**	**3**	**3**	**3**	**3**	**16**	**3**	**3**	**3**	**3**	**3**	**4**	**3**	**38**	**2**	**1**	**1**	**1**	**3**	**3**	**3**	**2**	**54**	**2**	**2**	**2**	**2**	**62**	**62**
TOTAL RENEWABLE		**4**	**3**	**4**	**3**	**3**	**17**	**3**	**3**	**28**	**69**	**103**	**111**	**114**	**448**	**112**	**104**	**105**	**97**	**67**	**32**	**8**	**4**	**977**	**2**	**2**	**2**	**2**	**985**	**985**
TOTAL HOURLY GENERATION (NET)		**1848**	**1773**	**1714**	**1663**	**1650**	**8648**	**1655**	**1658**	**1698**	**1768**	**1795**	**1823**	**1877**	**20922**	**1915**	**1933**	**1954**	**2015**	**2054**	**2096**	**2125**	**2248**	**37262**	**2239**	**2169**	**2088**	**2015**	**45773**	**45773**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2248	**1650**	**1907**	**84.84%**	**73.40%**	**45773**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Thursday, April 2, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	2				**18**	**36**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	1				**17**	**35**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																					3	6	9	6	3			**18**	**45**
Dos Bocas 3	5.00																					3	6	9	6	3			**18**	**45**
Yauco 1-1	25.00																													
Yauco 2-1	4.50																													**21**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**2**	**2**	**4**	**10**	**16**	**50**	**15**	**6**			**71**	**182**
THERMOELECTRICS																														
San Juan 7	100.00	69	69	69	68	68	343	69	68	69	68	68	69	68	822	68	68	68	68	65	64	64	65	1352	65	64	65	65	**1611**	**3258**
San Juan 8	100.00																													
San Juan 9	100.00	87	87	87	87	87	435	86	85	87	86	86	86	86	1037	86	87	86	86	85	86	86	86	1725	86	86	86	87	**2070**	**4156**
San Juan 10	100.00																													
Palo Seco 1	85.00	61	61	61	61	61	305	61	61	61	61	61	61	61	732	61	61	61	61	61	61	61	61	1220	61	61	36		**1378**	**2837**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**6720**
Palo Seco 4	216.00	140	140	140	140	140	700	137	80	88	140	140	140	140	1565	140	140	140	140	140	140	140	140	2685	140	140	140	140	**3245**	**6605**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	280	280	275	280	280	1395	285	275	280	280	280	275	275	3345	280	285	275	290	295	315	315	320	5720	275	270	295	295	**6855**	**13100**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**777**	**777**	**772**	**776**	**776**	**3878**	**778**	**709**	**725**	**775**	**775**	**771**	**770**	**9181**	**775**	**781**	**770**	**785**	**786**	**806**	**806**	**812**	**15502**	**767**	**761**	**762**	**727**	**18519**	**36676**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	30	30	20			80	7	30	30	30	30	30	30	267	30	30	30	30	30	31	31	40	519	40	33	30	30	**652**	**1426**
Aguirre CC Gas 1-2	50.00	30	30	30	30	31	151	30	30	30	30	30	30	31	362	30	30	30	30	30	31	31	40	614	40	33	30	30	**747**	**1524**
Aguirre CC Gas 1-3	50.00	25					25							2	27	30	30	30	30	30	31	31	40	279	40	32	30	30	**411**	**790**
Aguirre CC Gas 1-4	50.00	19					19								19			4	30	30	30	30	39	182	40	32	30	30	**314**	**640**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	30	20				50							1	51	30	30	30	30	30	30	30	37	298	40	40	40	40	**458**	**686**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	29	29	30	30	30	148	30	30	29	29	30	30	30	356	30	30	30	30	30	30	30	38	604	40	40	40	40	**764**	**1164**
Aguirre CC Gas 2-4	50.00	30	30	30	29	29	148	30	30	29	30	30	30	30	357	30	30	30	30	30	30	30	37	604	40	40	40	40	**764**	**1508**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**193**	**139**	**110**	**89**	**90**	**621**	**97**	**120**	**118**	**119**	**120**	**120**	**124**	**1439**	**180**	**180**	**184**	**210**	**210**	**213**	**213**	**271**	**3100**	**280**	**250**	**240**	**240**	**4110**	**7738**
San Juan GT 5	160.00																													
San Juan STM 5	60.00																													
San Juan GT 6	160.00																													
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.																														
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													
Cambalache 3	82.50																					12	63	75	77	78	78	64	**372**	**700**
TOTAL CAMBALACHE G.P.																						**12**	**63**	**75**	**77**	**78**	**78**	**64**	**372**	**700**
Mayagüez 1	55.00	9					9								9					38	47	47	47	188	48	48	48	48	**380**	**746**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	13					13								13				15	50	51	51	51	231	51	51	51	51	**435**	**846**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**22**					**22**								**22**				**15**	**88**	**98**	**98**	**98**	**419**	**99**	**99**	**99**	**99**	**815**	**1592**
DIESEL																														

Palo Seco 1-1	21.00	21	21	21	21	21	105	21	21	21	21	21	21	21	252	21	21	21	21	21	21	21	21	420	21	21	21	21	**504**	**1010**
Palo Seco 1-2	21.00																													
Palo Seco 2-1	21.00																													
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			18	21	21	60	22	22	21		**125**	**244**
Daguao 1-1	21.00																		8	18	18	18	62	18	6			**86**	**169**
Daguao 1-2	21.00																			10	16	16	42	16	6			**64**	**133**
Yabucoa 1-1	21.00																			14	18	18	50	18	11			**79**	**158**
Yabucoa 1-2	21.00																													
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																			14	19	19	52	19	15			**86**	**170**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																			11	18	18	47	18	18	16		**99**	**203**
TOTAL GAS TURBINES		**21**	**21**	**21**	**21**	**21**	**105**	**21**	**21**	**21**	**21**	**21**	**21**	**21**	**252**	**21**	**21**	**21**	**21**	**29**	**106**	**131**	**131**	**733**	**132**	**99**	**58**	**21**	**1043**	**2087**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**480**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**480**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	5	7	10	10			10	172	10	10	10	10	**212**	**452**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**25**	**27**	**30**	**30**	**20**	**20**	**30**	**572**	**30**	**30**	**30**	**30**	**692**	**1412**
TOTAL DIESEL		**73**	**51**	**51**	**51**	**51**	**277**	**51**	**51**	**51**	**51**	**51**	**51**	**51**	**634**	**51**	**46**	**48**	**66**	**147**	**224**	**261**	**322**	**1799**	**338**	**306**	**265**	**214**	**2922**	**5791**
COGENERATION																														
AES 1	227.15	228	229	228	228	228	1141	228	228	228	229	229	229	229	2741	229	228	228	228	228	227	227	223	4559	222	224	228	228	**5461**	**10768**
AES 2	227.15	189	189	194	195	195	962	195	196	197	197	197	196	196	2336	196	196	197	189	187	191	196	201	3889	201	201	201	200	**4692**	**9195**
TOTAL AES		**417**	**418**	**422**	**423**	**423**	**2103**	**423**	**424**	**425**	**426**	**426**	**425**	**425**	**5077**	**425**	**424**	**425**	**417**	**415**	**418**	**423**	**424**	**8448**	**423**	**425**	**429**	**428**	**10153**	**19963**
ECOELECTRICA		440	438	408	381	361	2028	397	399	397	390	393	404	454	4862	417	439	469	490	477	446	431	447	8478	432	460	444	431	**10245**	**20458**
TOTAL COGENERATION		**857**	**856**	**830**	**804**	**784**	**4131**	**820**	**823**	**822**	**816**	**819**	**829**	**879**	**9939**	**842**	**863**	**894**	**907**	**892**	**864**	**854**	**871**	**16926**	**855**	**885**	**873**	**859**	**20398**	**40421**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									3	8	11	14	17	53	17	17	15	12	7	3			124					**124**	**255**
San Fermín	20.00									4	10	13	14	13	54	16	16	15	12	9	3			125					**125**	**250**
Horizon	10.00									2	4	6	7	7	26	7	7	7	7	5	2			61					**61**	**125**
Oriana	45.00									8	21	30	28	29	116	26	26	26	23	21	5			243					**243**	**514**
Coto Laurel	10.00									1	2	3	6	7	19	9	9	5	6	3	1			52					**52**	**112**
Fonroche	40.00									6	8	20	23	15	72	21	24	24	18	10	4			173					**173**	**372**
TOTAL SOLAR										**24**	**53**	**83**	**92**	**88**	**340**	**96**	**99**	**92**	**78**	**55**	**18**			**778**					**778**	**1628**
Bechara	1.00																													
Pattern Santa Isabel	75.00										3	9	13	19	44	16	10	10	10	6	6	3		105					**105**	**178**
Punta Lima	26.00																													
TOTAL WIND											**3**	**9**	**13**	**19**	**44**	**16**	**10**	**10**	**10**	**6**	**6**	**3**		**105**					**105**	**178**
LandFill Gas Fajardo	2.40																													**17**
LandFill Gas Toa Baja	2.40	2	2	2	2	2	10	2	2	2	2	2	2	2	24	2	2	2	2	2	2	2	2	40	2	2	2	2	**48**	**93**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**24**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**40**	**2**	**2**	**2**	**2**	**48**	**110**
TOTAL RENEWABLE		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**26**	**58**	**94**	**107**	**109**	**408**	**114**	**111**	**104**	**90**	**63**	**26**	**5**	**2**	**923**	**2**	**2**	**2**	**2**	**931**	**1916**
.																														
TOTAL HOURLY GENERATION (NET)		**1902**	**1825**	**1765**	**1722**	**1703**	**8917**	**1748**	**1705**	**1744**	**1821**	**1861**	**1880**	**1935**	**21611**	**1964**	**1983**	**2002**	**2060**	**2100**	**2137**	**2149**	**2294**	**38300**	**2257**	**2210**	**2142**	**2042**	**46951**	**92724**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2294	**1703**	**1956**	**85.28%**	**74.24%**	**46951**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Friday, April 3, 2020

UNITS	MAXIMUM CAPACITY	HOUR																								TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																													
Toro Negro 1-1	1.50																												
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	1				**17**	**53**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	2				**18**	**53**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00										4	6	6	6	22	6	6	6	6	6	6	6	6	70	6	3			**79**	**124**
Dos Bocas 3	5.00										4	6	6	6	22	6	6	6	6	6	6	6	6	70	6	3			**79**	**124**
Yauco 1-1	25.00																													
Yauco 2-1	4.50																1	2	2	2	2	2	2	13	2	2			**17**	**38**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**10**	**14**	**14**	**14**	**54**	**14**	**15**	**16**	**16**	**16**	**18**	**18**	**18**	**185**	**17**	**8**			**210**	**392**
THERMOELECTRICS																													
San Juan 7	100.00	65	65	65	65	64	324	65	65	64	65	65	64	65	777	64	65	65	64	65	64	64	64	1292	65	64	64	65	**1550**	**4808**
San Juan 8	100.00																													
San Juan 9	100.00	86	86	86	86	87	431	86	87	86	87	86	87	87	1037	86	87	86	86	86	87	86	86	1727	86	86	86	86	**2071**	**6227**
San Juan 10	100.00																													
Palo Seco 1	85.00																										24	42	**66**	**2903**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**10080**
Palo Seco 4	216.00	130	140	140	140	140	690	140	140	140	140	140	140	140	1670	140	140	140	140	140	140	140	140	2790	140	140	140	140	**3350**	**9955**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	300	280	275	285	280	1420	285	275	285	275	285	275	280	3380	280	285	280	280	275	280	295	325	5680	320	300	305	300	**6905**	**20005**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**721**	**711**	**706**	**716**	**711**	**3565**	**716**	**707**	**715**	**707**	**716**	**706**	**712**	**8544**	**710**	**717**	**711**	**710**	**706**	**711**	**725**	**755**	**14289**	**751**	**730**	**759**	**773**	**17302**	**53978**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	30	30	30	30	30	150	30	30	30	30	30	31	31	362	30	30	30	30	30	30	30	38	610	40	40	40	41	**771**	**2197**
Aguirre CC Gas 1-2	50.00	30	30	30	30	30	150	30	30	30	30	31	31	31	363	30	30	30	30	30	30	31	38	612	40	40	41	41	**774**	**2298**
Aguirre CC Gas 1-3	50.00	30	30	30	30	30	150	30	30	30	30	31	31	31	362	30	30	30	30	30	30	31	37	610	40	40	41	41	**772**	**1562**
Aguirre CC Gas 1-4	50.00	30	3				33								33		25	30	30	30	30	30	37	245	40	40	40	40	**405**	**1045**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	40	40	40	40	40	200	40	40	40	40	39	39	39	477	39	40	40	40	40	40	40	40	796	40	40	40	40	**956**	**1642**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	40	40	40	40	40	200	40	40	40	39	39	39	39	476	39	39	40	40	40	40	40	39	793	40	40	40	41	**954**	**2118**
Aguirre CC Gas 2-4	50.00	40	40	40	40	40	200	40	40	40	40	39	39	39	477	39	40	40	40	40	40	40	39	795	40	40	40	41	**956**	**2464**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**240**	**213**	**210**	**210**	**210**	**1083**	**210**	**210**	**210**	**209**	**208**	**210**	**210**	**2550**	**207**	**234**	**240**	**240**	**240**	**240**	**242**	**268**	**4461**	**280**	**280**	**282**	**285**	**5588**	**13326**
San Juan GT 5	160.00																													
San Juan STM 5	60.00																													
San Juan GT 6	160.00																													
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.																														
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													
Cambalache 3	82.50																				5	29	50	84	50	50	44		**228**	**928**
TOTAL CAMBALACHE G.P.																					**5**	**29**	**50**	**84**	**50**	**50**	**44**		**228**	**928**
Mayagüez 1	55.00	20					20								20				25	46	47	47	47	232	47	48	47	48	**422**	**1168**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	26					26								26			17	38	50	50	51	51	283	51	51	51	51	**487**	**1333**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**46**					**46**								**46**			**17**	**63**	**96**	**97**	**98**	**98**	**515**	**98**	**99**	**98**	**99**	**909**	**2501**
DIESEL																														
Palo Seco 1-1	21.00	21	21	21	21	21	105	21	21	21	21	21	21	21	252	21	21	20	20	20	20	20	20	414	20	20	20	20	**494**	**1504**
Palo Seco 1-2	21.00																			8	20	20	20	68	20	20	20	20	**148**	**148**
Palo Seco 2-1	21.00												1	20	21	21	21	21	21	21	21	21	22	190	21	22	21	22	**276**	**276**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			6	21	21	21	69	21	22	16		**128**	**372**
Daguao 1-1	21.00																			11	18	18	18	65	18	8			**91**	**260**
Daguao 1-2	21.00																			5	16	16	16	53	16	7			**76**	**209**
Yabucoa 1-1	21.00																			5	18	18	18	59	18	12			**89**	**247**
Yabucoa 1-2	21.00																													
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																				10	19	19	48	19	16			**83**	**253**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																			2	18	18	18	56	18	18	12		**104**	**307**
TOTAL LAS TURBINES		**21**	**21**	**21**	**21**	**21**	**105**	**21**	**21**	**21**	**21**	**21**	**22**	**41**	**273**	**42**	**42**	**41**	**41**	**78**	**162**	**171**	**172**	**1022**	**171**	**145**	**89**	**62**	**1489**	**3576**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**720**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**720**
Palo Seco MP 3	27.00	10	10	3			23		3						26									26					**26**	**478**
TOTAL PALO SECO MP		**30**	**30**	**23**	**20**	**20**	**123**	**20**	**23**	**20**	**20**	**20**	**20**	**20**	**266**	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**426**	**20**	**20**	**20**	**20**	**506**	**1918**
TOTAL DIESEL		**97**	**51**	**44**	**41**	**41**	**274**	**41**	**44**	**41**	**41**	**41**	**42**	**61**	**585**	**62**	**62**	**78**	**124**	**194**	**284**	**318**	**340**	**2047**	**339**	**314**	**251**	**181**	**3132**	**8923**
COGENERATION																														
AES 1	227.15	228	228	227	227	227	1137	227	228	228	227	228	229	228	2732	230	228	229	229	229	228	228	226	4559	224	224	228	228	**5463**	**16231**
AES 2	227.15	201	201	203	203	204	1012	203	203	203	203	203	204	203	2434	204	204	206	206	205	205	206	207	4077	205	212	210	210	**4914**	**14109**
TOTAL AES		**429**	**429**	**430**	**430**	**431**	**2149**	**430**	**431**	**431**	**430**	**431**	**433**	**431**	**5166**	**434**	**432**	**435**	**435**	**434**	**433**	**434**	**433**	**8636**	**429**	**436**	**438**	**438**	**10377**	**30340**
ECOELECTRICA		445	452	400	355	335	1987	350	338	260	376	382	380	420	4493	447	423	444	457	454	404	413	468	8001	432	433	420	391	**9677**	**30135**
TOTAL COGENERATION		**874**	**881**	**830**	**785**	**766**	**4136**	**780**	**769**	**691**	**806**	**813**	**813**	**851**	**9659**	**881**	**855**	**879**	**892**	**888**	**837**	**847**	**899**	**16637**	**861**	**869**	**858**	**829**	**20054**	**60475**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									3	8	8	15	8	42	17	17	15	12	8	1			112					**112**	**367**
San Fermín	20.00									4	10	13	14	11	52	14	13	5	6	4	2			96					**96**	**346**
Horizon	10.00									2	6	6	10	9	33	10	10	8	7	6	2			76					**76**	**201**
Oriana	45.00									8	21	29	30	30	118	30	30	26	23	8	3			238					**238**	**752**
Coto Laurel	10.00									1	4	5	5	7	22	7	5	2	3	3	1			43					**43**	**155**
Fonroche	40.00									2	6	8	22	16	54	18	25	24	19	7	3			150					**150**	**522**
TOTAL SOLAR										**20**	**55**	**69**	**96**	**81**	**321**	**96**	**100**	**80**	**70**	**36**	**12**			**715**					**715**	**2343**
Bechara	1.00																													
Pattern Santa Isabel	75.00	1		1	1		3						5	10	12	30	15	15	11	5	4	1		81					**81**	**259**
Punta Lima	26.00																													
TOTAL WIND		**1**		**1**	**1**		**3**					**5**	**10**	**12**	**30**	**15**	**15**	**11**	**5**	**4**	**1**		**81**					**81**	**259**
LandFill Gas Fajardo	2.40																													
LandFill Gas Toa Baja	2.40	2	2	2	2	2	10	2	2	2	2	2	2	2	24	2	2	2	2	2	2	2	2	40	2	2	2	2	**48**	**141**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**24**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**40**	**2**	**2**	**2**	**2**	**48**	**158**
TOTAL RENEWABLE		**3**	**2**	**3**	**3**	**2**	**13**	**2**	**2**	**22**	**57**	**76**	**108**	**95**	**375**	**113**	**117**	**93**	**77**	**42**	**15**	**2**	**2**	**836**	**2**	**2**	**2**	**2**	**844**	**2760**
TOTAL HOURLY GENERATION (NET)		**1935**	**1858**	**1793**	**1755**	**1730**	**9071**	**1749**	**1732**	**1681**	**1830**	**1868**	**1893**	**1943**	**21767**	**1987**	**2000**	**2017**	**2059**	**2086**	**2105**	**2152**	**2282**	**38455**	**2250**	**2203**	**2152**	**2070**	**47130**	**139854**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2282	**1681**	**1964**	**86.05%**	**73.66%**	**47130**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Saturday, April 4, 2020

UNITS	MAXIMUM CAPACITY	HOUR																								TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																													
Toro Negro 1-1	1.50																												
Toro Negro 1-2	1.50																												53
Toro Negro 1-3	1.50																												53
Toro Negro 1-4	4.00																												
Toro Negro 2-1	2.00																												
Caonillas 1-1	9.00																												
Caonillas 1-2	9.00																												
Caonillas 2-1	3.60																												
Dos Bocas 1	5.00																												
Dos Bocas 2	5.00																												124
Dos Bocas 3	5.00																												124
Yauco 1-1	25.00																												
Yauco 2-1	4.50	2	2	2	2	2	10	1							11	1	2	2	2	2	2	2	2	26	2	2	2		32	70
Yauco 2-2	4.50																												
Garzas 1-1	3.60																												
Garzas 1-2	3.60																												
Garzas 2-1	5.04																												
Río Blanco 1	2.50																												
Río Blanco 2	2.50																												
TOTAL HYDROELECTRICS		**2**	**2**	**2**	**2**	**2**	**10**	**1**							**11**	**1**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**26**	**2**	**2**	**2**		**32**	**424**
THERMOELECTRICS																													
San Juan 7	100.00	64	64	65	64	64	321	47	29	29	35	35	36	37	569	39	40	45	68	68	68	68	68	1033	67	68	69	69	**1306**	**6114**
San Juan 8	100.00																												
San Juan 9	100.00	87	86	86	86	86	431	87	86	86	87	86	87	87	1037	86	86	86	86	86	86	85	85	1723	86	86	86	86	**2067**	**8294**
San Juan 10	100.00																												
Palo Seco 1	85.00	46	46	46	46	46	230	46	46	46	46	50	65	65	594	69	69	66	70	70	70	70	70	1148	67	67	67	67	**1416**	**4319**
Palo Seco 2	85.00																												
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**13440**
Palo Seco 4	216.00	140	140	140	140	140	700	140	114	111	120	120	120	120	1545	120	120	120	120	120	120	120	120	2505	120	120	120	120	**2985**	**12940**
Costa Sur 3	85.00																												
Costa Sur 4	85.00																												
Costa Sur 5	410.00																												
Costa Sur 6	410.00																												
Aguirre 1	450.00	300	250	250	250	250	1300	235	140	140	140	140	140	140	2375	170	230	240	245	250	275	275	280	4340	280	280	275	300	**5475**	**25480**
Aguirre 2	450.00																												
TOTAL THERMOELECTRICS		**777**	**726**	**727**	**726**	**726**	**3682**	**695**	**555**	**552**	**568**	**571**	**588**	**589**	**7800**	**624**	**685**	**697**	**729**	**734**	**759**	**758**	**763**	**13549**	**760**	**761**	**757**	**782**	**16609**	**70587**
COMBINED CYCLES																													
Aguirre CC Gas 1-1	50.00	40	35	30	30	30	165	30	30	30	30	30	30	30	375	30	30	30	30	30	30	30	30	615	30	30	30	30	**735**	**2932**
Aguirre CC Gas 1-2	50.00	40	34	30	30	30	164	30	30	30	30	30	30	30	374	30	30	30	30	30	31	31	31	617	30	30	30	30	**737**	**3035**
Aguirre CC Gas 1-3	50.00	40	6	30			56	6	30	30	30	30	30	30	242	30	30	30	30	30	30	30	30	482	30	30	30	30	**602**	**2164**
Aguirre CC Gas 1-4	50.00	39					39	1	30	30	30	30	30	30	220	30	30	30	30	30	30	30	30	460	30	30	30	30	**580**	**1625**
Aguirre CC STM 1	96.00																												
Aguirre CC Gas 2-1	50.00	40	32	30	30	30	162	30	30	30	30	30	30	30	372	29	29	29	29	30	30	30	30	608	30	30	30	30	**728**	**2370**
Aguirre CC Gas 2-2	50.00																												
Aguirre CC Gas 2-3	50.00	40	31	30	30	30	161	30	30	30	30	30	30	30	371	29	29	29	29	29	30	30	30	606	30	30	30	30	**726**	**2844**
Aguirre CC Gas 2-4	50.00	40	31	30	30	30	161	30	30	30	30	30	30	30	371	29	29	29	30	30	30	30	30	608	30	30	30	30	**728**	**3192**
Aguirre CC STM 2	96.00																												
TOTAL AGUIRRE C.C.		**279**	**179**	**150**	**150**	**150**	**908**	**157**	**210**	**210**	**210**	**210**	**210**	**210**	**2325**	**207**	**207**	**207**	**208**	**209**	**211**	**211**	**211**	**3996**	**210**	**210**	**210**	**210**	**4836**	**18162**
San Juan GT 5	160.00																												
San Juan STM 5	60.00																												
San Juan GT 6	160.00																												
San Juan STM 6	60.00																												
TOTAL SAN JUAN C.C.																													
DIESEL																													
Cambalache 1	82.50																												
Cambalache 2	82.50																												
Cambalache 3	82.50											16	70	77	163	77	77	78	78	78	78	78	78	785	78	78	57		**998**	**1926**
TOTAL CAMBALACHE G.P.												**16**	**70**	**77**	**163**	**77**	**77**	**78**	**78**	**78**	**78**	**78**	**78**	**785**	**78**	**78**	**57**		**998**	**1926**
Mayagüez 1	55.00	15					15								15						15	23	23	76	23	23	24	7	**153**	**1321**
Mayagüez 2	55.00																												
Mayagüez 3	55.00	32					32								32					4	23	23	24	106	23	18			**147**	**1480**
Mayagüez 4	55.00																												
TOTAL MAYAGUEZ G.P.		**47**					**47**								**47**					**4**	**38**	**46**	**47**	**182**	**46**	**41**	**24**	**7**	**300**	**2801**
DIESEL																													
Palo Seco 1-1	21.00	20	20	20	20	20	100	20	20	20	20	19	19	19	237	19	19	19	20	20	20	20	20	394	20	20	20	20	**474**	**1978**
Palo Seco 1-2	21.00	20	20	20	20	21	101	20	20	20	20	20	20	20	241	20	20	20	20	20	20	20	20	401	20	20	20	20	**481**	**629**
Palo Seco 2-1	21.00	22	22	21	22	21	108	22	22	22	21	21	21	21	258	21	21	21	21	21	21	22	22	428	21	22	21	22	**514**	**790**
Palo Seco 2-2	21.00																												
Palo Seco 3-1	21.00																												
Palo Seco 3-2	21.00																												
Costa Sur 1-1	21.00																												
Costa Sur 1-2	21.00																												
Aguirre 2-1	21.00																												
Aguirre 2-2	21.00																					21	21	42	22	3			**67**	**439**
Daguao 1-1	21.00																				5	18	18	41	11				**52**	**312**
Daguao 1-2	21.00																												**209**	
Yabucoa 1-1	21.00																				8	18	18	44	11				**55**	**302**
Yabucoa 1-2	21.00																													
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																					14	19	33	19				**52**	**305**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																					14	18	32	18	3			**53**	**360**
TOTAL GAS TURBINES		**62**	**62**	**61**	**62**	**62**	**309**	**62**	**62**	**62**	**61**	**60**	**60**	**60**	**736**	**60**	**60**	**60**	**61**	**61**	**74**	**147**	**156**	**1415**	**142**	**68**	**61**	**62**	**1748**	**5324**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**960**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	8				10	10	168	10	10	10	10	**208**	**928**
Palo Seco MP 3	27.00																	4	10	10	10	10	10	54	10	10	10	10	**94**	**572**
TOTAL PALO SECO MP		**20**	**20**	**20**	**20**	**20**	**100**	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**240**	**20**	**20**	**22**	**20**	**20**	**20**	**30**	**30**	**422**	**30**	**30**	**30**	**30**	**542**	**2460**
TOTAL DIESEL		**129**	**82**	**81**	**82**	**82**	**456**	**82**	**82**	**82**	**81**	**96**	**150**	**157**	**1186**	**157**	**157**	**160**	**159**	**163**	**210**	**301**	**311**	**2804**	**296**	**217**	**172**	**99**	**3588**	**12511**
COGENERATION																													
AES 1	227.15	228	215	204	199	199	1045	200	191	190	193	196	197	200	2412	200	204	204	210	208	213	218	223	4092	226	228	228	228	**5002**	**21233**
AES 2	227.15	210	210	210	201	199	1030	195	191	191	189	184	184	185	2349	186	188	190	196	198	198	199	201	3905	201	199	201	201	**4707**	**18816**
TOTAL AES		**438**	**425**	**414**	**400**	**398**	**2075**	**395**	**382**	**381**	**382**	**380**	**381**	**385**	**4761**	**386**	**392**	**394**	**406**	**406**	**411**	**417**	**424**	**7997**	**427**	**427**	**429**	**429**	**9709**	**40049**
ECOELECTRICA		351	459	448	410	385	2053	404	431	436	431	430	363	388	4936	393	348	380	417	464	446	392	465	8241	448	469	469	449	**10076**	**40211**
TOTAL COGENERATION		**789**	**884**	**862**	**810**	**783**	**4128**	**799**	**813**	**817**	**813**	**810**	**744**	**773**	**9697**	**779**	**740**	**774**	**823**	**870**	**857**	**809**	**889**	**16238**	**875**	**896**	**898**	**878**	**19785**	**80260**
RENEWABLE SYSTEMS																													
WindMar Martino	2.10																													
AES Ilumina	20.00									4	8	12	15	17	56	17	16	15	12	8	2			126					**126**	**493**
San Fermín	20.00									4	9	13	16	14	56	19	18	13	3	1				110					**110**	**456**
Horizon	10.00									2	6	9	10	9	36	10	10	10	9	3	1			79					**79**	**280**
Oriana	45.00									7	21	27	30	30	115	30	29	24	11	8	5			222					**222**	**974**
Coto Laurel	10.00									2	4	6	6	6	24	7	7	4	2	1	1			46					**46**	**201**
Fonroche	40.00									6	15	17	26	30	94	29	24	25	20	7	1			200					**200**	**722**
TOTAL SOLAR										**25**	**63**	**84**	**103**	**106**	**381**	**112**	**104**	**91**	**57**	**28**	**10**			**783**					**783**	**3126**
Bechara	1.00																													
Pattern Santa Isabel	75.00											1	13	15	29	16	16	13	11	6				91			3		**94**	**353**
Punta Lima	26.00																													
TOTAL WIND												**1**	**13**	**15**	**29**	**16**	**16**	**13**	**11**	**6**				**91**			**3**		**94**	**353**
LandFill Gas Fajardo	2.40																													**17**
LandFill Gas Toa Baja	2.40	2	2	2	2	2	10	2	1	2	2	2	2	2	23	2	2	2	2	2	2	3	3	41	2	2	2	2	**49**	**190**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**1**	**2**	**2**	**2**	**2**	**2**	**23**	**2**	**2**	**2**	**2**	**2**	**2**	**3**	**3**	**41**	**2**	**2**	**2**	**2**	**49**	**207**
TOTAL RENEWABLE		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**1**	**27**	**65**	**87**	**118**	**123**	**433**	**130**	**122**	**106**	**70**	**36**	**12**	**3**	**3**	**915**	**2**	**2**	**5**	**2**	**926**	**3686**
TOTAL HOURLY GENERATION (NET)		**1978**	**1875**	**1824**	**1772**	**1745**	**9194**	**1736**	**1661**	**1688**	**1737**	**1774**	**1810**	**1852**	**21452**	**1898**	**1913**	**1946**	**1991**	**2014**	**2051**	**2084**	**2179**	**37528**	**2145**	**2088**	**2044**	**1971**	**45776**	**185630**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2179	**1661**	**1907**	**87.53%**	**76.23%**	**45776**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Sunday, April 5, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50																													**53**
Toro Negro 1-3	1.50																													**53**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																					6	6	12	6	3			**21**	**145**
Dos Bocas 3	5.00																					6	6	12	6	3			**21**	**145**
Yauco 1-1	25.00																													
Yauco 2-1	4.50																													**70**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS																						**12**	**12**	**24**	**12**	**6**			**42**	**466**
THERMOELECTRICS																														
San Juan 7	100.00	71	69	68	70	69	347	69	69	69	69	69	69	68	829	68	69	68	68	68	68	69	68	1375	69	68	70	70	**1652**	**7766**
San Juan 8	100.00																													
San Juan 9	100.00	87	85	86	86	86	430	86	86	87	86	86	87	86	1034	86	86	86	86	85	86	86	85	1720	86	85	85	85	**2061**	**10355**
San Juan 10	100.00																													
Palo Seco 1	85.00	66	66	66	68	68	334	67	67	67	67	67	67	67	803	67	65	68	68	69	68	68	68	1344	68	68	68	68	**1616**	**5935**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	140	80	106	131	120	120	120	1517	120	134	140	140	140	140	140	140	2611	140	140	140	140	**3171**	**16611**
Palo Seco 4	216.00	120	120	120	120	120	600	120	95	80	81	100	100	100	1276	111	120	120	120	120	120	120	120	2227	120	120	120	120	**2707**	**15647**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	295	280	285	275	275	1410	260	235	235	235	245	240	240	3100	245	230	235	250	285	275	285	280	5185	260	275	295	305	**6320**	**31800**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**779**	**760**	**765**	**759**	**758**	**3821**	**742**	**632**	**644**	**669**	**687**	**683**	**681**	**8559**	**697**	**704**	**717**	**732**	**767**	**757**	**768**	**761**	**14462**	**743**	**756**	**778**	**788**	**17527**	**88114**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	30	30	30	30	30	150	30	30	30	30	30	17		317							26	30	373	30	30	31	29	**493**	**3425**
Aguirre CC Gas 1-2	50.00	30	30	30	30	30	150	30	30	30	31	31	31	30	363	30	30	30	30	30	30	31	31	605	30	30	31	29	**725**	**3760**
Aguirre CC Gas 1-3	50.00	30	30	30	30	30	150	30	30	30	30	30	16		316				30	30	30	30	30	466	30	30	31	30	**587**	**2751**
Aguirre CC Gas 1-4	50.00	8					8								8				21	30	30	30	30	149	30	30	30	29	**268**	**1893**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	25					25						17	30	72	29	30	30	30	30	30	30	30	311	30	30	30	29	**430**	**2800**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	30	16				46								46	9	30	30	30	30	30	30	30	265	30	30	30	30	**385**	**3229**
Aguirre CC Gas 2-4	50.00	4					4								4	11	30	30	30	30	30	30	30	225	30	30	30	30	**345**	**3537**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**157**	**106**	**90**	**90**	**90**	**533**	**90**	**90**	**90**	**91**	**91**	**81**	**60**	**1126**	**79**	**120**	**120**	**171**	**180**	**180**	**207**	**211**	**2394**	**210**	**210**	**213**	**206**	3233	21395
San Juan GT 5	160.00																													
San Juan STM 5	60.00																													
San Juan GT 6	160.00																													
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.																														
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													
Cambalache 3	82.50																													**1926**
TOTAL CAMBALACHE G.P.																														**1926**
Mayagüez 1	55.00																		6	23	23	23	23	98	23	24	23		**168**	**1489**
Mayagüez 2	55.00																													
Mayagüez 3	55.00																			23	50	51	51	175	51	51	51	24	**352**	**1832**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.																			**6**	**46**	**73**	**74**	**74**	**273**	**74**	**75**	**74**	**24**	520	3321
DIESEL																														

Palo Seco 1-1	21.00	20	20	20	20	20	100	20	20	20	19	20	19	19	237	19	19	19	19	19	19	19	19	389	20	19	19	20	**467**	**2445**
Palo Seco 1-2	21.00	20	20	20	21	20	101	20	20	20	20	20	20	20	241	20	20	20	20	20	20	20	20	401	20	20	20	20	**481**	**1110**
Palo Seco 2-1	21.00	22	21	22	21	22	108	22	22	22	22	21	21	21	259	21	21	21	21	21	21	22	22	429	21	22	21	22	**515**	**1305**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			11	21	21	53	21	21	11		**106**	**545**
Daguao 1-1	21.00																		3	18	18	18	57	10				**67**	**379**
Daguao 1-2	21.00																			11	16	16	43	9				**52**	**261**
Yabucoa 1-1	21.00																			12	18	18	48	17				**65**	**367**
Yabucoa 1-2	21.00																													
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																			11	19	19	49	19	14			**82**	**387**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																			6	18	18	42	18	18	9		**87**	**447**
TOTAL GAS TURBINES		**62**	**61**	**62**	**62**	**62**	**309**	**62**	**62**	**62**	**61**	**61**	**60**	**60**	**737**	**60**	**60**	**60**	**60**	**63**	**129**	**171**	**171**	**1511**	**155**	**114**	**80**	**62**	**1922**	**7246**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**1200**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**1168**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**812**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**3180**
TOTAL DIESEL		**92**	**91**	**92**	**92**	**92**	**459**	**92**	**92**	**92**	**91**	**91**	**90**	**90**	**1097**	**90**	**90**	**90**	**96**	**139**	**232**	**275**	**275**	**2384**	**259**	**219**	**184**	**116**	**3162**	**15673**
COGENERATION																														
AES 1	227.15	228	228	229	218	219	1122	219	219	214	209	212	214	216	2625	216	214	212	219	220	223	223	222	4374	223	225	228	228	**5278**	**26511**
AES 2	227.15	202	204	202	202	202	1012	196	196	196	190	189	189	189	2357	190	190	190	192	194	195	195	194	3897	195	195	195	195	**4677**	**23493**
TOTAL AES		**430**	**432**	**431**	**420**	**421**	**2134**	**415**	**415**	**410**	**399**	**401**	**403**	**405**	**4982**	**406**	**404**	**402**	**411**	**414**	**418**	**418**	**416**	**8271**	**418**	**420**	**423**	**423**	**9955**	**50004**
ECOELECTRICA		419	417	369	329	291	1825	317	333	345	314	327	348	399	4208	411	396	464	474	456	420	411	464	7704	462	482	469	457	**9574**	**49785**
TOTAL COGENERATION		**849**	**849**	**800**	**749**	**712**	**3959**	**732**	**748**	**755**	**713**	**728**	**751**	**804**	**9190**	**817**	**800**	**866**	**885**	**870**	**838**	**829**	**880**	**15975**	**880**	**902**	**892**	**880**	**19529**	**99789**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									4	8	12	15	16	55	17	16	14	11	6	2			121					**121**	**614**
San Fermín	20.00									3	9	13	15	17	57	18	17	16	12	4				124					**124**	**580**
Horizon	10.00									2	5	9	10	10	36	10	10	10	7	4	2			79					**79**	**359**
Oriana	45.00								1	7	19	29	30	30	116	30	29	19	14	7	2			217					**217**	**1191**
Coto Laurel	10.00									2	4	6	8	8	28	8	8	7	3	2				56					**56**	**257**
Fonroche	40.00									6	14	20	25	26	91	28	27	16	8	3	1			174					**174**	**896**
TOTAL SOLAR									**1**	**24**	**59**	**89**	**103**	**107**	**383**	**111**	**107**	**82**	**55**	**26**	**7**			**771**					**771**	**3897**
Bechara	1.00																													
Pattern Santa Isabel	75.00								1			1	10	15	27	14	18	19	15	9	6	3		111					**111**	**464**
Punta Lima	26.00																													
TOTAL WIND									**1**			**1**	**10**	**15**	**27**	**14**	**18**	**19**	**15**	**9**	**6**	**3**		**111**					**111**	**464**
LandFill Gas Fajardo	2.40																													**17**
LandFill Gas Toa Baja	2.40	2	2	2	2	2	10	2	2	2	2	2	2	2	24	2	2	2	2	2	2	2	2	40	2	2	2	2	**48**	**238**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**24**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**40**	**2**	**2**	**2**	**2**	**48**	**255**
TOTAL RENEWABLE		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**4**	**26**	**61**	**92**	**115**	**124**	**434**	**127**	**127**	**103**	**72**	**37**	**15**	**5**	**2**	**922**	**2**	**2**	**2**	**2**	**930**	**4616**
.																														
TOTAL HOURLY GENERATION (NET)		**1879**	**1808**	**1749**	**1692**	**1654**	**8782**	**1658**	**1566**	**1607**	**1625**	**1689**	**1720**	**1759**	**20406**	**1810**	**1841**	**1896**	**1956**	**1993**	**2022**	**2096**	**2141**	**36161**	**2106**	**2095**	**2069**	**1992**	**44423**	**230053**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2141	**1566**	**1851**	**86.45%**	**73.14%**	**44423**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Monday, April 6, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	2	1	2	1	2	2	17	1				**18**	**71**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	2	1	2	1	2	2	17	1				**18**	**71**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																				3	6	6	15	6	3			**24**	**169**
Dos Bocas 3	5.00																				3	6	6	15	6	3			**24**	**169**
Yauco 1-1	25.00																													
Yauco 2-1	4.50																													**70**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**4**	**2**	**4**	**8**	**16**	**16**	**64**	**14**	**6**			**84**	**550**
THERMOELECTRICS																														
San Juan 7	100.00	70	69	70	70	70	349	70	70	70	69	70	69	69	836	69	70	69	69	69	69	69	70	1390	69	70	70	69	**1668**	**9434**
San Juan 8	100.00																													
San Juan 9	100.00	86	85	86	86	85	428	86	85	82	82	81	81	82	1007	81	81	81	81	81	81	81	81	1655	81	81	81	81	**1979**	**12334**
San Juan 10	100.00																													
Palo Seco 1	85.00	68	68	68	68	68	340	68	68	68	68	68	68	68	816	68	68	68	68	68	66	66	66	1354	66	66	66	66	**1618**	**7553**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**19971**
Palo Seco 4	216.00	120	120	120	120	120	600	120	120	120	120	120	120	120	1440	120	120	120	120	120	120	120	120	2400	120	120	120	120	**2880**	**18527**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	300	300	300	300	300	1500	290	275	280	275	290	280	280	3470	270	245	265	320	365	345	295	300	5875	245	245	265	235	**6865**	**38665**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**784**	**782**	**784**	**784**	**783**	**3917**	**774**	**758**	**760**	**754**	**769**	**758**	**759**	**9249**	**748**	**724**	**743**	**798**	**843**	**821**	**771**	**777**	**15474**	**721**	**722**	**742**	**711**	18370	106484
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	31	30	30	30	30	151	30	30	30	30	30	30	31	362	30	30	30	30	30	37	37	40	626	40	40	32	30	**768**	**4193**
Aguirre CC Gas 1-2	50.00	31	31	30	30	30	152	30	30	30	30	30	30	31	363	30	30	30	30	30	38	37	40	628	40	40	32	30	**770**	**4530**
Aguirre CC Gas 1-3	50.00	29					29				28	30	30	30	147	30	30	30	30	30	30	33	40	400	40	37	30	30	**537**	**3288**
Aguirre CC Gas 1-4	50.00	24					24				23	30	30	30	137	30	30	30	30	30	30	30	40	387	40	36	30	30	**523**	**2416**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	30	30	30	30	29	149	29	30	30	30	30	30	30	358	30	30	30	30	30	30	30	37	605	40	34	30	30	**739**	**3539**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	30	29	29	30	30	148	29	29	30	30	30	30	30	356	30	30	30	30	30	30	30	37	603	40	33	30	30	**736**	**3965**
Aguirre CC Gas 2-4	50.00	29	29	30	30	30	148	30	30	30	10				248					7	30	30	35	350	30	29	30	30	**469**	**4006**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**204**	**149**	**149**	**150**	**149**	**801**	**148**	**149**	**150**	**181**	**180**	**180**	**182**	**1971**	**180**	**180**	**180**	**180**	**187**	**225**	**227**	**269**	**3599**	**270**	**249**	**214**	**210**	4542	25937
San Juan GT 5	160.00																													
San Juan STM 5	60.00																													
San Juan GT 6	160.00																													
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.																														
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													
Cambalache 3	82.50																				16	65	79	160	79	79	78	71	**467**	**2393**
TOTAL CAMBALACHE G.P.																					**16**	**65**	**79**	**160**	**79**	**79**	**78**	**71**	467	2393
Mayagüez 1	55.00																2	20	21	21	21	21	21	127	47	47	47	47	**315**	**1804**
Mayagüez 2	55.00																													
Mayagüez 3	55.00										4	50	51	50	155	50	50	48	25	25	25	25	25	428	41	51	51	51	**622**	**2454**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.											**4**	**50**	**51**	**50**	**155**	**50**	**52**	**68**	**46**	**46**	**46**	**46**	**46**	**555**	**88**	**98**	**98**	**98**	937	4258
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	20	19	96	19	20	20	19	20	19	19	232	19	19	19	19	19	19	19	19	384	19	19	19	19	**460**	**2905**
Palo Seco 1-2	21.00	20	20	20	20	20	100	20	20	20	19	20	20	20	239	20	20	20	19	20	20	19	20	397	20	20	20	20	**477**	**1587**
Palo Seco 2-1	21.00	21	22	21	22	21	107	22	22	21	9				181			10	21	21	21	21	21	296	21	21	21	21	**380**	**1685**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																					15	22	37	21	22	22	7	**109**	**654**
Daguao 1-1	21.00																					13	18	31	18	14			**63**	**442**
Daguao 1-2	21.00																					7	16	23	16	13			**52**	**313**
Yabucoa 1-1	21.00																													**367**
Yabucoa 1-2	21.00																													
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																					7	19	26	19	15			**60**	**447**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																					11	18	29	18	18	18	5	**88**	**535**
TOTAL GAS TURBINES		**60**	**61**	**60**	**62**	**60**	**303**	**61**	**62**	**61**	**47**	**40**	**39**	**39**	**652**	**39**	**39**	**49**	**59**	**60**	**60**	**112**	**153**	**1223**	**152**	**142**	**100**	**72**	**1689**	**8935**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**1440**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**1408**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**1052**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**3900**
TOTAL DIESEL		**90**	**91**	**90**	**92**	**90**	**453**	**91**	**92**	**91**	**81**	**120**	**120**	**119**	**1167**	**119**	**121**	**147**	**135**	**136**	**152**	**253**	**308**	**2538**	**349**	**349**	**306**	**271**	**3813**	**19486**
COGENERATION																														
AES 1	227.15	228	227	227	227	228	1137	228	227	228	224	227	229	228	2728	228	228	227	228	227	228	228	224	4546	224	227	228	228	**5453**	**31964**
AES 2	227.15	195	196	195	195	195	976	195	195	193	193	195	196	196	2339	195	196	196	196	197	197	197	197	3910	197	197	198	200	**4702**	**28195**
TOTAL AES		**423**	**423**	**422**	**422**	**423**	**2113**	**423**	**422**	**421**	**417**	**422**	**425**	**424**	**5067**	**423**	**424**	**423**	**424**	**424**	**425**	**425**	**421**	**8456**	**421**	**424**	**426**	**428**	**10155**	**60159**
ECOELECTRICA		416	407	364	330	322	1839	358	359	382	396	348	353	368	4403	396	459	492	492	492	496	493	497	8220	498	496	497	498	**10209**	**59994**
TOTAL COGENERATION		**839**	**830**	**786**	**752**	**745**	**3952**	**781**	**781**	**803**	**813**	**770**	**778**	**792**	**9470**	**819**	**883**	**915**	**916**	**916**	**921**	**918**	**918**	**16676**	**919**	**920**	**923**	**926**	**20364**	**120153**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									3	8	12	15	16	54	17	16	15	12	6	1			121					**121**	**735**
San Fermín	20.00									3	6	11	12	11	43	14	14	13	9	4	1			98					**98**	**678**
Horizon	10.00									2	5	9	10	10	36	10	10	10	8	4	1			79					**79**	**438**
Oriana	45.00									5	18	24	29	30	106	30	27	8	4	3	1			179					**179**	**1370**
Coto Laurel	10.00									2	4	6	5	7	24	8	8	5	4	3	1			53					**53**	**310**
Fonroche	40.00									5	11	21	24	27	88	28	25	22	18	12	3			196					**196**	**1092**
TOTAL SOLAR										**20**	**52**	**83**	**95**	**101**	**351**	**107**	**100**	**73**	**55**	**32**	**8**			**726**					**726**	**4623**
Bechara	1.00																													
Pattern Santa Isabel	75.00		2	3			5					4	18	41	68	53	47	29	20	20	17	7	3	264		1	1		**266**	**730**
Punta Lima	26.00																													
TOTAL WIND			**2**	**3**			**5**					**4**	**18**	**41**	**68**	**53**	**47**	**29**	**20**	**20**	**17**	**7**	**3**	**264**		**1**	**1**		**266**	**730**
LandFill Gas Fajardo	2.40																													**17**
LandFill Gas Toa Baja	2.40	2	2	2	2	2	10	2	2	2	2	2	2	2	24	1	1	1	1	2	2	1	2	35	2	2	2	1	**42**	**280**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**24**	**1**	**1**	**1**	**1**	**2**	**2**	**1**	**2**	**35**	**2**	**2**	**2**	**1**	**42**	**297**
TOTAL RENEWABLE		**2**	**4**	**5**	**2**	**2**	**15**	**2**	**2**	**22**	**54**	**89**	**115**	**144**	**443**	**161**	**148**	**103**	**76**	**54**	**27**	**8**	**5**	**1025**	**2**	**3**	**3**	**1**	**1034**	**5650**
.																														
TOTAL HOURLY GENERATION (NET)		**1919**	**1856**	**1814**	**1780**	**1769**	**9138**	**1796**	**1782**	**1828**	**1885**	**1930**	**1953**	**1998**	**22310**	**2029**	**2058**	**2092**	**2107**	**2140**	**2154**	**2193**	**2293**	**39376**	**2275**	**2249**	**2188**	**2119**	**48207**	**278260**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2293	**1769**	**2009**	**87.60%**	**77.15%**	**48207**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Tuesday, April 7, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	1	1	1	1	1	13	1				**14**	**85**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	1	1	1	1	1	13	1				**14**	**85**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00									5	6	6	6	6	29	6	6	6	6	6	6	6	6	77	6	3			**86**	**255**
Dos Bocas 3	5.00									5	6	6	6	6	29	6	6	6	6	6	6	6	6	77	6	3			**86**	**255**
Yauco 1-1	25.00																													
Yauco 2-1	4.50																													**70**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**12**	**14**	**14**	**14**	**14**	**68**	**14**	**14**	**14**	**14**	**14**	**14**	**14**	**14**	**180**	**14**	**6**			**200**	**750**
THERMOELECTRICS																														
San Juan 7	100.00	70	70	69	71	69	349	69	71	70	69	70	69	70	837	69	69	68	69	69	69	69	70	1389	69	70	70	69	**1667**	**11101**
San Juan 8	100.00																													
San Juan 9	100.00	81	81	78	82	80	402	82	80	81	81	81	81	81	969	80	81	81	80	81	81	81	81	1615	81	80	82	81	**1939**	**14273**
San Juan 10	100.00																													
Palo Seco 1	85.00	66	66	66	66	66	330	66	66	66	66	66	66	66	792	66	66	66	66	66	66	66	66	1320	66	66	66	66	**1584**	**9137**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**23331**
Palo Seco 4	216.00	120	120	120	120	120	600	120	120	120	120	120	120	120	1440	120	120	120	120	120	120	120	120	2400	120	120	120	120	**2880**	**21407**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	270	255	230	235	245	1235	235	245	235	240	245	240	240	2915	240	235	240	245	275	295	320	320	5085	270	240	270	300	**6165**	**44830**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**747**	**732**	**703**	**714**	**720**	**3616**	**712**	**722**	**712**	**716**	**722**	**716**	**717**	**8633**	**715**	**711**	**715**	**720**	**751**	**771**	**796**	**797**	**14609**	**746**	**716**	**748**	**776**	**17595**	**124079**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	30	30	30	30	30	150	30	30	30	30	31	31	31	363	30	30	30	30	30	30	30	30	603	30	31	31	31	**726**	**4919**
Aguirre CC Gas 1-2	50.00	30	30	30	30	30	150	30	30	30	31	31	31	31	364	30	30	30	30	30	30	30	31	605	30	31	31	31	**728**	**5258**
Aguirre CC Gas 1-3	50.00	30	30	30	30	30	150	30	30	30	30	31	31	31	363	30	30	30	30	30	30	30	35	608	31	31	31	30	**731**	**4019**
Aguirre CC Gas 1-4	50.00	30	30	30	30	30	150	29	29	30	30	30	30	30	358	30	30	30	30	30	30	30	31	599	31	31	30	30	**721**	**3137**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	30	30	30	30	30	150	29	30	30	30	30	30	30	359	30	30	30	30	29	29	29	30	596	30	30	31	31	**718**	**4257**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	30	30	30	30	30	150	29	29	29	30	30	30	30	357	30	30	30	30	29	29	29	29	593	30	30	31	31	**715**	**4680**
Aguirre CC Gas 2-4	50.00	30	30	30	30	30	150	29	30	30	30	30	30	30	359	30	30	30	30	29	29	29	29	595	30	31	31	31	**718**	**4724**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**210**	**210**	**210**	**210**	**210**	**1050**	**206**	**208**	**209**	**211**	**213**	**213**	**213**	**2523**	**210**	**210**	**210**	**210**	**207**	**207**	**207**	**215**	**4199**	**212**	**215**	**216**	**215**	**5057**	**30994**
San Juan GT 5	160.00																													
San Juan STM 5	60.00																													
San Juan GT 6	160.00																													
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.																														
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													
Cambalache 3	82.50	1					1								1							1	37	39	77	78	79	79	**352**	**2745**
TOTAL CAMBALACHE G.P.		**1**					**1**								**1**							**1**	**37**	**39**	**77**	**78**	**79**	**79**	**352**	**2745**
Mayagüez 1	55.00	18					18								18		5	25	25	25	25	31	46	200	47	46	47	19	**359**	**2163**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	45					45								45						14	24	24	107	25	51	51	51	**285**	**2739**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**63**					**63**								**63**		**5**	**25**	**25**	**25**	**39**	**55**	**70**	**307**	**72**	**97**	**98**	**70**	**644**	**4902**
DIESEL																														

Palo Seco 1-1	21.00	19	19	20	19	19	96	19	19	19	19	19	19	19	229	19	19	19	19	19	19	19	20	382	20	20	20	20	**462**	**3367**
Palo Seco 1-2	21.00	20	20	20	20	20	100	20	20	20	20	20	20	20	240	20	8		1	9	20	20	20	338	19	20	20	20	**417**	**2004**
Palo Seco 2-1	21.00	21	21	21	22	21	106	21	21	21	21	21	21	21	253	21	21	21	21	21	21	21	22	422	22	22	22	22	**510**	**2195**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																					7	20	27	22	22	17		**88**	**742**
Daguao 1-1	21.00																					5	18	23	18	18			**59**	**501**
Daguao 1-2	21.00																						16	16	16	16	1		**49**	**362**
Yabucoa 1-1	21.00																													**367**
Yabucoa 1-2	21.00																													
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																						19	19	19	19			**57**	**504**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																					1	18	19	18	18	15		**70**	**605**
TOTAL GAS TURBINES		**60**	**60**	**61**	**61**	**60**	**302**	**60**	**60**	**60**	**60**	**60**	**60**	**60**	**722**	**60**	**48**	**40**	**41**	**49**	**60**	**73**	**153**	**1246**	**154**	**155**	**95**	**62**	**1712**	**10647**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**1680**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**1648**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**1292**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**4620**
TOTAL DIESEL		**154**	**90**	**91**	**91**	**90**	**516**	**90**	**90**	**90**	**90**	**90**	**90**	**90**	**1146**	**90**	**83**	**95**	**96**	**104**	**129**	**159**	**290**	**2192**	**333**	**360**	**302**	**241**	**3428**	**22914**
COGENERATION																														
AES 1	227.15	228	227	228	228	228	1139	228	229	229	228	228	229	228	2738	228	228	228	228	228	228	226	226	4558	227	228	228	228	**5469**	**37433**
AES 2	227.15	200	199	201	201	201	1002	201	201	202	198	202	202	202	2410	202	204	207	205	206	206	206	206	4052	203	200	197	197	**4849**	**33044**
TOTAL AES		**428**	**426**	**429**	**429**	**429**	**2141**	**429**	**430**	**431**	**426**	**430**	**431**	**430**	**5148**	**430**	**432**	**435**	**433**	**434**	**434**	**432**	**432**	**8610**	**430**	**428**	**425**	**425**	**10318**	**70477**
ECOELECTRICA		497	497	477	419	398	2288	411	392	399	424	420	426	444	5204	464	464	447	479	492	494	493	492	9029	495	476	451	418	**10869**	**70863**
TOTAL COGENERATION		**925**	**923**	**906**	**848**	**827**	**4429**	**840**	**822**	**830**	**850**	**850**	**857**	**874**	**10352**	**894**	**896**	**882**	**912**	**926**	**928**	**925**	**924**	**17639**	**925**	**904**	**876**	**843**	**21187**	**141340**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									3	8	12	15	16	54	17	16	15	10	4	2			118					**118**	**853**
San Fermín	20.00									3	4	6	10	8	31	9	12	9	8	4	1			74					**74**	**752**
Horizon	10.00									2	5	8	10	10	35	10	10	10	5	4	2			76					**76**	**514**
Oriana	45.00									3	10	23	21	21	78	24	27	26	25	20	6			206					**206**	**1576**
Coto Laurel	10.00									2	4	6	6	7	25	8	8	7	6	3	1			58					**58**	**368**
Fonroche	40.00									5	11	18	26	28	88	29	27	21	11	7	3			186					**186**	**1278**
TOTAL SOLAR										**18**	**42**	**73**	**88**	**90**	**311**	**97**	**100**	**88**	**65**	**42**	**15**			**718**					**718**	**5341**
Bechara	1.00																													
Pattern Santa Isabel	75.00											2	18	32	52	34	36	46	45	35	23	21	7	299	7				**306**	**1036**
Punta Lima	26.00																													
TOTAL WIND												**2**	**18**	**32**	**52**	**34**	**36**	**46**	**45**	**35**	**23**	**21**	**7**	**299**	**7**				**306**	**1036**
LandFill Gas Fajardo	2.40																													**17**
LandFill Gas Toa Baja	2.40	2	2	2	2	2	10	1	2	2	2	2	2	1	22	2	2	2	2	2	2	2	2	38	2	2	2	2	**46**	**326**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**2**	**10**	**1**	**2**	**2**	**2**	**2**	**2**	**1**	**22**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**38**	**2**	**2**	**2**	**2**	**46**	**343**
TOTAL RENEWABLE		**2**	**2**	**2**	**2**	**2**	**10**	**1**	**2**	**20**	**44**	**77**	**108**	**123**	**385**	**133**	**138**	**136**	**112**	**79**	**40**	**23**	**9**	**1055**	**9**	**2**	**2**	**2**	**1070**	**6720**
.																														
TOTAL HOURLY GENERATION (NET)		**2038**	**1957**	**1912**	**1865**	**1849**	**9621**	**1849**	**1844**	**1873**	**1925**	**1966**	**1998**	**2031**	**23107**	**2056**	**2052**	**2052**	**2064**	**2081**	**2089**	**2124**	**2249**	**39874**	**2239**	**2203**	**2144**	**2077**	**48537**	**326797**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2249	**1844**	**2022**	**89.92%**	**81.99%**	**48537**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Wednesday, April 8, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	1	2	1	2	2	16	2				**18**	**103**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	1	2	1	2	2	16	1				**17**	**102**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																				6	6	6	18	6	3			**27**	**282**
Dos Bocas 3	5.00																				6	6	6	18	6	3			**27**	**282**
Yauco 1-1	25.00																													
Yauco 2-1	4.50													2	2	2	2	2	2	2	2	2	2	18	2	2			**22**	**92**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**2**	**4**	**12**	**4**	**4**	**4**	**4**	**6**	**16**	**18**	**18**	**86**	**17**	**8**			**111**	**861**
THERMOELECTRICS																														
San Juan 7	100.00	70	69	70	70	8	287								287									287					**287**	**11388**
San Juan 8	100.00																													
San Juan 9	100.00	81	81	81	81	13	337					2	14	55	408	80	79	75	79	79	80	79	80	1039	80	79	80	80	**1358**	**15631**
San Juan 10	100.00																													
Palo Seco 1	85.00	66	66	66	66	66	330	66	66	66	66	66	66	66	792	66	66	66	66	66	66	66	66	1320	66	66	66	66	**1584**	**10721**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**26691**
Palo Seco 4	216.00	120	120	120	120	120	600	120	120	143	150	150	150	150	1583	150	150	150	150	150	150	150	150	2783	150	150	150	150	**3383**	**24790**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	295	280	275	280	300	1430	290	290	280	275	275	240	240	3320	240	240	235	225	240	230	245	260	5235	255	230	240	245	**6205**	**51035**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**772**	**756**	**752**	**757**	**647**	**3684**	**616**	**616**	**629**	**631**	**633**	**610**	**651**	**8070**	**676**	**675**	**666**	**660**	**675**	**666**	**680**	**696**	**13464**	**691**	**665**	**676**	**681**	**16177**	**140256**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	30	30	30	30	37	157	40	40	40	40	40	40	40	437	35	30	30	30	30	30	30	31	683	30	30	30	30	**803**	**5722**
Aguirre CC Gas 1-2	50.00	30	30	30	30	37	157	40	40	40	40	40	40	41	438	35	30	30	30	30	30	31	31	685	30	30	30	30	**805**	**6063**
Aguirre CC Gas 1-3	50.00	30	30	9		17	86	30	30	30	30	30	30	31	297	30	30	30	30	30	30	30	31	538	30	30	30	30	**658**	**4677**
Aguirre CC Gas 1-4	50.00	30	9			17	56	30	30	30	30	30	30	22	258							14	30	302	30	18			**350**	**3487**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	30	30	30	30	34	154	39	39	40	40	40	40	40	432	33	29	30	30	30	30	30	30	674	30	30	30	30	**794**	**5051**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	30	30	30	30	34	154	39	39	40	40	40	40	40	432	32	29	29	30	30	30	30	30	672	30	30	30	30	**792**	**5472**
Aguirre CC Gas 2-4	50.00	30	30	30	30	34	154	39	39	40	40	40	40	40	432	32	29	30	30	30	30	30	30	673	30	30	30	30	**793**	**5517**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**210**	**189**	**159**	**150**	**210**	**918**	**257**	**257**	**260**	**260**	**260**	**260**	**254**	**2726**	**197**	**177**	**179**	**180**	**180**	**180**	**195**	**213**	**4227**	**210**	**198**	**180**	**180**	**4995**	**35989**
San Juan GT 5	160.00																	1	54	74	99	120	119	467	120	119	120	119	**945**	**945**
San Juan STM 5	60.00																													
San Juan GT 6	160.00																													
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.																		**1**	**54**	**74**	**99**	**120**	**119**	**467**	**120**	**119**	**120**	**119**	**945**	**945**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													
Cambalache 3	82.50	73	3				76								76							7	51	134	78	79	40		**331**	**3076**
TOTAL CAMBALACHE G.P.		**73**	**3**				**76**								**76**							**7**	**51**	**134**	**78**	**79**	**40**		**331**	**3076**
Mayagüez 1	55.00								26	46	46	38			156							4	25	185	25	25	25	20	**280**	**2443**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	16					16				21	47	25	25	134	25	25	25	25	25	25	25	25	334	25	25	25	5	**414**	**3153**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**16**					**16**		**26**	**46**	**67**	**85**	**25**	**25**	**290**	**25**	**25**	**25**	**25**	**25**	**25**	**29**	**50**	**519**	**50**	**50**	**50**	**25**	**694**	**5596**
DIESEL																														

Palo Seco 1-1	21.00	20	19	19	19	20	97	20	20	19	19	20	19	19	233	19	20	19	19	19	20	19	20	388	19	19	19	19	**464**	**3831**
Palo Seco 1-2	21.00	20	20	20	21	21	102	20	20	20	20	20	20	20	242	20	20	20	20	3				325					**325**	**2329**
Palo Seco 2-1	21.00	22	21	21	21	21	106	22	22	22	22	21	21	21	257	21	21	21	21	21	21	21	21	425	22	22	21	21	**511**	**2706**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																4	21	21	21	22	22	22	133	8				**141**	**883**
Daguao 1-1	21.00																													**501**
Daguao 1-2	21.00																													**362**
Yabucoa 1-1	21.00																													**367**
Yabucoa 1-2	21.00																				2			2					**2**	**2**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																													**504**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																													**605**
TOTAL GAS TURBINES		**62**	**60**	**60**	**61**	**62**	**305**	**62**	**62**	**61**	**61**	**61**	**60**	**60**	**732**	**60**	**65**	**81**	**81**	**64**	**65**	**62**	**63**	**1273**	**49**	**41**	**40**	**40**	**1443**	**12090**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**1920**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**1888**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**1532**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**5340**
TOTAL DIESEL		**181**	**93**	**90**	**91**	**92**	**547**	**92**	**118**	**137**	**158**	**176**	**115**	**115**	**1458**	**115**	**120**	**136**	**136**	**119**	**120**	**128**	**194**	**2526**	**207**	**200**	**160**	**95**	**3188**	**26102**
COGENERATION																														
AES 1	227.15	228	228	228	228	227	1139	225	225	226	228	228	228	228	2727	229	228	227	227	229	229	228	228	4552	223	228	227	229	**5459**	**42892**
AES 2	227.15	197	197	192	192	189	967	185	186	185	184	185	187	186	2265	185	189	194	195	195	194	193	195	3805	194	193	194	194	**4580**	**37624**
TOTAL AES		**425**	**425**	**420**	**420**	**416**	**2106**	**410**	**411**	**411**	**412**	**413**	**415**	**414**	**4992**	**414**	**417**	**421**	**422**	**424**	**423**	**421**	**423**	**8357**	**417**	**421**	**421**	**423**	**10039**	**80516**
ECOELECTRICA		451	449	446	443	444	2233	458	433	404	398	365	435	423	5149	449	491	492	482	485	492	481	481	9002	463	463	476	466	**10870**	**81733**
TOTAL COGENERATION		**876**	**874**	**866**	**863**	**860**	**4339**	**868**	**844**	**815**	**810**	**778**	**850**	**837**	**10141**	**863**	**908**	**913**	**904**	**909**	**915**	**902**	**904**	**17359**	**880**	**884**	**897**	**889**	**20909**	**162249**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00										4	11	15	17	47	15	17	14	10	5	1			109					**109**	**962**
San Fermín	20.00										2	5	7	4	18	9	11	10	4	5	1			58					**58**	**810**
Horizon	10.00									1	3	5	5	7	21	8	8	9	4	5	1			56					**56**	**570**
Oriana	45.00									5	8	11	20	27	71	21	9	8	7	4	3			123					**123**	**1699**
Coto Laurel	10.00									2	3	3	4	4	16	6	5	4	3	2	1			37					**37**	**405**
Fonroche	40.00									5	8	16	20	22	71	22	14	15	13	5	3			143					**143**	**1421**
TOTAL SOLAR										**13**	**28**	**51**	**71**	**81**	**244**	**81**	**64**	**60**	**41**	**26**	**10**			**526**					**526**	**5867**
Bechara	1.00																													
Pattern Santa Isabel	75.00										2	13	25	25	65	36	25	22	17	13	9	12	7	206	3	2			**211**	**1247**
Punta Lima	26.00																													
TOTAL WIND											**2**	**13**	**25**	**25**	**65**	**36**	**25**	**22**	**17**	**13**	**9**	**12**	**7**	**206**	**3**	**2**			**211**	**1247**
LandFill Gas Fajardo	2.40																													**17**
LandFill Gas Toa Baja	2.40	2	2	2	2	1	9	1	1	1	1	1	2	2	18	2	2	2	1	1		1	1	28	1		1		**30**	**356**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**1**	**9**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**18**	**2**	**2**	**2**	**1**	**1**		**1**	**1**	**28**	**1**		**1**		**30**	**373**
TOTAL RENEWABLE		**2**	**2**	**2**	**2**	**1**	**9**	**1**	**1**	**14**	**31**	**65**	**98**	**108**	**327**	**119**	**91**	**84**	**59**	**40**	**19**	**13**	**8**	**760**	**4**	**2**	**1**		**767**	**7487**
.																														
TOTAL HOURLY GENERATION (NET)		**2041**	**1914**	**1869**	**1863**	**1810**	**9497**	**1834**	**1836**	**1857**	**1892**	**1914**	**1935**	**1969**	**22734**	**1974**	**1975**	**1983**	**1997**	**2003**	**2015**	**2056**	**2152**	**38889**	**2129**	**2076**	**2034**	**1964**	**47092**	**373889**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2152	**1810**	**1962**	**91.18%**	**84.11%**	**47092**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Thursday, April 9, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	2	1	2	1	2	16	2				**18**	**121**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	2	1	2	1	2	16	1				**17**	**119**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																													**282**
Dos Bocas 3	5.00																													**282**
Yauco 1-1	25.00																													
Yauco 2-1	4.50																													**92**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**4**	**2**	**4**	**2**	**4**	**32**	**3**				**35**	**896**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	80	80	80	80	80	400	80	80	81	80	80	80	81	962	80	80	80	81	80	80	81	80	1604	81	80	80	81	**1926**	**17557**
San Juan 10	100.00																													
Palo Seco 1	85.00	67	67	67	67	67	335	67	67	67	67	67	67	67	804	67	67	67	67	67	67	67	67	1340	67	67	67	67	**1608**	**12329**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**30051**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150	150	150	150	150	150	3000	150	150	150	150	**3600**	**28390**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	245	240	235	235	240	1195	240	240	290	310	310	310	310	3205	305	300	300	325	300	300	320	345	5700	350	310	245	245	**6850**	**57885**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**682**	**677**	**672**	**672**	**677**	**3380**	**677**	**677**	**728**	**747**	**747**	**747**	**748**	**8451**	**742**	**737**	**737**	**763**	**737**	**737**	**758**	**782**	**14444**	**788**	**747**	**682**	**683**	**17344**	**157600**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	30	30	30	30	30	150	30	30	30	31	31	31	31	364	31	31	31	34	40	40	40	39	650	41	41	41	41	**814**	**6536**
Aguirre CC Gas 1-2	50.00	30	30	13			73						10	30	113	30	30	30	37	40	40	40	40	400	41	41	41	41	**564**	**6627**
Aguirre CC Gas 1-3	50.00	19					19								19			17	38	40	40	40	39	233	41	41	41	41	**397**	**5074**
Aguirre CC Gas 1-4	50.00																		9	29	30	30	29	127	30	30	30	31	**248**	**3735**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	21					21								21			16	37	40	39	40	40	233	40	40	41	41	**395**	**5446**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	30	15				45							5	50	30	30	30	35	39	40	40	39	333	40	40	41	41	**495**	**5967**
Aguirre CC Gas 2-4	50.00	30	30	30	30	30	150	29	29	29	30	30	30	30	357	30	30	30	35	39	40	40	39	640	41	41	40	40	**802**	**6319**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**160**	**105**	**73**	**60**	**60**	**458**	**59**	**59**	**59**	**61**	**61**	**71**	**96**	**924**	**121**	**121**	**154**	**225**	**267**	**269**	**270**	**265**	**2616**	**274**	**274**	**275**	**276**	**3715**	**39704**
San Juan GT 5	160.00	120	120	120	119	119	598	120	119	120	119	93	90	90	1349	89	90	82	2				11	1623	65	117	32		**1837**	**2782**
San Juan STM 5	60.00																													
San Juan GT 6	160.00																													
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**120**	**120**	**120**	**119**	**119**	**598**	**120**	**119**	**120**	**119**	**93**	**90**	**90**	**1349**	**89**	**90**	**82**	**2**				**11**	**1623**	**65**	**117**	**32**		**1837**	**2782**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													
Cambalache 3	82.50																		1	39	77	77	78	272	78	78	78	79	**585**	**3661**
TOTAL CAMBALACHE G.P.																			**1**	**39**	**77**	**77**	**78**	**272**	**78**	**78**	**78**	**79**	**585**	**3661**
Mayagüez 1	55.00																						27	27	46	46	47	47	**213**	**2656**
Mayagüez 2	55.00																													
Mayagüez 3	55.00																	11	36	50	50	50	50	247	51	51	51	51	**451**	**3604**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.																		**11**	**36**	**50**	**50**	**50**	**77**	**274**	**97**	**97**	**98**	**98**	**664**	**6260**
DIESEL																														

Palo Seco 1-1	21.00	19	20	19	20	19	97	20	19	20	19	19	20	19	233	19	19	19	19	19	19	19	20	386	19	19	19	19	**462**	**4293**
Palo Seco 1-2	21.00	21	22	21	22	21	107	22	21	22	21	21	21	21	256	21	21	21	21	21	21	21	21	424	21	21	21	21	**508**	**2837**
Palo Seco 2-1	21.00																													**2706**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			2	21	21	44	22	22	3		**91**	**974**
Daguao 1-1	21.00																			18	18	18	54	18	10			**82**	**583**
Daguao 1-2	21.00																			9	16	16	41	16	9			**66**	**428**
Yabucoa 1-1	21.00																			7	18	18	43	18	12			**73**	**440**
Yabucoa 1-2	21.00																												**2**
Vega Baja 1-1	21.00																												
Vega Baja 1-2	21.00																			6	19	19	44	19	11			**74**	**578**
Jobos 1-1	21.00																												
Jobos 1-2	21.00																				17	18	35	18	18	3		**74**	**679**
TOTAL GAS TURBINES		**40**	**42**	**40**	**42**	**40**	**204**	**42**	**40**	**42**	**40**	**40**	**41**	**40**	**489**	**40**	**40**	**40**	**40**	**40**	**82**	**149**	**151**	**1071**	**151**	**122**	**46**	**40**	**1430**	**13520**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**2160**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**2128**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**1772**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**6060**
TOTAL DIESEL		**70**	**72**	**70**	**72**	**70**	**354**	**72**	**70**	**72**	**70**	**70**	**71**	**70**	**849**	**70**	**70**	**81**	**107**	**159**	**239**	**306**	**336**	**2217**	**356**	**327**	**252**	**247**	**3399**	**29501**
COGENERATION																														
AES 1	227.15	228	228	228	228	228	1140	228	229	229	229	228	228	228	2739	228	229	228	228	228	228	227	228	4563	227	228	228	228	**5474**	**48366**
AES 2	227.15	194	197	197	193	192	973	192	190	191	194	194	194	195	2323	198	199	199	190	197	194	194	196	3890	195	203	204	204	**4696**	**42320**
TOTAL AES		**422**	**425**	**425**	**421**	**420**	**2113**	**420**	**419**	**420**	**423**	**422**	**422**	**423**	**5062**	**426**	**428**	**427**	**418**	**425**	**422**	**421**	**424**	**8453**	**422**	**431**	**432**	**432**	**10170**	**90686**
ECOELECTRICA		427	423	409	389	380	2028	397	380	354	374	390	416	419	4758	409	438	445	477	443	418	387	457	8232	364	318	443	444	**9801**	**91534**
TOTAL COGENERATION		**849**	**848**	**834**	**810**	**800**	**4141**	**817**	**799**	**774**	**797**	**812**	**838**	**842**	**9820**	**835**	**866**	**872**	**895**	**868**	**840**	**808**	**881**	**16685**	**786**	**749**	**875**	**876**	**19971**	**182220**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									3	8	12	15	16	54	16	16	14	12	8	3			123					**123**	**1085**
San Fermín	20.00									4	9	10	11	11	45	15	15	9	12	8	3			107					**107**	**917**
Horizon	10.00									1	5	8	10	10	34	10	10	10	8	5	2			79					**79**	**649**
Oriana	45.00								1	3	7	32	23	31	97	32	29	16	5	6	4			189					**189**	**1888**
Coto Laurel	10.00									1	2	3	4	7	17	8	8	7	6	4	1			51					**51**	**456**
Fonroche	40.00									5	5	14	23	28	75	27	27	26	17	13	4			189					**189**	**1610**
TOTAL SOLAR									**1**	**17**	**36**	**79**	**86**	**103**	**322**	**108**	**105**	**82**	**60**	**44**	**17**			**738**					**738**	**6605**
Bechara	1.00																													
Pattern Santa Isabel	75.00											5	7	10	22	10	10	9	6	2	2			61					**61**	**1308**
Punta Lima	26.00																													
TOTAL WIND												**5**	**7**	**10**	**22**	**10**	**10**	**9**	**6**	**2**	**2**			**61**					**61**	**1308**
LandFill Gas Fajardo	2.40																													**17**
LandFill Gas Toa Baja	2.40	1	1			1	3	1		1		1		1	7	1	1	1	1		1	1	1	14	1	1	1	1	**18**	**374**
TOTAL LANDFILL GAS		**1**	**1**			**1**	**3**	**1**		**1**		**1**		**1**	**7**	**1**	**1**	**1**	**1**		**1**	**1**	**1**	**14**	**1**	**1**	**1**	**1**	**18**	**391**
TOTAL RENEWABLE		**1**	**1**			**1**	**3**	**1**	**1**	**18**	**36**	**85**	**93**	**114**	**351**	**119**	**116**	**92**	**67**	**46**	**20**	**1**	**1**	**813**	**1**	**1**	**1**	**1**	**817**	**8304**
.																														
TOTAL HOURLY GENERATION (NET)		**1882**	**1823**	**1769**	**1733**	**1727**	**8934**	**1746**	**1725**	**1773**	**1832**	**1870**	**1912**	**1962**	**21754**	**1978**	**2002**	**2020**	**2063**	**2079**	**2109**	**2145**	**2280**	**38430**	**2273**	**2215**	**2117**	**2083**	**47118**	**421007**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2280	**1725**	**1963**	**86.11%**	**75.66%**	**47118**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Friday, April 10, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50																													**121**
Toro Negro 1-3	1.50																													**119**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00									5	6	6	6	6	29	6	6	6	6	6	5	1	6	71	6	3			**80**	**362**
Dos Bocas 3	5.00									5	6	6	6	6	29	6	6	6	6	6	5	1	6	71	6	3			**80**	**362**
Yauco 1-1	25.00																													
Yauco 2-1	4.50																						2	2	3	2			**7**	**99**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**10**	**12**	**12**	**12**	**12**	**58**	**12**	**12**	**12**	**12**	**12**	**10**	**2**	**14**	**144**	**15**	**8**			**167**	**1063**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	81	82	78	79	81	401	81	81	80	79	81	81	80	964	81	80	80	80	80	80	81	80	1606	81	81	80	73	**1921**	**19478**
San Juan 10	100.00																													
Palo Seco 1	85.00	67	67	64	64	64	326	63	63	63	63	63	63	63	767	63	63	63	63	63	63	63	63	1271	64	64	64	64	**1527**	**13856**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**33411**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150	150	150	150	150	150	3000	150	150	150	150	**3600**	**31990**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	235	240	240	240	240	1195	240	235	245	235	235	240	240	2865	240	240	240	250	250	250	255	310	4900	315	270	240	240	**5965**	**63850**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**673**	**679**	**672**	**673**	**675**	**3372**	**674**	**669**	**678**	**667**	**669**	**674**	**673**	**8076**	**674**	**673**	**673**	**683**	**683**	**683**	**689**	**743**	**13577**	**750**	**705**	**674**	**667**	**16373**	**173973**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	39	40	40	40	40	199	40	40	40	5				324		23	30	30	30	30	30	40	537	40	39	30	30	**676**	**7212**
Aguirre CC Gas 1-2	50.00	39	40	40	40	40	199	40	40	40	40	40	40	41	480	40	40	40	40	40	40	41	41	802	40	39	30	30	**941**	**7568**
Aguirre CC Gas 1-3	50.00	40	40	40	25		145								145		3	30	30	30	30	30	38	336	40	40	40	40	**496**	**5570**
Aguirre CC Gas 1-4	50.00	40	40	5			85								85						24	30	37	176	40	39	40	40	**335**	**4070**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	39	39	39	40	40	197	26							223							3	34	260	35	33	30	30	**388**	**5834**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	39	39	39	40	40	197	40	40	40	40	40	39	39	475	39	39	39	40	40	40	40	40	792	40	37	30	30	**929**	**6896**
Aguirre CC Gas 2-4	50.00	39	39	39	40	40	197	40	40	40	40	40	39	39	475	39	39	40	40	40	40	40	40	793	40	37	30	30	**930**	**7249**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**275**	**277**	**242**	**225**	**200**	**1219**	**186**	**160**	**160**	**125**	**120**	**118**	**119**	**2207**	**118**	**144**	**179**	**180**	**180**	**204**	**214**	**270**	**3696**	**275**	**264**	**230**	**230**	**4695**	**44399**
San Juan GT 5	160.00													7	7	59	90	120	132	147	157	137	76	925	9				**934**	**3716**
San Juan STM 5	60.00																													
San Juan GT 6	160.00																													
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.														**7**	**7**	**59**	**90**	**120**	**132**	**147**	**157**	**137**	**76**	**925**	**9**				**934**	**3716**
DIESEL																														
Cambalache 1	82.50																						10	10	46	50	51	51	**208**	**208**
Cambalache 2	82.50																													
Cambalache 3	82.50	78	15				93								93						18	75	79	265	78	78	79	79	**579**	**4240**
TOTAL CAMBALACHE G.P.		**78**	**15**				**93**								**93**						**18**	**75**	**89**	**275**	**124**	**128**	**130**	**130**	**787**	**4448**
Mayagüez 1	55.00	21					21								21									21		31	46	46	**144**	**2800**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	3					3								3									3		10	50	51	**114**	**3718**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**24**					**24**								**24**									**24**		**41**	**96**	**97**	**258**	**6518**
DIESEL																														

Palo Seco 1-1	21.00	19	20	20	20	20	99	20	19	19	19	19	19	19	233	19	19	19	19	19	19	19	19	385	19	19	19	19	**461**	**4754**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	21	21	22	22	107	22	22	21	21	21	21	21	256	21	21	20	20	20	20	21	21	420	21	21	21	21	**504**	**3210**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																					17	21	38	22	22	22	12	**116**	**1090**
Daguao 1-1	21.00																													**583**
Daguao 1-2	21.00																													**428**
Yabucoa 1-1	21.00																					13	18	31	18	18			**67**	**507**
Yabucoa 1-2	21.00																													**2**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																					14	19	33	18	18	1		**70**	**648**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																					12	18	30	18	18	18	10	**94**	**773**
TOTAL GAS TURBINES		**40**	**41**	**41**	**42**	**42**	**206**	**42**	**41**	**40**	**40**	**40**	**40**	**40**	**489**	**40**	**40**	**39**	**39**	**39**	**39**	**96**	**116**	**937**	**116**	**116**	**81**	**62**	**1312**	**14832**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	16	206	20	20	20	20	**286**	**2446**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	16	206	20	20	20	20	**286**	**2414**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	16	206	20	20	20	20	**286**	**2058**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**48**	**618**	**60**	**60**	**60**	**60**	**858**	**6918**
TOTAL DIESEL		**172**	**86**	**71**	**72**	**72**	**473**	**72**	**71**	**70**	**70**	**70**	**70**	**70**	**966**	**70**	**70**	**69**	**69**	**69**	**87**	**201**	**253**	**1854**	**300**	**345**	**367**	**349**	**3215**	**32716**
COGENERATION																														
AES 1	227.15	228	228	228	228	227	1139	229	229	227	226	226	228	229	2733	228	228	229	229	220	220	220	220	4527	206	205	212	212	**5362**	**53728**
AES 2	227.15	204	205	205	205	205	1024	205	205	205	205	205	203	204	2456	204	205	205	205	205	199	193	191	4063	189	188	188	190	**4818**	**47138**
TOTAL AES		**432**	**433**	**433**	**433**	**432**	**2163**	**434**	**434**	**432**	**431**	**431**	**431**	**433**	**5189**	**432**	**433**	**434**	**434**	**425**	**419**	**413**	**411**	**8590**	**395**	**393**	**400**	**402**	**10180**	**100866**
ECOELECTRICA		422	428	386	372	366	1974	356	309	295	333	344	344	363	4318	362	343	331	399	475	492	462	501	7683	507	506	493	458	**9647**	**101181**
TOTAL COGENERATION		**854**	**861**	**819**	**805**	**798**	**4137**	**790**	**743**	**727**	**764**	**775**	**775**	**796**	**9507**	**794**	**776**	**765**	**833**	**900**	**911**	**875**	**912**	**16273**	**902**	**899**	**893**	**860**	**19827**	**202047**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									4	9	13	15	17	58	17	16	15	12	8	3			129					**129**	**1214**
San Fermín	20.00									4	10	14	17	18	63	12	16	15	13	8	3			130					**130**	**1047**
Horizon	10.00									2	4	7	8	8	29	10	10	10	9	5	2			75					**75**	**724**
Oriana	45.00								1	7	20	27	38	42	135	43	42	36	25	11	3			295					**295**	**2183**
Coto Laurel	10.00									2	4	5	4	6	21	6	7	6	5	2	1			48					**48**	**504**
Fonroche	40.00									5	12	16	25	26	84	25	26	24	18	11	5			193					**193**	**1803**
TOTAL SOLAR									**1**	**24**	**59**	**82**	**107**	**117**	**390**	**113**	**117**	**106**	**82**	**45**	**17**			**870**					**870**	**7475**
Bechara	1.00																													
Pattern Santa Isabel	75.00							1			1	5	13	21	41	23	21	16	14	12	11	7	3	148					**148**	**1456**
Punta Lima	26.00																													
TOTAL WIND								**1**			**1**	**5**	**13**	**21**	**41**	**23**	**21**	**16**	**14**	**12**	**11**	**7**	**3**	**148**					**148**	**1456**
LandFill Gas Fajardo	2.40																													**17**
LandFill Gas Toa Baja	2.40	1		1		1	3		1		1		1		6	1		1		1		1	1	11	1	1	1	1	**15**	**389**
TOTAL LANDFILL GAS		**1**		**1**		**1**	**3**		**1**		**1**		**1**		**6**	**1**		**1**		**1**		**1**	**1**	**11**	**1**	**1**	**1**	**1**	**15**	**406**
TOTAL RENEWABLE		**1**		**1**		**1**	**3**	**1**	**2**	**24**	**61**	**87**	**121**	**138**	**437**	**137**	**138**	**123**	**96**	**58**	**28**	**8**	**4**	**1029**	**1**	**1**	**1**	**1**	**1033**	**9337**
.																														
TOTAL HOURLY GENERATION (NET)		**1975**	**1903**	**1805**	**1775**	**1746**	**9204**	**1723**	**1645**	**1669**	**1699**	**1733**	**1770**	**1815**	**21258**	**1864**	**1903**	**1941**	**2005**	**2049**	**2080**	**2126**	**2272**	**37498**	**2252**	**2222**	**2165**	**2107**	**46244**	**467251**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2272	**1645**	**1927**	**84.81%**	**72.40%**	**46244**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Saturday, April 11, 2020

UNITS	MAXIMUM CAPACITY	HOUR																										TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																													
Toro Negro 1-1	1.50																												
Toro Negro 1-2	1.50																												**121**
Toro Negro 1-3	1.50																												**119**
Toro Negro 1-4	4.00																												
Toro Negro 2-1	2.00																												
Caonillas 1-1	9.00																												
Caonillas 1-2	9.00																												
Caonillas 2-1	3.60																												
Dos Bocas 1	5.00																												
Dos Bocas 2	5.00																			1	3		4	8	6	3			**17**	**379**
Dos Bocas 3	5.00																			1	3		4	8	6	3			**17**	**379**
Yauco 1-1	25.00																												
Yauco 2-1	4.50																				1	1	1	3	1	2			**6**	**105**
Yauco 2-2	4.50																												
Garzas 1-1	3.60																												
Garzas 1-2	3.60																												
Garzas 2-1	5.04																												
Río Blanco 1	2.50																												
Río Blanco 2	2.50																												
TOTAL HYDROELECTRICS																				**2**	**7**	**1**	**9**	**19**	**13**	**8**			**40**	**1103**
THERMOELECTRICS																													
San Juan 7	100.00																												**11388**
San Juan 8	100.00																												
San Juan 9	100.00	61	61	61	61	61	305	60	61	61	61	60	60	61	729	60	60	60	61	60	60	61	61	1212	61	61	61	61	**1456**	**20934**
San Juan 10	100.00																												
Palo Seco 1	85.00	64	64	64	64	64	320	64	64	64	64	64	64	64	768	64	64	64	64	64	64	64	64	1280	64	64	64	64	**1536**	**15392**
Palo Seco 2	85.00																												
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	135	140	1675	140	140	140	140	140	140	140	140	2795	140	140	140	140	**3355**	**36766**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150	150	150	150	150	150	3000	150	150	150	150	**3600**	**35590**
Costa Sur 3	85.00																												
Costa Sur 4	85.00																												
Costa Sur 5	410.00																												
Costa Sur 6	410.00																												
Aguirre 1	450.00	235	240	235	235	255	1200	240	240	240	240	240	240	240	2880	240	240	240	280	290	290	280	280	5020	280	285	285	280	**6150**	**70000**
Aguirre 2	450.00																												
TOTAL THERMOELECTRICS		**650**	**655**	**650**	**650**	**670**	**3275**	**654**	**655**	**655**	**655**	**654**	**649**	**655**	**7852**	**654**	**654**	**654**	**695**	**704**	**704**	**695**	**695**	**13307**	**695**	**700**	**700**	**695**	**16097**	**190070**
COMBINED CYCLES																													
Aguirre CC Gas 1-1	50.00	30	30	30	30	30	150	30	31	30	30	31	31	29	362	30	30	30	30	31	30	36	30	609	30	35	49	49	**772**	**7984**
Aguirre CC Gas 1-2	50.00	30	30	30	30	30	150	30	31	30	30	30	31	29	361	30	30	30	30	30	34	36	30	611	30	30	30	30	**731**	**8299**
Aguirre CC Gas 1-3	50.00	40	40	40	40	40	200	40	34	32	30	30	30	28	424	30	30	30	30	31	30	36	31	672	30	30	30	30	**792**	**6362**
Aguirre CC Gas 1-4	50.00	40	40	40	40	40	200	40	32	30	30	30	31	28	421	30	30	30	30	29	33	35		638					**638**	**4708**
Aguirre CC STM 1	96.00																												
Aguirre CC Gas 2-1	50.00	30	30	30	30	30	150	30	29	30	30	30	31	2	332			6	30	30	35	40	29	502	30	30	30	30	**622**	**6456**
Aguirre CC Gas 2-2	50.00																												
Aguirre CC Gas 2-3	50.00	30	30	30	12		102								102						23	40	39	204	39	40	40	40	**363**	**7259**
Aguirre CC Gas 2-4	50.00	30	30	30	30	30	150	30	29	30	30	30	31	28	358	30	30	30	30	30	35	40	30	613	29	30	30	30	**732**	**7981**
Aguirre CC STM 2	96.00																												
TOTAL AGUIRRE C.C.		**230**	**230**	**230**	**212**	**200**	**1102**	**200**	**186**	**182**	**180**	**181**	**185**	**144**	**2360**	**150**	**150**	**156**	**180**	**181**	**220**	**263**	**189**	**3849**	**188**	**195**	**209**	**209**	**4650**	**49049**
San Juan GT 5	160.00																37	85	95	72	30	92	120	531	119	119	120	120	**1009**	**4725**
San Juan STM 5	60.00																												
San Juan GT 6	160.00																												
San Juan STM 6	60.00																												
TOTAL SAN JUAN C.C.																	**37**	**85**	**95**	**72**	**30**	**92**	**120**	**531**	**119**	**119**	**120**	**120**	**1009**	**4725**
DIESEL																													
Cambalache 1	82.50																												
Cambalache 2	82.50	50	11				61								61						4	39	48	152	50	50	50	51	**353**	**561**
Cambalache 3	82.50	34					34								34					33	76	77	77	297	79	79	79	75	**609**	**4849**
TOTAL CAMBALACHE G.P.		**84**	**11**				**95**								**95**					**33**	**80**	**116**	**125**	**449**	**129**	**129**	**129**	**126**	**962**	**5410**
Mayagüez 1	55.00	47	47	3			97								97				6	38	34	46	46	267	46	47	47	47	**454**	**3254**
Mayagüez 2	55.00																												
Mayagüez 3	55.00	23	19				42								42				16	42	50	50	51	251	51	51	51	51	**455**	**4173**
Mayagüez 4	55.00																												
TOTAL MAYAGUEZ G.P.		**70**	**66**	**3**			**139**								**139**				**22**	**80**	**84**	**96**	**97**	**518**	**97**	**98**	**98**	**98**	**909**	**7427**
DIESEL																													

Palo Seco 1-1	21.00	19	19	20	19	19	96	20	19	19	19	20	19	19	231	19	19	19	19	19	19	19	19	383	19	19	19	19	**459**	**5213**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	21	21	21	21	105	21	21	22	21	21	21	21	253	21	21	21	21	21	21	21	21	421	21	21	21	21	**505**	**3715**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			2	21	21	21	65	22	22	20		**129**	**1219**
Daguao 1-1	21.00																				17	18	18	53	18	14			**85**	**668**
Daguao 1-2	21.00																				11	16	16	43	16	12			**71**	**499**
Yabucoa 1-1	21.00																			4	18	18	18	58	18	9			**85**	**592**
Yabucoa 1-2	21.00																													**2**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																				16	19	19	54	19	11			**84**	**732**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																			1	18	18	18	55	18	11			**84**	**857**
TOTAL GAS TURBINES		**40**	**40**	**41**	**40**	**40**	**201**	**41**	**40**	**41**	**40**	**41**	**40**	**40**	**484**	**40**	**40**	**40**	**40**	**47**	**141**	**150**	**150**	**1132**	**151**	**119**	**60**	**40**	**1502**	**16334**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	20	20	20	20	20	100	14	10	10	10	10	10	10	174	10	10	10	10	10	10	10	10	254	10	10	10	10	**294**	**2740**
Palo Seco MP 2	27.00	20	20	20	20	20	100	14	10	10	10	10	10	10	174	10	10	10	10	10	10	10	10	254	10	10	10	10	**294**	**2708**
Palo Seco MP 3	27.00	20	20	20	20	20	100	14	10	10	10	10	10	10	174	10	10	10	10	10	10	10	10	254	10	10	10	10	**294**	**2352**
TOTAL PALO SECO MP		**60**	**60**	**60**	**60**	**60**	**300**	**42**	**30**	**30**	**30**	**30**	**30**	**30**	**522**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**762**	**30**	**30**	**30**	**30**	**882**	**7800**
TOTAL DIESEL		**254**	**177**	**104**	**100**	**100**	**735**	**83**	**70**	**71**	**70**	**71**	**70**	**70**	**1240**	**70**	**70**	**70**	**92**	**190**	**335**	**392**	**402**	**2861**	**407**	**376**	**317**	**294**	**4255**	**36971**
COGENERATION																														
AES 1	227.15	220	219	225	228	227	1119	219	229	231	228	229	234	230	2719	229	229	230	230	228	229	228	228	4550	229	228	219	228	**5454**	**59182**
AES 2	227.15	191	192	195	198	181	957	179	179	195	198	201	196	204	2309	203	203	202	206	204	203	204	205	3939	200	192	191	189	**4711**	**51849**
TOTAL AES		**411**	**411**	**420**	**426**	**408**	**2076**	**398**	**408**	**426**	**426**	**430**	**430**	**434**	**5028**	**432**	**432**	**432**	**436**	**432**	**432**	**432**	**433**	**8489**	**429**	**420**	**410**	**417**	**10165**	**111031**
ECOELECTRICA		459	457	451	417	386	2170	401	364	356	357	385	388	424	4845	456	454	462	466	448	378	354	485	8348	466	462	479	434	**10189**	**111370**
TOTAL COGENERATION		**870**	**868**	**871**	**843**	**794**	**4246**	**799**	**772**	**782**	**783**	**815**	**818**	**858**	**9873**	**888**	**886**	**894**	**902**	**880**	**810**	**786**	**918**	**16837**	**895**	**882**	**889**	**851**	**20354**	**222401**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									4	9	12	15	17	57	17	16	15	12	8	3			128					**128**	**1342**
San Fermín	20.00									4	9	13	14	18	58	14	17	16	13	8	2			128					**128**	**1175**
Horizon	10.00									2	4	6	10	10	32	10	10	10	8	5	2			77					**77**	**801**
Oriana	45.00								1	5	19	22	37	42	126	42	43	39	29	15	7	1		302					**302**	**2485**
Coto Laurel	10.00									2	4	6	6	6	24	8	8	7	6	4	1			58					**58**	**562**
Fonroche	40.00									6	13	19	24	26	88	27	27	24	19	12	4			201					**201**	**2004**
TOTAL SOLAR									**1**	**23**	**58**	**78**	**106**	**119**	**385**	**118**	**121**	**111**	**87**	**52**	**19**	**1**		**894**					**894**	**8369**
Bechara	1.00																													
Pattern Santa Isabel	75.00				1	1	2	1	2			1	6	15	27	20	22	21	20	12	8	4	4	138	6	5	3	1	**153**	**1609**
Punta Lima	26.00																													
TOTAL WIND					**1**	**1**	**2**	**1**	**2**			**1**	**6**	**15**	**27**	**20**	**22**	**21**	**20**	**12**	**8**	**4**	**4**	**138**	**6**	**5**	**3**	**1**	**153**	**1609**
LandFill Gas Fajardo	2.40																													**17**
LandFill Gas Toa Baja	2.40	1		1		1	3		1		1		1	1	7	1		1	1			1	1	12		1	1	1	**15**	**404**
TOTAL LANDFILL GAS		**1**		**1**		**1**	**3**		**1**		**1**		**1**	**1**	**7**	**1**		**1**	**1**			**1**	**1**	**12**		**1**	**1**	**1**	**15**	**421**
TOTAL RENEWABLE		**1**		**1**	**1**	**2**	**5**	**1**	**4**	**23**	**59**	**79**	**113**	**135**	**419**	**139**	**143**	**133**	**108**	**64**	**27**	**6**	**5**	**1044**	**6**	**6**	**4**	**2**	**1062**	**10399**
.																														
TOTAL HOURLY GENERATION (NET)		**2005**	**1930**	**1856**	**1806**	**1766**	**9363**	**1737**	**1687**	**1713**	**1747**	**1800**	**1835**	**1862**	**21744**	**1901**	**1940**	**1992**	**2072**	**2093**	**2133**	**2235**	**2338**	**38448**	**2323**	**2286**	**2239**	**2171**	**47467**	**514718**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2338	**1687**	**1978**	**84.59%**	**72.16%**	**47467**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Sunday, April 12, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1-1	1.50																											
Toro Negro 1-2	1.50																											**121**
Toro Negro 1-3	1.50																											**119**
Toro Negro 1-4	4.00																											
Toro Negro 2-1	2.00																											
Caonillas 1-1	9.00																											
Caonillas 1-2	9.00																											
Caonillas 2-1	3.60																											
Dos Bocas 1	5.00																											
Dos Bocas 2	5.00																					6	3	9	6	3		**18**	**397**
Dos Bocas 3	5.00																					6	6	12	6	6		**24**	**403**
Yauco 1-1	25.00																											
Yauco 2-1	4.50																				1	1	1	3	1	1		**5**	**110**
Yauco 2-2	4.50																											
Garzas 1-1	3.60																											
Garzas 1-2	3.60																											
Garzas 2-1	5.04																											
Río Blanco 1	2.50																											
Río Blanco 2	2.50																											
TOTAL HYDROELECTRICS																					**1**	**13**	**10**	**24**	**13**	**10**		**47**	**1150**
THERMOELECTRICS																												
San Juan 7	100.00																											**11388**
San Juan 8	100.00																											
San Juan 9	100.00	60	61	61	61	61	304	61	62	62	61	60	56	55	721	57	56	56	57	57	57	58	57	1176	56	57	54	52	**1395**	**22329**
San Juan 10	100.00																											
Palo Seco 1	85.00	64	64	64	64	64	320	63	63	63	63	63	63	63	761	63	63	63	63	63	63	63	63	1265	63	63	63	63	**1517**	**16909**
Palo Seco 2	85.00																											
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**40126**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150	150	150	150	150	150	3000	150	150	150	150	**3600**	**39190**
Costa Sur 3	85.00																											
Costa Sur 4	85.00																											
Costa Sur 5	410.00																											
Costa Sur 6	410.00																											
Aguirre 1	450.00	280	280	260	240	240	1300	240	240	240	240	240	250	270	3020	280	275	275	250	280	250	235	265	5130	285	315	315	285	**6330**	**76330**
Aguirre 2	450.00																											
TOTAL THERMOELECTRICS		**694**	**695**	**675**	**655**	**655**	**3374**	**654**	**655**	**655**	**654**	**653**	**659**	**678**	**7982**	**690**	**684**	**684**	**660**	**690**	**660**	**646**	**675**	**13371**	**694**	**725**	**722**	**690**	**16202**	**206272**
COMBINED CYCLES																												
Aguirre CC Gas 1-1	50.00	50	50	43	30	30	203	33	10						246			3	30	30	30	30	30	399	30	30	30	30	**519**	**8503**
Aguirre CC Gas 1-2	50.00	30	30	30	31	31	152	30	30	30	30	30	33	39	374	31	30	39	40	40	34	30	30	648	30	30	30	30	**768**	**9067**
Aguirre CC Gas 1-3	50.00	29	30	30	10		99								99	17	30	38	40	40	35	30	30	359	30	30	30	30	**479**	**6841**
Aguirre CC Gas 1-4	50.00																													**4708**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	30	30	31	31	31	153	26	30	30	30	30	31	36	366	31	30	38	40	40	34	30	30	639	30	30	30	30	**759**	**7215**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	39	40	40	40	40	199	34							233			23	30	30	30	30	30	406	30	30	30	30	**526**	**7785**
Aguirre CC Gas 2-4	50.00	30	30	30	30	29	149	29	30	30	30	30	32	35	365	31	30	37	40	40	36	30	30	639	30	30	30	30	**759**	**8740**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**208**	**210**	**204**	**172**	**161**	**955**	**152**	**100**	**90**	**90**	**90**	**96**	**110**	**1683**	**110**	**120**	**178**	**220**	**220**	**199**	**180**	**180**	**3090**	**180**	**180**	**180**	**180**	**3810**	**52859**
San Juan GT 5	160.00	120	119	119	120	119	597	120	120	119	119	120	85		1280			30	90	89	101	117	120	1827	120	119	120	119	**2305**	**7030**
San Juan STM 5	60.00																													
San Juan GT 6	160.00																													
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**120**	**119**	**119**	**120**	**119**	**597**	**120**	**120**	**119**	**119**	**120**	**85**		**1280**			**30**	**90**	**89**	**101**	**117**	**120**	**1827**	**120**	**119**	**120**	**119**	**2305**	**7030**
DIESEL																												
Cambalache 1	82.50																													
Cambalache 2	82.50	46					46								46						9	41	50	146	50	50	50	51	**347**	**908**
Cambalache 3	82.50	4					4								4					10	63	76	76	229	77	77	78	76	**537**	**5386**
TOTAL CAMBALACHE G.P.		**50**					**50**								**50**					**10**	**72**	**117**	**126**	**375**	**127**	**127**	**128**	**127**	**884**	**6294**
Mayagüez 1	55.00	47	38	1			86								86				9	22	22	23	46	208	47	47	47	47	**396**	**3650**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	51	21				72								72			4	36	24	24	25	50	235	51	51	51	51	**439**	**4612**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**98**	**59**	**1**			**158**								**158**			**4**	**45**	**46**	**46**	**48**	**96**	**443**	**98**	**98**	**98**	**98**	**835**	**8262**
DIESEL																												

Palo Seco 1-1	21.00	19	19	19	19	19	95	19	19	19	19	19	19	19	228	19	19	19	19	19	19	19	19	380	19	19	19	19	**456**	**5669**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	21	21	21	21	105	21	21	21	21	21	21	20	251	20	20	20	20	21	21	21	21	415	21	21	21	21	**499**	**4214**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																				17	21	22	60	22	22	22	1	**127**	**1346**
Daguao 1-1	21.00																				14	18	18	50	18	2			**70**	**738**
Daguao 1-2	21.00																				6	16	16	38	16	3			**57**	**556**
Yabucoa 1-1	21.00																				14	18	18	50	18	13			**81**	**673**
Yabucoa 1-2	21.00																													**2**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																				12	19	19	50	19	7			**76**	**808**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																				12	18	18	48	18	18	18		**102**	**959**
TOTAL GAS TURBINES		**40**	**40**	**40**	**40**	**40**	**200**	**40**	**40**	**40**	**40**	**40**	**40**	**39**	**479**	**39**	**39**	**39**	**39**	**40**	**115**	**150**	**151**	**1091**	**151**	**105**	**80**	**41**	**1468**	**17802**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**2980**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**2948**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**2592**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**8520**
TOTAL DIESEL		**218**	**129**	**71**	**70**	**70**	**558**	**70**	**70**	**70**	**70**	**70**	**70**	**69**	**1047**	**69**	**69**	**73**	**114**	**126**	**263**	**345**	**403**	**2509**	**406**	**360**	**336**	**296**	**3907**	**40878**
COGENERATION																														
AES 1	227.15	229	229	229	229	229	1145	229	229	229	229	229	229	227	2746	222	214	218	223	223	223	224	228	4521	228	229	229	229	**5436**	**64618**
AES 2	227.15	187	186	184	180	181	918	181	181	181	181	182	182	181	2187	183	181	183	183	183	183	184	184	3651	186	185	184	185	**4391**	**56240**
TOTAL AES		**416**	**415**	**413**	**409**	**410**	**2063**	**410**	**410**	**410**	**410**	**411**	**411**	**408**	**4933**	**405**	**395**	**401**	**406**	**406**	**406**	**408**	**412**	**8172**	**414**	**414**	**413**	**414**	**9827**	**120858**
ECOELECTRICA		424	434	440	452	423	2173	395	368	365	364	363	341	391	4760	434	465	396	377	453	400	387	462	8134	471	467	464	450	**9986**	**121356**
TOTAL COGENERATION		**840**	**849**	**853**	**861**	**833**	**4236**	**805**	**778**	**775**	**774**	**774**	**752**	**799**	**9693**	**839**	**860**	**797**	**783**	**859**	**806**	**795**	**874**	**16306**	**885**	**881**	**877**	**864**	**19813**	**242214**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									1	3	11	15	17	47	18	17	15	12	8	3			120					**120**	**1462**
San Fermín	20.00									5	8	11	16	18	58	18	18	16	13	9	3			135					**135**	**1310**
Horizon	10.00									1	2	8	9	9	29	10	10	10	9	5	2			75					**75**	**876**
Oriana	45.00								1	6	21	31	40	42	141	43	42	36	25	17	5			309					**309**	**2794**
Coto Laurel	10.00									2	4	4	5	5	20	5	7	3	4	2				41					**41**	**603**
Fonroche	40.00									3	12	17	22	28	82	26	20	20	16	8	4			176					**176**	**2180**
TOTAL SOLAR									**1**	**18**	**50**	**82**	**107**	**119**	**377**	**120**	**114**	**100**	**79**	**49**	**17**			**856**					**856**	**9225**
Bechara	1.00																													
Pattern Santa Isabel	75.00		1	2			3	1	1	1	5	11	60	73	155	74	72	72	66	51	45	35	23	593	7	1	4	4	**609**	**2218**
Punta Lima	26.00																													
TOTAL WIND			**1**	**2**			**3**	**1**	**1**	**1**	**5**	**11**	**60**	**73**	**155**	**74**	**72**	**72**	**66**	**51**	**45**	**35**	**23**	**593**	**7**	**1**	**4**	**4**	**609**	**2218**
LandFill Gas Fajardo	2.40																													**17**
LandFill Gas Toa Baja	2.40	1	1	1	1	1	5	1	1	1	1	1	1	1	12	1	1	1	1	1	1	1	1	20	1	1	1	1	**24**	**428**
TOTAL LANDFILL GAS		**1**	**1**	**1**	**1**	**1**	**5**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**12**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**20**	**1**	**1**	**1**	**1**	**24**	**445**
TOTAL RENEWABLE		**1**	**2**	**3**	**1**	**1**	**8**	**2**	**3**	**20**	**56**	**94**	**168**	**193**	**544**	**195**	**187**	**173**	**146**	**101**	**63**	**36**	**24**	**1469**	**8**	**2**	**5**	**5**	**1489**	**11888**
.																														
TOTAL HOURLY GENERATION (NET)		**2081**	**2004**	**1925**	**1879**	**1839**	**9728**	**1803**	**1726**	**1729**	**1763**	**1801**	**1830**	**1849**	**22229**	**1903**	**1920**	**1935**	**2013**	**2085**	**2093**	**2132**	**2286**	**38596**	**2306**	**2277**	**2240**	**2154**	**47573**	**562291**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2306	**1726**	**1982**	**85.96%**	**74.85%**	**47573**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Monday, April 13, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1-1	1.50																											
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	1				**17**	**138**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	2				**18**	**137**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																				3	6	6	15	6	3			**24**	**421**
Dos Bocas 3	5.00																				3	6	6	15	6	3			**24**	**427**
Yauco 1-1	25.00																													
Yauco 2-1	4.50									1	2	2	2	2	9	2	2	2	2	2	2	2	2	25	2	2			**29**	**139**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**3**	**4**	**4**	**4**	**4**	**19**	**4**	**4**	**4**	**4**	**4**	**12**	**18**	**18**	**87**	**17**	**8**			**112**	**1262**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	53	52	52	52	53	262	52	53	52	52	56	61	61	649	61	61	62	61	59	54	52	54	1113	60	60	65	68	**1366**	**23695**
San Juan 10	100.00																													
Palo Seco 1	85.00	63	63	63	63	63	315	63	63	63	63	63	63	63	756	63	63	63	63	63	63	63	63	1260	63	63	63	63	**1512**	**18421**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	142	145	145	145	145	1702	145	145	145	145	145	145	145	145	2862	145	145	145	145	**3442**	**43568**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	153	165	165	165	165	1863	133	83	80	80	80	115	150	150	2734	150	150	150	150	**3334**	**42524**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	260	250	280	260	285	1335	305	315	335	330	330	330	300	3580	290	305	305	280	285	250	245	305	5845	320	315	305	285	**7070**	**83400**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**666**	**655**	**685**	**665**	**691**	**3362**	**710**	**721**	**745**	**755**	**759**	**764**	**734**	**8550**	**692**	**657**	**655**	**629**	**632**	**627**	**655**	**717**	**13814**	**738**	**733**	**728**	**711**	**16724**	**222996**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	30	30	30	30	31	151	31	31	30	30	30	30	30	363	30	45	50	50	50	34	33	40	695	39	39	40	40	**853**	**9356**
Aguirre CC Gas 1-2	50.00	30	30	30	31	31	152	30	30	30	31	31	31	29	364	30	30	31	31	30	29	33	40	618	40	40	40	39	**777**	**9844**
Aguirre CC Gas 1-3	50.00	30	30	30	30	31	151	30	30	30	30	31	31	29	362	30	30	31	31	29	29	32	32	606	30	30	30	31	**727**	**7568**
Aguirre CC Gas 1-4	50.00																						1	1					**1**	**4709**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	30	30	30	30	30	150	29	29	30	30	30	30	29	357	30	30	30	31	30	28	30	32	598	30	30	30	30	**718**	**7933**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	30	30	30	10		100	24	30	30	30	30	30	30	304	30	30	30	30	30	28	30	32	544	31	31	30	30	**666**	**8451**
Aguirre CC Gas 2-4	50.00	29	29	30	30	30	148	29	30	30	30	30	30	29	356	30	30	30	31	29	29	30	32	597	30	30	30	30	**717**	**9457**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**179**	**179**	**180**	**161**	**153**	**852**	**173**	**180**	**180**	**181**	**182**	**182**	**176**	**2106**	**180**	**195**	**202**	**204**	**198**	**177**	**188**	**209**	**3659**	**200**	**200**	**200**	**200**	**4459**	**57318**
San Juan GT 5	160.00	120	119	119	120	120	598	119	120	119	117	90	89	90	1342	90	89	90	89	105	120	120	119	2164	119	120	120	120	**2643**	**9673**
San Juan STM 5	60.00																		8	34	38	39	39	158	39	39	39	38	**313**	**313**
San Juan GT 6	160.00																													
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**120**	**119**	**119**	**120**	**120**	**598**	**119**	**120**	**119**	**117**	**90**	**89**	**90**	**1342**	**90**	**89**	**90**	**97**	**139**	**158**	**159**	**158**	**2322**	**158**	**159**	**159**	**158**	**2956**	**9986**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50	46					46								46									46					**46**	**954**
Cambalache 3	82.50	3					3			15	73	77	77	77	322	76	76	76	76	76	77	77	77	933	78	78	78	76	**1243**	**6629**
TOTAL CAMBALACHE G.P.		**49**					**49**			**15**	**73**	**77**	**77**	**77**	**368**	**76**	**76**	**76**	**76**	**76**	**77**	**77**	**77**	**979**	**78**	**78**	**78**	**76**	**1289**	**7583**
Mayagüez 1	55.00	47	47	6			100	4	33	47	47	46	46	46	369	13		2	46	46	46	46	46	614	46	46	46	46	**798**	**4448**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	51	16				67	24	51	51	51	51	51	50	396	7		12	50	50	51	51	51	668	51	51	51	38	**859**	**5471**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**98**	**63**	**6**			**167**	**28**	**84**	**98**	**98**	**97**	**97**	**96**	**765**	**20**		**14**	**96**	**96**	**97**	**97**	**97**	**1282**	**97**	**97**	**97**	**84**	**1657**	**9919**
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	19	19	95	19	19	19	19	19	19	19	228	19	19	19	19	19	19	19	19	380	19	19	19	19	**456**	**6125**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	21	21	21	21	105	21	21	21	21	21	21	21	252	21	20	21	20	21	20	21	21	417	21	21	21	21	**501**	**4715**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																		18	21	21	22	22	104	22	21	19		**166**	**1512**
Daguao 1-1	21.00																			2	18	18	18	56	18	12			**86**	**824**
Daguao 1-2	21.00																				14	16	16	46	16	12			**74**	**630**
Yabucoa 1-1	21.00																			15	18	18	18	69	18	12			**99**	**772**
Yabucoa 1-2	21.00																													**2**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																			2	19	19	19	59	19	10			**88**	**896**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																			7	18	18	18	61	18	18	16		**113**	**1072**
TOTAL GAS TURBINES		**40**	**40**	**40**	**40**	**40**	**200**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**480**	**40**	**39**	**40**	**57**	**87**	**147**	**151**	**151**	**1192**	**151**	**125**	**75**	**40**	**1583**	**19385**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**3220**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**3188**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**2832**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**9240**
TOTAL DIESEL		**217**	**133**	**76**	**70**	**70**	**566**	**98**	**154**	**183**	**241**	**244**	**244**	**243**	**1973**	**166**	**145**	**160**	**259**	**289**	**351**	**355**	**355**	**4053**	**356**	**330**	**280**	**230**	**5249**	**46127**
COGENERATION																														
AES 1	227.15	229	228	228	214	211	1110	157	128	128	128	128	161	217	2157	224	223	223	226	226	227	226	227	3959	228	228	228	228	**4871**	**69489**
AES 2	227.15	183	186	184	186	184	923	134	132	132	132	132	136	139	1860	146	148	154	169	177	185	186	187	3212	185	185	187	187	**3956**	**60196**
TOTAL AES		**412**	**414**	**412**	**400**	**395**	**2033**	**291**	**260**	**260**	**260**	**260**	**297**	**356**	**4017**	**370**	**371**	**377**	**395**	**403**	**412**	**412**	**414**	**7171**	**413**	**413**	**415**	**415**	**8827**	**129685**
ECOELECTRICA		455	463	463	462	453	2296	464	436	418	352	373	361	331	5031	436	464	461	422	398	332	384	467	8395	464	469	462	460	**10250**	**131606**
TOTAL COGENERATION		**867**	**877**	**875**	**862**	**848**	**4329**	**755**	**696**	**678**	**612**	**633**	**658**	**687**	**9048**	**806**	**835**	**838**	**817**	**801**	**744**	**796**	**881**	**15566**	**877**	**882**	**877**	**875**	**19077**	**261291**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									4	8	12	14	16	54	17	17	14	11	5	3	1		122					**122**	**1584**
San Fermín	20.00									4	7	12	12	13	48	13	12	13	9	5	1			101					**101**	**1411**
Horizon	10.00									2	6	9	8	8	33	9	9	10	8	4	2			75					**75**	**951**
Oriana	45.00								1	5	20	29	32	38	125	42	42	41	33	18	4	1		306					**306**	**3100**
Coto Laurel	10.00									2	4	6	3	3	18	5	2	4	2	1	1			33					**33**	**636**
Fonroche	40.00									6	14	21	27	26	94	23	23	20	6	4	2			172					**172**	**2352**
TOTAL SOLAR									**1**	**23**	**59**	**89**	**96**	**104**	**372**	**109**	**105**	**102**	**69**	**37**	**13**	**2**		**809**					**809**	**10034**
Bechara	1.00																													
Pattern Santa Isabel	75.00	4	6	3	1	2	16	1	4	3	10	16	41	68	159	74	74	74	74	74	71	47	18	665	5	1	2	1	**674**	**2892**
Punta Lima	26.00																													
TOTAL WIND		**4**	**6**	**3**	**1**	**2**	**16**	**1**	**4**	**3**	**10**	**16**	**41**	**68**	**159**	**74**	**74**	**74**	**74**	**74**	**71**	**47**	**18**	**665**	**5**	**1**	**2**	**1**	**674**	**2892**
LandFill Gas Fajardo	2.40																			1	1	1	1	4	1	1	1	1	**8**	**25**
LandFill Gas Toa Baja	2.40	1	1	1	1	1	5	1	1	1	1	1	1	1	12	1	1			2	2	2	1	21	2	2	2	2	**29**	**457**
TOTAL LANDFILL GAS		**1**	**1**	**1**	**1**	**1**	**5**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**12**	**1**	**1**			**3**	**3**	**3**	**2**	**25**	**3**	**3**	**3**	**3**	**37**	**482**
TOTAL RENEWABLE		**5**	**7**	**4**	**2**	**3**	**21**	**2**	**6**	**27**	**70**	**106**	**138**	**173**	**543**	**184**	**180**	**176**	**143**	**114**	**87**	**52**	**20**	**1499**	**8**	**4**	**5**	**4**	**1520**	**13408**
.																														
TOTAL HOURLY GENERATION (NET)		**2054**	**1970**	**1939**	**1880**	**1885**	**9728**	**1857**	**1877**	**1935**	**1980**	**2018**	**2079**	**2107**	**23581**	**2122**	**2105**	**2125**	**2153**	**2177**	**2156**	**2223**	**2358**	**41000**	**2354**	**2316**	**2249**	**2178**	**50097**	**612388**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2358	**1857**	**2087**	**88.52%**	**78.75%**	**50097**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Tuesday, April 14, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	2				**18**	**156**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	1				**17**	**154**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																					6	6	12	6	3			**21**	**442**
Dos Bocas 3	5.00																					6	6	12	6	3			**21**	**448**
Yauco 1-1	25.00																													
Yauco 2-1	4.50																					2	2	4	2	2			**8**	**147**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**2**	**2**	**4**	**18**	**18**	**60**	**17**	**8**			**85**	**1347**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	69	70	70	69	70	348	69	69	69	70	70	70	68	833	69	69	68	69	68	69	69	68	1382	69	69	69	69	**1658**	**25353**
San Juan 10	100.00																													
Palo Seco 1	85.00	63	63	63	63	63	315	63	63	63	63	63	63	63	756	63	63	63	63	63	63	63	63	1260	63	63	63	63	**1512**	**19933**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	145	145	145	145	145	725	145	145	145	140	140	140	140	1720	140	140	140	140	140	140	140	140	2840	140	140	140	140	**3400**	**46968**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150	150	150	150	150	150	3000	150	150	150	150	**3600**	**46124**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	270	260	260	230	230	1250	235	235	235	265	300	300	275	3095	265	260	265	255	265	260	245	310	5220	330	315	355	330	**6550**	**89950**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**697**	**688**	**688**	**657**	**658**	**3388**	**662**	**662**	**662**	**688**	**723**	**723**	**696**	**8204**	**687**	**682**	**686**	**677**	**686**	**682**	**667**	**731**	**13702**	**752**	**737**	**777**	**752**	**16720**	**239716**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	40	38	30	30	30	168	30	30	30	30	31	31	31	381	30	30	30	30	30	30	30	42	633	49	50	50	50	**832**	**10188**
Aguirre CC Gas 1-2	50.00	40	37	30	30	30	167	30	30	30	31	31	31	31	381	30	30	30	30	30	30	30	42	633	50	50	50	50	**833**	**10677**
Aguirre CC Gas 1-3	50.00	30	30	6			66			26	30	30	30	30	212	29	29	29	30	30	30	30	30	449	30	30	30	30	**569**	**8137**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	29	29	29	30	30	147	30	18						195					15	30	30	30	300	29	30	30	30	**419**	**8352**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	28	29	29	29	29	144	30	30	30	30	30	30	31	355	29	29	29	29	29	29	30	30	589	30	30	30	30	**709**	**9160**
Aguirre CC Gas 2-4	50.00	29	29	29	29	30	146	30	30	30	30	30	30	31	357	29	29	29	29	29	30	30	30	592	29	30	30	30	**711**	**10168**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**196**	**192**	**153**	**148**	**149**	**838**	**150**	**138**	**146**	**151**	**152**	**152**	**154**	**1881**	**147**	**147**	**147**	**148**	**163**	**179**	**180**	**204**	**3196**	**217**	**220**	**220**	**220**	**4073**	**61391**
San Juan GT 5	160.00	119	120	119	120	119	597	120	120	120	119	119	106	96	1397	109	113	119	120	119	122	121	120	2340	119	120	119	120	**2818**	**12491**
San Juan STM 5	60.00	39	38	39	38	38	192	38	38	39	39	40	41	42	469	40	40	41	40	41	40	40	40	791	40	40	40	39	**950**	**1263**
San Juan GT 6	160.00																				2	2		4					**4**	**4**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**158**	**158**	**158**	**158**	**157**	**789**	**158**	**158**	**159**	**158**	**159**	**147**	**138**	**1866**	**149**	**153**	**160**	**160**	**160**	**164**	**163**	**160**	**3135**	**159**	**160**	**159**	**159**	**3772**	**13758**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													**954**
Cambalache 3	82.50	7					7						11	57	75	76	76	76	77	77	77	77	78	689	78	78	78	78	**1001**	**7630**
TOTAL CAMBALACHE G.P.		**7**					**7**						**11**	**57**	**75**	**76**	**76**	**76**	**77**	**77**	**77**	**77**	**78**	**689**	**78**	**78**	**78**	**78**	**1001**	**8584**
Mayagüez 1	55.00	46	6				52						5	18	75	18	3				20	21	21	158	21	21	21	21	**242**	**4690**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	10					10					9	23	23	65	23					45	51	51	235	51	51	51	51	**439**	**5910**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**56**	**6**				**62**					**9**	**28**	**41**	**140**	**41**	**3**				**65**	**72**	**72**	**393**	**72**	**72**	**72**	**72**	**681**	**10600**
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	19	19	95	19	19	19	19	19	19	19	228	19	19	19	19	19	19	19	19	380	19	19	19	19	**456**	**6581**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	21	21	21	21	105	21	21	21	21	21	21	21	252	21	21	21	21	20	21	21	21	419	21	21	21	21	**503**	**5218**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			5	21	21	22	69	22	22	22	5	**140**	**1652**
Daguao 1-1	21.00																					16	18	34	18	15			**67**	**891**
Daguao 1-2	21.00																				3	16	16	35	16	13			**64**	**694**
Yabucoa 1-1	21.00																			2	18	18	18	56	18	12			**86**	**858**
Yabucoa 1-2	21.00																				14	18	18	50	16				**66**	**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																				5	19	19	43	19	14			**76**	**972**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																				4	18	18	40	18	18	18	4	**98**	**1170**
TOTAL GAS TURBINES		**40**	**40**	**40**	**40**	**40**	**200**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**480**	**40**	**40**	**40**	**40**	**46**	**105**	**166**	**169**	**1126**	**167**	**134**	**80**	**49**	**1556**	**20941**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**3460**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**3428**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**3072**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**9960**
TOTAL DIESEL		**133**	**76**	**70**	**70**	**70**	**419**	**70**	**70**	**70**	**70**	**79**	**109**	**168**	**1055**	**187**	**149**	**146**	**147**	**153**	**277**	**345**	**349**	**2808**	**347**	**314**	**260**	**229**	**3958**	**50085**
COGENERATION																														
AES 1	227.15	219	221	221	222	222	1105	222	219	221	221	222	223	223	2656	222	222	221	221	221	221	221	221	4426	222	221	222	223	**5314**	**74803**
AES 2	227.15	188	187	189	190	190	944	191	189	185	182	174	176	177	2218	177	177	177	183	187	188	190	190	3687	189	192	195	194	**4457**	**64653**
TOTAL AES		**407**	**408**	**410**	**412**	**412**	**2049**	**413**	**408**	**406**	**403**	**396**	**399**	**400**	**4874**	**399**	**399**	**398**	**404**	**408**	**409**	**411**	**411**	**8113**	**411**	**413**	**417**	**417**	**9771**	**139456**
ECOELECTRICA		473	478	464	448	437	2300	439	427	441	421	370	341	300	5039	297	341	375	429	460	372	359	470	8142	461	464	421	379	**9867**	**141473**
TOTAL COGENERATION		**880**	**886**	**874**	**860**	**849**	**4349**	**852**	**835**	**847**	**824**	**766**	**740**	**700**	**9913**	**696**	**740**	**773**	**833**	**868**	**781**	**770**	**881**	**16255**	**872**	**877**	**838**	**796**	**19638**	**280929**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									3	8	10	16	17	54	18	17	15	11	8	4			127					**127**	**1711**
San Fermín	20.00								1	4	9	10	11	16	51	17	16	12	12	8	2	1		119					**119**	**1530**
Horizon	10.00									2	6	8	9	10	35	10	10	10	9	5	2			81					**81**	**1032**
Oriana	45.00								1	7	22	33	40	42	145	43	40	38	34	16	8	1		325					**325**	**3425**
Coto Laurel	10.00									2	4	5	5	6	22	4	7	8	6	4				51					**51**	**687**
Fonroche	40.00								1	6	10	21	27	28	93	25	24	17	16	12	3			190					**190**	**2542**
TOTAL SOLAR									**3**	**24**	**59**	**87**	**108**	**119**	**400**	**117**	**114**	**100**	**88**	**53**	**19**	**2**		**893**					**893**	**10927**
Bechara	1.00																													
Pattern Santa Isabel	75.00		1		1	1	3	2	1	1	7	19	27	62	122	73	74	74	74	74	74	63	20	648	4	2	2	2	**658**	**3550**
Punta Lima	26.00																													
TOTAL WIND			**1**		**1**	**1**	**3**	**2**	**1**	**1**	**7**	**19**	**27**	**62**	**122**	**73**	**74**	**74**	**74**	**74**	**74**	**63**	**20**	**648**	**4**	**2**	**2**	**2**	**658**	**3550**
LandFill Gas Fajardo	2.40	1	1	1	1	1	5	1	1	1	1	1	1	1	12	1	1	1	1	1	1	1	1	20	1	1	1	1	**24**	**49**
LandFill Gas Toa Baja	2.40	2	2	2	2	2	10	1	1	1	1	1	1	1	17	1	1	1	1	1	1	1	1	25	1	1	1	1	**29**	**486**
TOTAL LANDFILL GAS		**3**	**3**	**3**	**3**	**3**	**15**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**29**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**45**	**2**	**2**	**2**	**2**	**53**	**535**
TOTAL RENEWABLE		**3**	**4**	**3**	**4**	**4**	**18**	**4**	**6**	**27**	**68**	**108**	**137**	**183**	**551**	**192**	**190**	**176**	**164**	**129**	**95**	**67**	**22**	**1586**	**6**	**4**	**4**	**4**	**1604**	**15012**
TOTAL HOURLY GENERATION (NET)		**2067**	**2004**	**1946**	**1897**	**1887**	**9801**	**1896**	**1869**	**1913**	**1961**	**1989**	**2010**	**2041**	**23480**	**2060**	**2063**	**2090**	**2131**	**2161**	**2182**	**2210**	**2365**	**40742**	**2370**	**2320**	**2258**	**2160**	**49850**	**662238**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2370	**1869**	**2077**	**87.64%**	**78.86%**	**49850**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Wednesday, April 15, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	2				**18**	**174**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	1				**17**	**171**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																				3	6	6	15	6	3			**24**	**466**
Dos Bocas 3	5.00																				3	6	6	15	6	3			**24**	**472**
Yauco 1-1	25.00																													
Yauco 2-1	4.50												1	2	3	2	2	2	2	2	2	2	2	19	2	2			**23**	**170**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**3**	**4**	**13**	**4**	**4**	**4**	**4**	**4**	**12**	**18**	**18**	**81**	**17**	**8**			**106**	**1453**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	69	69	69	70	69	346	69	69	69	69	69	69	68	828	69	69	69	68	69	69	69	68	1378	69	69	69	70	**1655**	**27008**
San Juan 10	100.00																													
Palo Seco 1	85.00	63	63	63	63	63	315	63	63	63	63	63	63	63	756	63	63	63	63	63	63	63	63	1260	63	63	63	63	**1512**	**21445**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**50328**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150	150	150	150	150	150	3000	150	150	150	150	**3600**	**49724**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	310	300	245	230	235	1320	235	235	240	240	290	300	290	3150	280	275	285	310	295	280	275	285	5435	285	275	280	285	**6560**	**96510**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**732**	**722**	**667**	**653**	**657**	**3431**	**657**	**657**	**662**	**662**	**712**	**722**	**711**	**8214**	**702**	**697**	**707**	**731**	**717**	**702**	**697**	**706**	**13873**	**707**	**697**	**702**	**708**	16687	256403
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	50	50	41	30	30	201	31	31	30	30	30	30	30	413	30	30	30	30	30	30	30	52	675	51	51	51	52	**880**	**11068**
Aguirre CC Gas 1-2	50.00	50	50	50	41	30	221	31	31	31	30	30	30	30	434	30	30	30	30	30	30	30	52	696	51	51	52	52	**902**	**11579**
Aguirre CC Gas 1-3	50.00	28	29	29	29	29	144	30	8						182				14	30	30	30	32	318	30	30	30	30	**438**	**8575**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	28	28	29	29	29	143	30	30	30	30	30	30	30	353	29	29	29	30	30	30	30	32	592	29	30	30	30	**711**	**9063**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	29	30	30	30	30	149	30	30						209				6	30	30	30	31	336	30	30	30	30	**456**	**9616**
Aguirre CC Gas 2-4	50.00	30	30	30	30	30	150	30	30	30	30	30	30	30	360	29	29	29	30	30	30	30	31	598	30	30	30	30	**718**	**10886**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**215**	**217**	**209**	**189**	**178**	**1008**	**182**	**160**	**121**	**120**	**120**	**120**	**120**	**1951**	**118**	**118**	**118**	**140**	**180**	**180**	**180**	**230**	**3215**	**221**	**222**	**223**	**224**	4105	65496
San Juan GT 5	160.00	120	119	119	120	120	598	119	119	119	120	120	120	120	1435	119	120	119	120	119	120	119	120	2391	119	120	120	119	**2869**	**15360**
San Juan STM 5	60.00	40	40	40	39	39	198	39	40	40	40	40	41	41	479	40	41	40	41	40	39	40	40	800	40	40	40	39	**959**	**2222**
San Juan GT 6	160.00																													**4**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**160**	**159**	**159**	**159**	**159**	**796**	**158**	**159**	**159**	**160**	**160**	**161**	**161**	**1914**	**159**	**161**	**159**	**161**	**159**	**159**	**159**	**160**	**3191**	**159**	**160**	**160**	**158**	3828	17586
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													**954**
Cambalache 3	82.50	9					9								9					3	30	77	78	197	78	78	78	55	**486**	**8116**
TOTAL CAMBALACHE G.P.		**9**					**9**								**9**					**3**	**30**	**77**	**78**	**197**	**78**	**78**	**78**	**55**	486	9070
Mayagüez 1	55.00	21	17				38								38					15	21	21	21	116	21	21	21	21	**200**	**4890**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	51	7				58								58					34	51	51	51	245	51	51	51	52	**450**	**6360**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**72**	**24**				**96**								**96**					**49**	**72**	**72**	**72**	**361**	**72**	**72**	**72**	**73**	650	11250
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	19	19	95	19	19	19	19	19	19	20	229	19	19	19	19	19	19	19	19	381	19	19	19	19	**457**	**7038**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	21	21	21	22	106	22	22	22	21	21	21	21	256	21	21	20	20	21	21	21	21	422	21	21	21	21	**506**	**5724**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			6	21	21	22	70	22	22	22	6	**142**	**1794**
Daguao 1-1	21.00																					12	18	30	18	14			**62**	**953**
Daguao 1-2	21.00																					6	16	22	16	12			**50**	**744**
Yabucoa 1-1	21.00																			1	18	18	18	55	18	13			**86**	**944**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																					10	19	29	18				**47**	**1019**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																			1	18	18	18	55	17				**72**	**1242**
TOTAL GAS TURBINES		**40**	**40**	**40**	**40**	**41**	**201**	**41**	**41**	**41**	**40**	**40**	**40**	**41**	**485**	**40**	**40**	**39**	**39**	**48**	**97**	**125**	**151**	**1064**	**149**	**101**	**62**	**46**	**1422**	**22363**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**3700**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**3668**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**3312**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**10680**
TOTAL DIESEL		**151**	**94**	**70**	**70**	**71**	**456**	**71**	**71**	**71**	**70**	**70**	**70**	**71**	**950**	**70**	**70**	**69**	**69**	**130**	**229**	**304**	**331**	**2222**	**329**	**281**	**242**	**204**	**3278**	**53363**
COGENERATION																														
AES 1	227.15	221	222	221	222	222	1108	222	224	224	222	223	221	222	2666	222	220	222	219	219	219	219	219	4425	220	221	222	222	**5310**	**80113**
AES 2	227.15	194	196	189	184	184	947	186	186	187	184	180	179	182	2231	184	184	186	187	186	184	184	184	3710	184	187	187	187	**4455**	**69108**
TOTAL AES		**415**	**418**	**410**	**406**	**406**	**2055**	**408**	**410**	**411**	**406**	**403**	**400**	**404**	**4897**	**406**	**404**	**408**	**406**	**405**	**403**	**403**	**403**	**8135**	**404**	**408**	**409**	**409**	**9765**	**149221**
ECOELECTRICA		396	382	404	392	355	1929	368	368	427	453	432	384	419	4780	416	422	440	449	428	374	326	423	8058	429	438	430	386	**9741**	**151214**
TOTAL COGENERATION		**811**	**800**	**814**	**798**	**761**	**3984**	**776**	**778**	**838**	**859**	**835**	**784**	**823**	**9677**	**822**	**826**	**848**	**855**	**833**	**777**	**729**	**826**	**16193**	**833**	**846**	**839**	**795**	**19506**	**300435**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									2	8	12	13	15	50	18	17	15	12	8	3			123					**123**	**1834**
San Fermín	20.00								1	4	8	9	13	14	49	19	18	16	13	9	3			127					**127**	**1657**
Horizon	10.00									1	2	8	7	8	26	10	10	10	9	5	2			72					**72**	**1104**
Oriana	45.00									9	21	29	40	43	142	43	43	33	19	6	4			290					**290**	**3715**
Coto Laurel	10.00									2	3	4	4	4	17	3	2	2	3	2	2			31					**31**	**718**
Fonroche	40.00									3	15	11	17	21	67	28	16	25	18	11	4			169					**169**	**2711**
TOTAL SOLAR									**1**	**21**	**57**	**73**	**94**	**105**	**351**	**121**	**106**	**101**	**74**	**41**	**18**			**812**					**812**	**11739**
Bechara	1.00																													
Pattern Santa Isabel	75.00	2				13	15	3	3	8	6	6	35	53	129	60	72	71	62	48	41	36	25	544	6				**550**	**4100**
Punta Lima	26.00																													
TOTAL WIND		**2**				**13**	**15**	**3**	**3**	**8**	**6**	**6**	**35**	**53**	**129**	**60**	**72**	**71**	**62**	**48**	**41**	**36**	**25**	**544**	**6**				**550**	**4100**
LandFill Gas Fajardo	2.40																													**49**
LandFill Gas Toa Baja	2.40	1	1	1	1	1	5	1	1	1	1	1	1	1	12	1	1	1	1	2	2	2	2	24	2	2	2	2	**32**	**518**
TOTAL LANDFILL GAS		**1**	**1**	**1**	**1**	**1**	**5**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**12**	**1**	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**24**	**2**	**2**	**2**	**2**	**32**	**567**
TOTAL RENEWABLE		**3**	**1**	**1**	**1**	**14**	**20**	**4**	**5**	**30**	**64**	**80**	**130**	**159**	**492**	**182**	**179**	**173**	**137**	**91**	**61**	**38**	**27**	**1380**	**8**	**2**	**2**	**2**	**1394**	**16406**
.																														
TOTAL HOURLY GENERATION (NET)		**2072**	**1993**	**1920**	**1870**	**1840**	**9695**	**1848**	**1830**	**1883**	**1937**	**1979**	**1990**	**2049**	**23211**	**2057**	**2055**	**2078**	**2097**	**2114**	**2120**	**2125**	**2298**	**40155**	**2274**	**2216**	**2168**	**2091**	**48904**	**711142**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2298	**1830**	**2038**	**88.67%**	**79.63%**	**48904**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Thursday, April 16, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	2	1	2	1	2	16	1				**17**	**191**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	2	1	2	1	2	16	2				**18**	**189**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																						6	6	6	3			**15**	**481**
Dos Bocas 3	5.00																						6	6	6	3			**15**	**487**
Yauco 1-1	25.00																													
Yauco 2-1	4.50												2	2	4	2	2	2	2	2	2	2	2	20	2	2			**24**	**194**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**4**	**4**	**14**	**4**	**4**	**4**	**6**	**4**	**6**	**4**	**18**	**64**	**17**	**8**			**89**	**1542**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	69	69	70	69	69	346	70	70	70	69	69	69	69	832	69	69	69	68	70	71	71	72	1391	71	72	72	72	**1678**	**28686**
San Juan 10	100.00																													
Palo Seco 1	85.00	63	63	63	63	63	315	63	63	63	63	63	63	63	756	63	63	63	63	63	63	63	63	1260	63	63	63	63	**1512**	**22957**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**53688**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150	150	150	150	150	150	3000	150	150	37		**3337**	**53061**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	280	280	280	280	280	1400	280	280	280	290	280	275	280	3365	280	275	265	260	285	290	300	315	5635	295	290	310	280	**6810**	**103320**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**702**	**702**	**703**	**702**	**702**	**3511**	**703**	**703**	**703**	**712**	**702**	**697**	**702**	**8433**	**702**	**697**	**687**	**681**	**708**	**714**	**724**	**740**	**14086**	**719**	**715**	**622**	**555**	**16697**	**273100**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	50	30	30	30	30	170	30	30	30	30	30	30	30	380	30	30	30	30	30	30	34	51	645	50	42	45	50	**832**	**11900**
Aguirre CC Gas 1-2	50.00	50	32	30	30	30	172	30	5		17	30	30	31	315	30	30	30	30	30	30	34	51	580	50	43	45	50	**768**	**12347**
Aguirre CC Gas 1-3	50.00	30	8				38					14	30	4	86					7	30	30	40	193	40	41	38	40	**352**	**8927**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	30	30	30	29	29	148	30	9		13	30	30	30	290	30	30	30	30	30	30	32	45	547	45	40	41	45	**718**	**9781**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	30	12				42					17	30		89					5	30	30	45	199	45	40	45	50	**379**	**9995**
Aguirre CC Gas 2-4	50.00	29	29	29	30	30	147	30	29	30	30	30	29	31	356	30	30	30	30	30	14			520					**520**	**11406**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**219**	**141**	**119**	**119**	**119**	**717**	**120**	**73**	**60**	**90**	**151**	**179**	**126**	**1516**	**120**	**120**	**120**	**120**	**132**	**164**	**160**	**232**	**2684**	**230**	**206**	**214**	**235**	**3569**	**69065**
San Juan GT 5	160.00	119	120	120	119	120	598	119	119	119	120	120	120	113	1428	127	144	159	160	161	150	113	150	2592	149	150	149	150	**3190**	**18550**
San Juan STM 5	60.00	40	39	39	39	39	196	38	38	38	39	39	41	41	470	42	45	50	50	50	49	39	46	841	45	46	46	45	**1023**	**3245**
San Juan GT 6	160.00																													**4**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**159**	**159**	**159**	**158**	**159**	**794**	**157**	**157**	**157**	**159**	**159**	**161**	**154**	**1898**	**169**	**189**	**209**	**210**	**211**	**199**	**152**	**196**	**3433**	**194**	**196**	**195**	**195**	**4213**	**21799**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													**954**
Cambalache 3	82.50																				18	66	9	93	69	78	78	79	**397**	**8513**
TOTAL CAMBALACHE G.P.																					**18**	**66**	**9**	**93**	**69**	**78**	**78**	**79**	**397**	**9467**
Mayagüez 1	55.00	13					13								13								8	21	20	21	21	21	**104**	**4994**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	17					17					15			32					4	24	24	51	135	51	51	51	52	**340**	**6700**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**30**					**30**					**15**			**45**					**4**	**24**	**24**	**59**	**156**	**71**	**72**	**72**	**73**	**444**	**11694**
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	19	20	96	20	20	19	19	19	19	19	231	19	19	19	19	19	19	19	19	383	19	19	19	19	**459**	**7497**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	21	21	22	22	107	22	22	21	21	21	21	21	256	21	21	21	21	20	21	21	21	423	21	21	21	21	**507**	**6231**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			1	21	21	22	65	22	22	22	22	**153**	**1947**
Daguao 1-1	21.00																			2	18	18	18	56	18	15			**89**	**1042**
Daguao 1-2	21.00																				10	16	16	42	16	14			**72**	**816**
Yabucoa 1-1	21.00																				2	18	18	38	18	13			**69**	**1013**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																				6	19	19	44	19	9			**72**	**1091**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																				17	18	18	53	18	18	18	18	**125**	**1367**
TOTAL GAS TURBINES		**40**	**40**	**40**	**41**	**42**	**203**	**42**	**42**	**40**	**40**	**40**	**40**	**40**	**487**	**40**	**40**	**40**	**40**	**42**	**114**	**150**	**151**	**1104**	**151**	**131**	**80**	**80**	**1546**	**23909**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	23	213	10	10	10	10	**253**	**3953**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	23	213	10	10	10	10	**253**	**3921**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	23	213	10	10	10	10	**253**	**3565**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**69**	**639**	**30**	**30**	**30**	**30**	**759**	**11439**
TOTAL DIESEL		**100**	**70**	**70**	**71**	**72**	**383**	**72**	**72**	**70**	**70**	**85**	**70**	**70**	**892**	**70**	**70**	**70**	**70**	**76**	**186**	**270**	**288**	**1992**	**321**	**311**	**260**	**262**	**3146**	**56509**
COGENERATION																														
AES 1	227.15	222	221	221	215	189	1068	189	176	189	208	210	209	214	2463	210	214	214	214	199	204	195	204	4117	206	214	215	228	**4980**	**85093**
AES 2	227.15	188	189	190	191	194	952	183	175	174	181	183	185	186	2219	185	185	188	189	187	188	186	185	3712	185	187	185	186	**4455**	**73563**
TOTAL AES		**410**	**410**	**411**	**406**	**383**	**2020**	**372**	**351**	**363**	**389**	**393**	**394**	**400**	**4682**	**395**	**399**	**402**	**403**	**386**	**392**	**381**	**389**	**7829**	**391**	**401**	**400**	**414**	**9435**	**158656**
ECOELECTRICA		399	408	381	329	321	1838	346	385	452	445	383	350	412	4611	397	367	403	434	459	385	396	416	7868	348	377	450	423	**9466**	**160680**
TOTAL COGENERATION		**809**	**818**	**792**	**735**	**704**	**3858**	**718**	**736**	**815**	**834**	**776**	**744**	**812**	**9293**	**792**	**766**	**805**	**837**	**845**	**777**	**777**	**805**	**15697**	**739**	**778**	**850**	**837**	**18901**	**319336**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									4	9	13	16	16	58	16	17	15	12	8	3			129					**129**	**1963**
San Fermín	20.00									4	7	13	12	15	51	18	17	15	14	7	1			123					**123**	**1780**
Horizon	10.00									2	6	9	9	9	35	10	10	10	9	6	2			82					**82**	**1186**
Oriana	45.00													1	1	26	40	24	11	10	3			115					**115**	**3830**
Coto Laurel	10.00									2	4	5	3	8	22	6	9	7	4	5	1			54					**54**	**772**
Fonroche	40.00								1	7	15	17	26	27	93	26	28	22	19	12	6			206					**206**	**2917**
TOTAL SOLAR									**1**	**19**	**41**	**57**	**66**	**76**	**260**	**102**	**121**	**93**	**69**	**48**	**16**			**709**					**709**	**12448**
Bechara	1.00																													
Pattern Santa Isabel	75.00				2	2	4	2	2	1	3	20	46	68	146	74	74	70	70	61	57	41	27	620	8	4	1	1	**634**	**4734**
Punta Lima	26.00																													
TOTAL WIND					**2**	**2**	**4**	**2**	**2**	**1**	**3**	**20**	**46**	**68**	**146**	**74**	**74**	**70**	**70**	**61**	**57**	**41**	**27**	**620**	**8**	**4**	**1**	**1**	**634**	**4734**
LandFill Gas Fajardo	2.40																													**49**
LandFill Gas Toa Baja	2.40	2	2	2	2	2	10	2	2	2	2	2	2	2	24	2	2	2	2	2	2	1	1	38	1	1	1	1	**42**	**560**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**24**	**2**	**2**	**2**	**2**	**2**	**2**	**1**	**1**	**38**	**1**	**1**	**1**	**1**	**42**	**609**
TOTAL RENEWABLE		**2**	**2**	**2**	**4**	**4**	**14**	**4**	**5**	**22**	**46**	**79**	**114**	**146**	**430**	**178**	**197**	**165**	**141**	**111**	**75**	**42**	**28**	**1367**	**9**	**5**	**2**	**2**	**1385**	**17791**
.																														
TOTAL HOURLY GENERATION (NET)		**1991**	**1892**	**1845**	**1789**	**1760**	**9277**	**1774**	**1746**	**1829**	**1913**	**1954**	**1969**	**2014**	**22476**	**2035**	**2043**	**2060**	**2065**	**2087**	**2121**	**2129**	**2307**	**39323**	**2229**	**2219**	**2143**	**2086**	**48000**	**759142**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2307	**1746**	**2000**	**86.69%**	**75.68%**	**48000**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Friday, April 17, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	2	1	2	1	2	16	2				**18**	**209**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	2	1	2	1	2	16	1				**17**	**206**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																				3	6	6	15	6	3			**24**	**505**
Dos Bocas 3	5.00																				3	6	6	15	6	3			**24**	**511**
Yauco 1-1	25.00																													
Yauco 2-1	4.50																													**194**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**4**	**2**	**10**	**14**	**16**	**62**	**15**	**6**			**83**	**1625**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	72	72	71	72	72	359	73	72	72	72	72	72	72	864	72	71	72	72	71	72	71	72	1437	71	72	72	71	**1723**	**30409**
San Juan 10	100.00																													
Palo Seco 1	85.00	63	63	63	63	63	315	63	63	63	63	63	63	63	756	63	63	63	63	63	63	63	63	1260	63	63	63	63	**1512**	**24469**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**57048**
Palo Seco 4	216.00																													**53061**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	230	240	240	240	240	1190	240	240	240	240	240	240	235	2865	240	235	240	240	285	295	305	315	5020	300	300	300	300	**6220**	**109540**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**505**	**515**	**514**	**515**	**515**	**2564**	**516**	**515**	**515**	**515**	**515**	**515**	**510**	**6165**	**515**	**509**	**515**	**515**	**559**	**570**	**579**	**590**	**10517**	**574**	**575**	**575**	**574**	**12815**	**285915**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	51	51	51	51	51	255	41	40	40	40	40	40	41	537	40	40	40	40	40	40	40	46	863	51	51	49	49	**1063**	**12963**
Aguirre CC Gas 1-2	50.00	51	51	51	51	52	256	42	40	40	40	40	40	41	539	40	40	40	40	40	40	40	49	868	50	50	50	49	**1067**	**13414**
Aguirre CC Gas 1-3	50.00	40	33				73				23	30	30	30	186	30	30	30	30	30	30	30	37	433	41	40	40	39	**593**	**9520**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	45	45	45	46	46	227	39	40	39	39	40	40	40	504	40	40	40	39	39	39	39	40	820	46	45	45	43	**999**	**10780**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	50	50	18			118				14	30	30	30	222	30	30	30	30	30	30	30	40	472	50	50	50	48	**670**	**10665**
Aguirre CC Gas 2-4	50.00																			14	30	30	45	119	44	42	45	43	**293**	**11699**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**237**	**230**	**165**	**148**	**149**	**929**	**122**	**120**	**119**	**156**	**180**	**180**	**182**	**1988**	**180**	**180**	**180**	**179**	**193**	**209**	**209**	**257**	**3575**	**282**	**278**	**279**	**271**	**4685**	**73750**
San Juan GT 5	160.00	149	150	149	150	149	747	150	150	150	149	149	149	149	1793	146	147	172	182	159	144	145	144	3032	145	144	145	144	**3610**	**22160**
San Juan STM 5	60.00	46	45	45	45	45	226	44	44	45	45	47	46	46	543	45	44	44	43	43	43	42	42	889	42	44	45	44	**1064**	**4309**
San Juan GT 6	160.00																													**4**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**195**	**195**	**194**	**195**	**194**	**973**	**194**	**194**	**195**	**194**	**196**	**195**	**195**	**2336**	**191**	**191**	**216**	**225**	**202**	**187**	**187**	**186**	**3921**	**187**	**188**	**190**	**188**	**4674**	**26473**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													**954**
Cambalache 3	82.50	78	78	78	78	79	391	78	78	77	77	77	77	77	932	76	76	76	76	77	77	77	77	1544	77	78	78	78	**1855**	**10368**
TOTAL CAMBALACHE G.P.		**78**	**78**	**78**	**78**	**79**	**391**	**78**	**78**	**77**	**77**	**77**	**77**	**77**	**932**	**76**	**76**	**76**	**76**	**77**	**77**	**77**	**77**	**1544**	**77**	**78**	**78**	**78**	**1855**	**11322**
Mayagüez 1	55.00	21	3				24								24					4	21	21	21	91	21	21	21	21	**175**	**5169**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	52	15				67								67					10	24	24	46	171	51	51	51	51	**375**	**7075**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**73**	**18**				**91**								**91**					**14**	**45**	**45**	**67**	**262**	**72**	**72**	**72**	**72**	**550**	**12244**
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	19	20	96	19	19	19	19	19	19	19	229	19	19	19	19	19	19	19	19	381	19	19	19	19	**457**	**7954**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	22	22	22	22	109	22	22	21	21	21	21	21	258	21	21	21	21	21	21	21	21	426	21	21	21	21	**510**	**6741**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00	16					16								16						3	21	22	62	22	22	22	22	**150**	**2097**
Daguao 1-1	21.00																				1	18	18	37	18	18	17		**90**	**1132**
Daguao 1-2	21.00																				4	16	16	36	16	16	15		**83**	**899**
Yabucoa 1-1	21.00																					13	18	31	18	13			**62**	**1075**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																				2	19	19	40	19	14			**73**	**1164**
Jobos 1-1	21.00																													
Jobos 1-2	21.00	13					13								13						2	18	18	51	18	18	18	18	**123**	**1490**
TOTAL GAS TURBINES		**69**	**41**	**41**	**41**	**42**	**234**	**41**	**41**	**40**	**40**	**40**	**40**	**40**	**516**	**40**	**40**	**40**	**40**	**40**	**52**	**145**	**151**	**1064**	**151**	**141**	**112**	**80**	**1548**	**25457**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**4193**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**4161**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**3805**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**12159**
TOTAL DIESEL		**250**	**167**	**149**	**149**	**151**	**866**	**149**	**149**	**147**	**147**	**147**	**147**	**147**	**1899**	**146**	**146**	**146**	**146**	**161**	**204**	**297**	**325**	**3470**	**330**	**321**	**292**	**260**	**4673**	**61182**
COGENERATION																														
AES 1	227.15	228	228	228	228	226	1138	228	227	228	228	228	228	229	2734	229	229	228	229	228	228	228	228	4561	228	228	228	228	**5473**	**90566**
AES 2	227.15	184	185	186	186	185	926	185	185	185	184	184	186	185	2220	187	187	187	187	187	187	186	185	3713	184	184	182	182	**4445**	**78008**
TOTAL AES		**412**	**413**	**414**	**414**	**411**	**2064**	**413**	**412**	**413**	**412**	**412**	**414**	**414**	**4954**	**416**	**416**	**415**	**416**	**415**	**415**	**414**	**413**	**8274**	**412**	**412**	**410**	**410**	**9918**	**168574**
ECOELECTRICA		365	370	391	367	349	1842	373	370	411	420	394	369	380	4559	372	386	379	436	439	406	360	453	7790	432	400	377	348	**9347**	**170027**
TOTAL COGENERATION		**777**	**783**	**805**	**781**	**760**	**3906**	**786**	**782**	**824**	**832**	**806**	**783**	**794**	**9513**	**788**	**802**	**794**	**852**	**854**	**821**	**774**	**866**	**16064**	**844**	**812**	**787**	**758**	**19265**	**338601**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									2	7	10	15	18	52	18	17	15	12	8	3			125					**125**	**2088**
San Fermín	20.00								1	4	9	13	17	18	62	19	19	16	13	10	3			142					**142**	**1922**
Horizon	10.00									2	4	7	9	10	32	10	10	10	9	5	2			78					**78**	**1264**
Oriana	45.00									7	19	28	35	40	129	42	38	34	12	10	3	1		269					**269**	**4099**
Coto Laurel	10.00									2	3	3	4	4	16	6	6	3	2	1				34					**34**	**806**
Fonroche	40.00									2	12	21	21	16	72	27	25	25	20	13	4			186					**186**	**3103**
TOTAL SOLAR									**1**	**19**	**54**	**82**	**101**	**106**	**363**	**122**	**115**	**103**	**68**	**47**	**15**	**1**		**834**					**834**	**13282**
Bechara	1.00																													
Pattern Santa Isabel	75.00		2	1	2	1	6	1			1	8	39	58	113	74	74	74	74	74	74	57	21	635	8	4			**647**	**5381**
Punta Lima	26.00																													
TOTAL WIND			**2**	**1**	**2**	**1**	**6**	**1**			**1**	**8**	**39**	**58**	**113**	**74**	**74**	**74**	**74**	**74**	**74**	**57**	**21**	**635**	**8**	**4**			**647**	**5381**
LandFill Gas Fajardo	2.40	1	1	1	1	1	5	1	1	1					8	1	1	1	1	1	1	1	1	16	1	1	1	1	**20**	**69**
LandFill Gas Toa Baja	2.40	1	1	1	1	1	5	1	1	1	1				9				1	1	1	1	1	14	1	1	1	1	**18**	**578**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**1**				**17**	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**2**	**30**	**2**	**2**	**2**	**2**	**38**	**647**
TOTAL RENEWABLE		**2**	**4**	**3**	**4**	**3**	**16**	**3**	**3**	**21**	**56**	**90**	**140**	**164**	**493**	**197**	**190**	**178**	**144**	**123**	**91**	**60**	**23**	**1499**	**10**	**6**	**2**	**2**	**1519**	**19310**
.																														
TOTAL HOURLY GENERATION (NET)		**1966**	**1894**	**1830**	**1792**	**1772**	**9254**	**1770**	**1763**	**1823**	**1902**	**1936**	**1962**	**1994**	**22404**	**2019**	**2020**	**2031**	**2065**	**2094**	**2092**	**2120**	**2263**	**39108**	**2242**	**2186**	**2125**	**2053**	**47714**	**806856**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2263	**1763**	**1988**	**87.85%**	**77.91%**	**47714**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Saturday, April 18, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1-1	1.50																											
Toro Negro 1-2	1.50																											**209**
Toro Negro 1-3	1.50																											**206**
Toro Negro 1-4	4.00																											
Toro Negro 2-1	2.00																											
Caonillas 1-1	9.00																											
Caonillas 1-2	9.00																											
Caonillas 2-1	3.60																											
Dos Bocas 1	5.00																											
Dos Bocas 2	5.00									2	6	6	6	6	26	6	6	6	6	6				56					**56**	**561**
Dos Bocas 3	5.00									2	6	6	6	6	26	6	6	6	6	6				56					**56**	**567**
Yauco 1-1	25.00																											
Yauco 2-1	4.50																											**194**
Yauco 2-2	4.50																											
Garzas 1-1	3.60																											
Garzas 1-2	3.60																											
Garzas 2-1	5.04																											
Río Blanco 1	2.50																											
Río Blanco 2	2.50																											
TOTAL HYDROELECTRICS										**4**	**12**	**12**	**12**	**12**	**52**	**12**	**12**	**12**	**12**	**12**				**112**					**112**	**1737**
THERMOELECTRICS																												
San Juan 7	100.00																											**11388**
San Juan 8	100.00																											
San Juan 9	100.00	72	72	72	71	72	359	72	72	74	84	85	85	85	916	85	85	86	85	85	86	86	85	1599	86	85	85	86	**1941**	**32350**
San Juan 10	100.00																											
Palo Seco 1	85.00	63	63	63	63	63	315	63	63	28	28	28	28	28	581	28	28	28	28	28	28	28	28	805	28	28	28	28	**917**	**25386**
Palo Seco 2	85.00																											
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	140	140	140	140	140	2800	140	140	140	140	**3360**	**60408**
Palo Seco 4	216.00																											**53061**
Costa Sur 3	85.00																											
Costa Sur 4	85.00																											
Costa Sur 5	410.00																											
Costa Sur 6	410.00																											
Aguirre 1	450.00	260	240	240	240	240	1220	235	240	265	280	240	235	240	2955	240	240	255	280	255	250	250	300	5025	315	300	305	275	**6220**	**115760**
Aguirre 2	450.00																											
TOTAL THERMOELECTRICS		**535**	**515**	**515**	**514**	**515**	**2594**	**510**	**515**	**507**	**532**	**493**	**488**	**493**	**6132**	**493**	**493**	**509**	**533**	**508**	**504**	**504**	**553**	**10229**	**569**	**553**	**558**	**529**	**12438**	**298353**
COMBINED CYCLES																												
Aguirre CC Gas 1-1	50.00	49	50	50	50	50	249	16			15	29	30	30	369	30	30	31	30	30	30	30	42	622	50	52	50	50	**824**	**13787**
Aguirre CC Gas 1-2	50.00	50	50	50	33		183				20	29	30	31	293	30	30	31	30	30	30	30	43	547	51	51	50	50	**749**	**14163**
Aguirre CC Gas 1-3	50.00	40	37				77						27	30	134	30	30	30	30	30	30	30	30	374	31	31	30	31	**497**	**10017**
Aguirre CC Gas 1-4	50.00																											**4709**
Aguirre CC STM 1	96.00																											
Aguirre CC Gas 2-1	50.00	45	45	45	45	41	221	1		1	30	29	30	29	341	30	30	31	30	28	30	30	30	580	45	45	45	45	**760**	**11540**
Aguirre CC Gas 2-2	50.00																											
Aguirre CC Gas 2-3	50.00	49	49	49	49	50	246	45	40	40	46	47	50	50	564	50	50	50	50	37	30	30	30	891	49	50	50	51	**1091**	**11756**
Aguirre CC Gas 2-4	50.00	44	44	44	44	45	221	47	39	40	40	42	40	50	519	45	45	45	45	35	29	30	30	823	45	45	46	45	**1004**	**12703**
Aguirre CC STM 2	96.00																											
TOTAL AGUIRRE C.C.		**277**	**275**	**238**	**221**	**186**	**1197**	**109**	**79**	**81**	**151**	**176**	**207**	**220**	**2220**	**215**	**215**	**218**	**215**	**190**	**179**	**180**	**205**	**3837**	**271**	**274**	**271**	**272**	**4925**	**78675**
San Juan GT 5	160.00	145	145	145	144	144	723	145	148	107					1123			7	76	108	90	118	118	1640	115	119	120	120	**2114**	**24274**
San Juan STM 5	60.00	45	44	44	44	44	221	44	44	33					342						11	38	39	430	37	40	39	40	**586**	**4895**
San Juan GT 6	160.00																		1	61	70	70	73	275					**275**	**279**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**190**	**189**	**189**	**188**	**188**	**944**	**189**	**192**	**140**					**1465**			**7**	**77**	**169**	**171**	**226**	**230**	**2345**	**152**	**159**	**159**	**160**	**2975**	**29448**
DIESEL																												
Cambalache 1	82.50																											
Cambalache 2	82.50																											**954**
Cambalache 3	82.50	45					45						2	31	78	77	77	77	77	78	79	78	78	699	78	78	78	68	**1001**	**11369**
TOTAL CAMBALACHE G.P.		**45**					**45**						**2**	**31**	**78**	**77**	**77**	**77**	**77**	**78**	**79**	**78**	**78**	**699**	**78**	**78**	**78**	**68**	**1001**	**12323**
Mayagüez 1	55.00	15					15								15									15					**15**	**5184**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	51	36				87			5	51	51	51	51	296	51	51	51	51	51	51	51	51	704	51	51	51	51	**908**	**7983**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**66**	**36**				**102**			**5**	**51**	**51**	**51**	**51**	**311**	**51**	**51**	**51**	**51**	**51**	**51**	**51**	**51**	**719**	**51**	**51**	**51**	**51**	**923**	**13167**
DIESEL																												

Palo Seco 1-1	21.00	19	19	19	19	20	96	20	20	19	19	19	19	19	231	19	19	19	19	19	19	19	19	383	19	19	19	19	**459**	**8413**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	21	21	22	22	107	22	22	21	21	21	21	21	256	21	21	21	21	21	21	21	21	424	21	20	21	21	**507**	**7248**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00	1					1								1						10	21	22	54	22	22	22	7	**127**	**2224**
Daguao 1-1	21.00																					17	18	35	18	18	16		**87**	**1219**
Daguao 1-2	21.00																				1	16	16	33	16	16	14		**79**	**978**
Yabucoa 1-1	21.00																						8	8	18	18	15		**59**	**1134**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																													**1164**
Jobos 1-1	21.00																													
Jobos 1-2	21.00	1					1								1							17	18	36	18	18	18	1	**91**	**1581**
TOTAL GAS TURBINES		**42**	**40**	**40**	**41**	**42**	**205**	**42**	**42**	**40**	**40**	**40**	**40**	**40**	**489**	**40**	**40**	**40**	**40**	**40**	**51**	**111**	**122**	**973**	**132**	**131**	**125**	**48**	**1409**	**26866**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	21	22	22	22	167	22	22	22	22	22	22	22	22	343	22	22	22	22	**431**	**4624**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	21	22	22	22	167	22	22	22	22	22	22	22	22	343	22	22	22	22	**431**	**4592**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	21	22	22	22	167	22	22	22	22	22	22	22	22	343	22	22	22	22	**431**	**4236**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**63**	**66**	**66**	**66**	**501**	**66**	**66**	**66**	**66**	**66**	**66**	**66**	**66**	**1029**	**66**	**66**	**66**	**66**	**1293**	**13452**
TOTAL DIESEL		**183**	**106**	**70**	**71**	**72**	**502**	**72**	**72**	**75**	**154**	**157**	**159**	**188**	**1379**	**234**	**234**	**234**	**234**	**235**	**247**	**306**	**317**	**3420**	**327**	**326**	**320**	**233**	**4626**	**65808**
COGENERATION																														
AES 1	227.15	228	223	224	227	228	1130	228	228	228	229	230	232	232	2737	232	231	232	231	232	232	231	228	4586	228	228	228	229	**5499**	**96065**
AES 2	227.15	181	179	179	179	179	897	180	177	180	181	182	182	182	2161	182	182	182	183	182	182	182	182	3618	182	182	182	180	**4344**	**82352**
TOTAL AES		**409**	**402**	**403**	**406**	**407**	**2027**	**408**	**405**	**408**	**410**	**412**	**414**	**414**	**4898**	**414**	**413**	**414**	**414**	**414**	**414**	**413**	**410**	**8204**	**410**	**410**	**410**	**409**	**9843**	**178417**
ECOELECTRICA		371	390	401	365	362	1889	434	386	432	410	435	401	386	4773	371	374	407	360	363	413	334	446	7841	437	406	347	403	**9434**	**179461**
TOTAL COGENERATION		**780**	**792**	**804**	**771**	**769**	**3916**	**842**	**791**	**840**	**820**	**847**	**815**	**800**	**9671**	**785**	**787**	**821**	**774**	**777**	**827**	**747**	**856**	**16045**	**847**	**816**	**757**	**812**	**19277**	**357878**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									4	8	13	16	17	58	17	17	15	13	7	3			130					**130**	**2218**
San Fermín	20.00								5	8	11	15	17	16	72	15	16	9	8					120					**120**	**2042**
Horizon	10.00									2	6	9	10	10	37	10	10	10	8	5	2			82					**82**	**1346**
Oriana	45.00								1	9	22	33	40	42	147	43	43	27	20	4	3			287					**287**	**4386**
Coto Laurel	10.00									2	4	5	6	8	25	9	8	6	5	2	2			57					**57**	**863**
Fonroche	40.00								1	7	15	20	20	25	88	27	25	15	16	8	3			182					**182**	**3285**
TOTAL SOLAR									**7**	**32**	**66**	**95**	**109**	**118**	**427**	**121**	**119**	**82**	**70**	**26**	**13**			**858**					**858**	**14140**
Bechara	1.00																													
Pattern Santa Isabel	75.00				3	4	7	1			17	23	46	61	155	62	73	67	68	69	61	61	21	637	5	5	3		**650**	**6031**
Punta Lima	26.00																													
TOTAL WIND					**3**	**4**	**7**	**1**			**17**	**23**	**46**	**61**	**155**	**62**	**73**	**67**	**68**	**69**	**61**	**61**	**21**	**637**	**5**	**5**	**3**		**650**	**6031**
LandFill Gas Fajardo	2.40	1	1	1	1		4								4		1	1	1	1	1	1	1	11	1	1	1	1	**15**	**84**
LandFill Gas Toa Baja	2.40	1	1	1	1	1	5	1	1	1					8		1	1	1	1	1	1	1	15	1	1	1	1	**19**	**597**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**1**	**9**	**1**	**1**	**1**					**12**		**2**	**2**	**2**	**2**	**2**	**2**	**2**	**26**	**2**	**2**	**2**	**2**	**34**	**681**
TOTAL RENEWABLE		**2**	**2**	**2**	**5**	**5**	**16**	**2**	**8**	**33**	**83**	**118**	**155**	**179**	**594**	**183**	**194**	**151**	**140**	**97**	**76**	**63**	**23**	**1521**	**7**	**7**	**5**	**2**	**1542**	**20852**
.																														
TOTAL HOURLY GENERATION (NET)		**1967**	**1879**	**1818**	**1770**	**1735**	**9169**	**1724**	**1657**	**1680**	**1752**	**1803**	**1836**	**1892**	**21513**	**1922**	**1935**	**1952**	**1985**	**1988**	**2004**	**2026**	**2184**	**37509**	**2173**	**2135**	**2070**	**2008**	**45895**	**852751**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2184	**1657**	**1912**	**87.56%**	**75.87%**	**45895**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Sunday, April 19, 2020

UNITS	MAXIMUM CAPACITY	HOUR																										TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																													
Toro Negro 1-1	1.50																												
Toro Negro 1-2	1.50																												**209**
Toro Negro 1-3	1.50																												**206**
Toro Negro 1-4	4.00																												
Toro Negro 2-1	2.00																												
Caonillas 1-1	9.00																												
Caonillas 1-2	9.00																												
Caonillas 2-1	3.60																												
Dos Bocas 1	5.00																												
Dos Bocas 2	5.00																												**561**
Dos Bocas 3	5.00																												**567**
Yauco 1-1	25.00																												
Yauco 2-1	4.50																												**194**
Yauco 2-2	4.50																												
Garzas 1-1	3.60																												
Garzas 1-2	3.60																												
Garzas 2-1	5.04																												
Río Blanco 1	2.50																												
Río Blanco 2	2.50																												
TOTAL HYDROELECTRICS																													**1737**
THERMOELECTRICS																													
San Juan 7	100.00																												**11388**
San Juan 8	100.00																												
San Juan 9	100.00	86	85	86	86	86	429	76	71	71	70	70	70	70	927	70	69	70	70	69	70	69	70	1484	69	70	70	69	**1762**	**34112**
San Juan 10	100.00																												
Palo Seco 1	85.00	49	61	61	61	61	293	61	61	61	61	61	61	61	720	61	61	61	61	61	61	61	61	1208	61	61	61	61	**1452**	**26838**
Palo Seco 2	85.00																												
Palo Seco 3	216.00	140	140	140	140	140	700	140	140	140	140	140	140	140	1680	140	140	140	139	139	139	139	139	2795	139	139	139	139	**3351**	**63759**
Palo Seco 4	216.00																					27	91	118	120	120	120	120	**598**	**53659**
Costa Sur 3	85.00																												
Costa Sur 4	85.00																												
Costa Sur 5	410.00																												
Costa Sur 6	410.00																												
Aguirre 1	450.00	300	300	280	245	250	1375	245	250	250	250	245	250	250	3115	250	250	280	325	325	300	300	305	5450	300	320	340	320	**6730**	**122490**
Aguirre 2	450.00																												
TOTAL THERMOELECTRICS		**575**	**586**	**567**	**532**	**537**	**2797**	**522**	**522**	**522**	**521**	**516**	**521**	**521**	**6442**	**521**	**520**	**551**	**595**	**594**	**570**	**596**	**666**	**11055**	**689**	**710**	**730**	**709**	**13893**	**312246**
COMBINED CYCLES																													
Aguirre CC Gas 1-1	50.00	46	30	30	36	30	172	29	30	30	30	30	30	30	381	30	30	30	30	30	30	30	31	622	40	43	50	50	**805**	**14592**
Aguirre CC Gas 1-2	50.00	46	30	30	36	30	172	30	25						227					29	30	30	30	346	40	42	51	50	**529**	**14692**
Aguirre CC Gas 1-3	50.00	29	6				35								35				12	30	30	30	30	167	30	32	33	40	**302**	**10319**
Aguirre CC Gas 1-4	50.00																												**4709**
Aguirre CC STM 1	96.00																												
Aguirre CC Gas 2-1	50.00	42	31	30	30	30	163	30	6						199			16	30	30	30	30	30	365	30	34	41	43	**513**	**12053**
Aguirre CC Gas 2-2	50.00																												
Aguirre CC Gas 2-3	50.00	46	32	30	30	30	168	29	29	29	29	29	30	30	373	30	30	30	30	30	30	30	30	613	30	34	42	51	**770**	**12526**
Aguirre CC Gas 2-4	50.00	41	28				69								69									69					**69**	**12772**
Aguirre CC STM 2	96.00																												
TOTAL AGUIRRE C.C.		**250**	**157**	**120**	**132**	**120**	**779**	**118**	**90**	**59**	**59**	**59**	**60**	**60**	**1284**	**60**	**60**	**76**	**102**	**149**	**150**	**150**	**151**	**2182**	**170**	**185**	**217**	**234**	**2988**	**81663**
San Juan GT 5	160.00	119	120	119	120	119	597	120	120	120	120	119	119	119	1434	120	119	120	119	120	119	120	119	2390	120	120	119	120	**2869**	**27143**
San Juan STM 5	60.00	40	39	39	40	39	197	39	40	40	40	40	40	40	476	41	40	40	40	40	40	39	40	796	39	39	39	39	**952**	**5847**
San Juan GT 6	160.00																		1	14	70	71	97	253	118	67			**438**	**717**
San Juan STM 6	60.00																												
TOTAL SAN JUAN C.C.		**159**	**159**	**158**	**160**	**158**	**794**	**159**	**160**	**160**	**160**	**159**	**159**	**159**	**1910**	**161**	**159**	**160**	**160**	**174**	**229**	**230**	**256**	**3439**	**277**	**226**	**158**	**159**	**4259**	**33707**
DIESEL																													
Cambalache 1	82.50																												
Cambalache 2	82.50																												**954**
Cambalache 3	82.50	1					1								1					4	42	76	77	200	77	78	77	10	**442**	**11811**
TOTAL CAMBALACHE G.P.		**1**					**1**								**1**					**4**	**42**	**76**	**77**	**200**	**77**	**78**	**77**	**10**	**442**	**12765**
Mayagüez 1	55.00																												**5184**
Mayagüez 2	55.00																												
Mayagüez 3	55.00	11					11								11					10	35	50	51	157	51	51	51	36	**346**	**8329**
Mayagüez 4	55.00																												
TOTAL MAYAGUEZ G.P.		**11**					**11**								**11**					**10**	**35**	**50**	**51**	**157**	**51**	**51**	**51**	**36**	**346**	**13513**
DIESEL																													

Palo Seco 1-1	21.00	19	19	19	19	19	95	19	20	20	19	19	19	19	230	19	19	19	19	19	19	19	19	382	19	19	19	19	**458**	**8871**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	22	22	22	22	109	22	22	21	21	21	21	21	258	20	20	20	20	21	20	21	21	421	21	21	21	21	**505**	**7753**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			8	21	21	22	72	22	22	10		**126**	**2350**
Daguao 1-1	21.00																				6	18	18	42	18	15			**75**	**1294**
Daguao 1-2	21.00																				2	16	16	34	16	14			**64**	**1042**
Yabucoa 1-1	21.00																					14	18	32	18	18	7		**75**	**1209**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																													**1164**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																													**1581**
TOTAL GAS TURBINES		**40**	**41**	**41**	**41**	**41**	**204**	**41**	**42**	**41**	**40**	**40**	**40**	**40**	**488**	**39**	**39**	**39**	**39**	**48**	**68**	**109**	**114**	**983**	**114**	**109**	**57**	**40**	**1303**	**28169**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	20	10	10	10	10	60	10	10	10	10	10	10	10	130	10	10	10	10	10	10	10	10	210	10	10	10	10	**250**	**4874**
Palo Seco MP 2	27.00	20	10	10	10	10	60	10	10	10	10	10	10	10	130	10	10	10	10	10	10	10	10	210	10	10	10	10	**250**	**4842**
Palo Seco MP 3	27.00	20	10	10	10	10	60	10	10	10	10	10	10	10	130	10	10	10	10	10	10	10	10	210	10	10	10	10	**250**	**4486**
TOTAL PALO SECO MP		**60**	**30**	**30**	**30**	**30**	**180**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**390**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**630**	**30**	**30**	**30**	**30**	**750**	**14202**
TOTAL DIESEL		**112**	**71**	**71**	**71**	**71**	**396**	**71**	**72**	**71**	**70**	**70**	**70**	**70**	**890**	**69**	**69**	**69**	**69**	**92**	**175**	**265**	**272**	**1970**	**272**	**268**	**215**	**116**	**2841**	**68649**
COGENERATION																														
AES 1	227.15	228	228	229	228	229	1142	229	228	228	229	229	229	229	2743	229	229	229	229	229	229	228	229	4574	228	228	228	228	**5486**	**101551**
AES 2	227.15	176	175	177	177	179	884	179	176	179	179	179	180	179	2135	179	179	180	179	179	180	179	179	3569	179	179	179	179	**4285**	**86637**
TOTAL AES		**404**	**403**	**406**	**405**	**408**	**2026**	**408**	**404**	**407**	**408**	**408**	**409**	**408**	**4878**	**408**	**408**	**409**	**408**	**408**	**409**	**407**	**408**	**8143**	**407**	**407**	**407**	**407**	**9771**	**188188**
ECOELECTRICA		433	466	472	453	422	2246	405	370	405	408	394	378	397	5003	436	460	461	480	477	437	392	470	8616	463	447	461	463	**10450**	**189911**
TOTAL COGENERATION		**837**	**869**	**878**	**858**	**830**	**4272**	**813**	**774**	**812**	**816**	**802**	**787**	**805**	**9881**	**844**	**868**	**870**	**888**	**885**	**846**	**799**	**878**	**16759**	**870**	**854**	**868**	**870**	**20221**	**378099**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									4	9	12	16	18	59	18	17	15	13	8	3			133					**133**	**2351**
San Fermín	20.00									5	9	14	16	19	63	19	18	17	14	9	3			143					**143**	**2185**
Horizon	10.00									2	6	7	10	10	35	10	10	10	9	6	2			82					**82**	**1428**
Oriana	45.00								1	9	23	33	38	38	142	38	43	41	33	18	7	1		323					**323**	**4709**
Coto Laurel	10.00									2	5	4	5	8	24	9	7	7	3	2	1			53					**53**	**916**
Fonroche	40.00								1	8	12	22	27	29	99	29	27	22	19	10	5			211					**211**	**3496**
TOTAL SOLAR									**2**	**30**	**64**	**92**	**112**	**122**	**422**	**123**	**122**	**112**	**91**	**53**	**21**	**1**		**945**					**945**	**15085**
Bechara	1.00																													
Pattern Santa Isabel	75.00					1	1	2	2	2	9	35	66	74	191	74	74	74	74	74	74	67	46	748	15	6	5	5	**779**	**6810**
Punta Lima	26.00																													
TOTAL WIND						**1**	**1**	**2**	**2**	**2**	**9**	**35**	**66**	**74**	**191**	**74**	**74**	**74**	**74**	**74**	**74**	**67**	**46**	**748**	**15**	**6**	**5**	**5**	**779**	**6810**
LandFill Gas Fajardo	2.40	1	1	1	1	1	5	1	1	1	1	1	1	1	12	1	1	1	1	1	1	1	1	20	1	1	1	1	**24**	**108**
LandFill Gas Toa Baja	2.40	1	1	1	1	1	5	1	1	1	1	1	1	1	12	1	1	1	1	1	1	1	1	20	1	1	1	1	**24**	**621**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**24**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**40**	**2**	**2**	**2**	**2**	**48**	**729**
TOTAL RENEWABLE		**2**	**2**	**2**	**2**	**3**	**11**	**4**	**6**	**34**	**75**	**129**	**180**	**198**	**637**	**199**	**198**	**188**	**167**	**129**	**97**	**70**	**48**	**1733**	**17**	**8**	**7**	**7**	**1772**	**22624**
.																														
TOTAL HOURLY GENERATION (NET)		**1935**	**1844**	**1796**	**1755**	**1719**	**9049**	**1687**	**1624**	**1658**	**1701**	**1735**	**1777**	**1813**	**21044**	**1854**	**1874**	**1914**	**1981**	**2023**	**2067**	**2110**	**2271**	**37138**	**2295**	**2251**	**2195**	**2095**	**45974**	**898725**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2295	**1624**	**1916**	**83.47%**	**70.76%**	**45974**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Monday, April 20, 2020

UNITS	MAXIMUM CAPACITY	HOUR																								TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																													
Toro Negro 1-1	1.50																												
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	2	1	2	1	2	16	2				**18**	**227**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	2	1	2	1	2	16	1				**17**	**223**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																				3	6	6	15	6	3			**24**	**585**
Dos Bocas 3	5.00																				3	6	6	15	6	3			**24**	**591**
Yauco 1-1	25.00																													
Yauco 2-1	4.50										2	2	2	2	8	2	2	2	2	2	2	2	2	24	2	2			**28**	**222**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**4**	**4**	**4**	**4**	**18**	**4**	**4**	**4**	**6**	**4**	**12**	**16**	**18**	**86**	**17**	**8**			**111**	**1848**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	70	69	70	69	70	348	70	70	70	70	69	69	69	835	69	70	69	69	70	69	69	80	1400	82	82	82	82	**1728**	**35840**
San Juan 10	100.00																													
Palo Seco 1	85.00	61	61	61	61	61	305	61	61	61	61	61	61	61	732	61	61	61	61	61	61	61	61	1220	61	61	61	61	**1464**	**28302**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	140	140	140	140	140	700	138	138	138	138	138	138	138	1666	138	138	138	138	135	135	135	137	2760	137	137	137	137	**3308**	**67067**
Palo Seco 4	216.00	120	120	120	120	120	600	128	140	140	140	140	140	140	1568	140	140	140	140	140	140	140	150	2698	160	160	160	155	**3333**	**56992**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	300	320	290	280	285	1475	295	285	285	285	285	280	275	3465	285	280	285	275	280	285	300	345	5800	330	330	325	305	**7090**	**129580**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**691**	**710**	**681**	**670**	**676**	**3428**	**692**	**694**	**694**	**694**	**693**	**688**	**683**	**8266**	**693**	**689**	**693**	**683**	**686**	**690**	**705**	**773**	**13878**	**770**	**770**	**765**	**740**	**16923**	**329169**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	50	32	30	30	3	145								145						18	30	51	244	51	50	50	50	**445**	**15037**
Aguirre CC Gas 1-2	50.00	50	38	30	30	30	178	29	29	29	29	30	30	32	386	30	30	30	30	30	30	33	51	650	50	50	50	50	**850**	**15542**
Aguirre CC Gas 1-3	50.00	21					21				10	30	30	31	122	30	30	30	30	30	30	30	33	365	40	40	41	40	**526**	**10845**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00																													
Aguirre CC Gas 2-1	50.00	34					34			30	30	30	30	31	185	30	30	30	30	29	29	29	32	424	35	35	36	35	**565**	**12618**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	50	29	30	28	2	139				24	30	30	30	253	30	30	30	30	30	29	29	31	492	30	31	31	30	**614**	**13140**
Aguirre CC Gas 2-4	50.00											9	30	31	70	30	30	30	30	29	29	29	32	309	35	35	35	35	**449**	**13221**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**205**	**99**	**90**	**88**	**35**	**517**	**29**	**29**	**59**	**93**	**129**	**150**	**155**	**1161**	**150**	**150**	**150**	**150**	**148**	**165**	**180**	**230**	**2484**	**241**	**241**	**243**	**240**	**3449**	**85112**
San Juan GT 5	160.00	119	120	119	119	120	597	119	119	120	120	120	115	106	1416	120	119	120	120	125	120	119	142	2401	149	150	148	136	**2984**	**30127**
San Juan STM 5	60.00	39	39	38	39	39	194	38	39	39	39	37	41	40	467	41	41	41	41	41	41	42	43	798	46	45	45	43	**977**	**6824**
San Juan GT 6	160.00																21	76	114	140	157	132	83	723	12				**735**	**1452**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**158**	**159**	**157**	**158**	**159**	**791**	**157**	**158**	**159**	**159**	**157**	**156**	**146**	**1883**	**161**	**181**	**237**	**275**	**306**	**318**	**293**	**268**	**3922**	**207**	**195**	**193**	**179**	**4696**	**38403**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													**954**
Cambalache 3	82.50																								18	72	77	15	**182**	**11993**
TOTAL CAMBALACHE G.P.																									**18**	**72**	**77**	**15**	**182**	**12947**
Mayagüez 1	55.00																													**5184**
Mayagüez 2	55.00																													
Mayagüez 3	55.00										10	15			25						15	34	51	125	51	51	51	17	**295**	**8624**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.											**10**	**15**			**25**						**15**	**34**	**51**	**125**	**51**	**51**	**51**	**17**	**295**	**13808**
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	19	19	95	19	19	19	19	19	19	19	228	19	19	19	19	19	19	19	20	381	19	19	19	19	**457**	**9328**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	21	21	21	21	105	21	21	21	21	21	21	21	252	21	20	20	20	21	21	21	21	417	21	21	21	21	**501**	**8254**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																					1	21	22	22	22	18		**84**	**2434**
Daguao 1-1	21.00																						13	13	18	14			**45**	**1339**
Daguao 1-2	21.00																						3	3	16	13			**32**	**1074**
Yabucoa 1-1	21.00																													**1209**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																						1	1	19	19	15		**54**	**1218**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																						5	5					**5**	**1586**
TOTAL GAS TURBINES		**40**	**40**	**40**	**40**	**40**	**200**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**480**	**40**	**39**	**39**	**39**	**40**	**40**	**41**	**84**	**842**	**115**	**108**	**73**	**40**	**1178**	**29347**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**5114**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**5082**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**4726**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**14922**
TOTAL DIESEL		**70**	**70**	**70**	**70**	**70**	**350**	**70**	**70**	**70**	**80**	**85**	**70**	**70**	**865**	**70**	**69**	**69**	**69**	**70**	**85**	**105**	**165**	**1567**	**214**	**261**	**231**	**102**	**2375**	**71024**
COGENERATION																														
AES 1	227.15	229	228	228	228	229	1142	229	229	229	228	229	229	229	2744	229	229	229	229	229	229	228	229	4575	227	227	228	228	**5485**	**107036**
AES 2	227.15	177	179	179	175	176	886	174	172	173	172	173	172	173	2095	173	173	170	170	173	172	171	172	3469	172	171	171	172	**4155**	**90792**
TOTAL AES		**406**	**407**	**407**	**403**	**405**	**2028**	**403**	**401**	**402**	**400**	**402**	**401**	**402**	**4839**	**402**	**402**	**399**	**399**	**402**	**401**	**399**	**401**	**8044**	**399**	**398**	**399**	**400**	**9640**	**197828**
ECOELECTRICA		462	466	457	423	458	2266	460	455	462	448	432	410	416	5349	411	432	413	397	432	446	453	467	8800	448	379	357	459	**10443**	**200354**
TOTAL COGENERATION		**868**	**873**	**864**	**826**	**863**	**4294**	**863**	**856**	**864**	**848**	**834**	**811**	**818**	**10188**	**813**	**834**	**812**	**796**	**834**	**847**	**852**	**868**	**16844**	**847**	**777**	**756**	**859**	**20083**	**398182**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									3	8	12	15	16	54	17	16	15	12	7	3			124					**124**	**2475**
San Fermín	20.00								1	4	7	8	11	9	40	12	8	9	9	7	4			89					**89**	**2274**
Horizon	10.00									1	6	8	8	10	33	10	10	10	8	7	2			80					**80**	**1508**
Oriana	45.00								1	10	22	33	40	36	142	37	43	14	19	14	4			273					**273**	**4982**
Coto Laurel	10.00									2	3	5	7	5	22	8	4	6	4	3	1			48					**48**	**964**
Fonroche	40.00									5	12	18	20	26	81	26	23	21	14	13	5			183					**183**	**3679**
TOTAL SOLAR									**2**	**25**	**58**	**84**	**101**	**102**	**372**	**110**	**104**	**75**	**66**	**51**	**19**			**797**					**797**	**15882**
Bechara	1.00																													
Pattern Santa Isabel	75.00	2	3	1	1	1	8	1	1	4	15	24	35	63	151	73	62	65	63	49	22	16	12	513	9	6	3	1	**532**	**7342**
Punta Lima	26.00																													
TOTAL WIND		**2**	**3**	**1**	**1**	**1**	**8**	**1**	**1**	**4**	**15**	**24**	**35**	**63**	**151**	**73**	**62**	**65**	**63**	**49**	**22**	**16**	**12**	**513**	**9**	**6**	**3**	**1**	**532**	**7342**
LandFill Gas Fajardo	2.40	1	1	1	1	1	5	1	1	1	1	1	1	1	12	1	1	1	1	1	1	1	1	20	1	1	1	1	**24**	**132**
LandFill Gas Toa Baja	2.40	1	1	1	1	1	5	1	1	1	1	1	1	1	12	1	1	1	1	1	1	1	1	20	1	1	1	1	**24**	**645**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**24**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**40**	**2**	**2**	**2**	**2**	**48**	**777**
TOTAL RENEWABLE		**4**	**5**	**3**	**3**	**3**	**18**	**3**	**5**	**31**	**75**	**110**	**138**	**167**	**547**	**185**	**168**	**142**	**131**	**102**	**43**	**18**	**14**	**1350**	**11**	**8**	**5**	**3**	**1377**	**24001**
.																														
TOTAL HOURLY GENERATION (NET)		**1996**	**1916**	**1865**	**1815**	**1806**	**9398**	**1814**	**1812**	**1879**	**1953**	**2012**	**2017**	**2043**	**22928**	**2076**	**2095**	**2107**	**2110**	**2150**	**2160**	**2169**	**2336**	**40131**	**2307**	**2260**	**2193**	**2123**	**49014**	**947739**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2336	**1806**	**2042**	**87.43%**	**77.31%**	**49014**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Tuesday, April 21, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1-1	1.50																											
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	2	1	2	1	2	1	16	2				**18**	**245**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	2	1	2	1	2	1	16	1				**17**	**240**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																				3	1	6	10	6	3			**19**	**604**
Dos Bocas 3	5.00																				3	1	6	10	6	3			**19**	**610**
Yauco 1-1	25.00																													
Yauco 2-1	4.50											2	2	2	6	2	2	2	2	2	2	2	2	22	2	2	1		**27**	**249**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**4**	**4**	**4**	**16**	**4**	**4**	**6**	**4**	**6**	**10**	**8**	**16**	**74**	**17**	**8**	**1**		**100**	**1948**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	82	81	82	82	82	409	82	82	82	82	80	66	41	924	36	36	36	37	57	79	82	82	1369	83	82	82	82	**1698**	**37538**
San Juan 10	100.00																													
Palo Seco 1	85.00	61	61	61	61	61	305	61	61	61	61	61	61	61	732	61	61	61	61	61	60	60	60	1217	60	60	60	60	**1457**	**29759**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	137	137	137	137	137	685	137	137	137	137	135	135	135	1638	135	135	135	135	135	135	135	135	2718	135	135	135	135	**3258**	**70325**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150	150	150	150	150	150	3000	150	150	150	150	**3600**	**60592**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	285	275	285	280	275	1400	285	275	285	300	275	280	295	3395	295	280	280	285	310	325	305	325	5800	340	320	325	335	**7120**	**136700**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**715**	**704**	**715**	**710**	**705**	**3549**	**715**	**705**	**715**	**730**	**701**	**692**	**682**	**8489**	**677**	**662**	**662**	**668**	**713**	**749**	**732**	**752**	**14104**	**768**	**747**	**752**	**762**	**17133**	**346302**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	45	3				48				3	30	30	30	141	35	49	49	50	50	50	50	50	524	50	50	50	50	**724**	**15761**
Aguirre CC Gas 1-2	50.00	48	32	30	30	30	170	29	29	30	30	30	30	30	378	32	30	30	30	30	30	20	30	610	30	30	30	30	**730**	**16272**
Aguirre CC Gas 1-3	50.00	37	3				40				3	30	30	33	136	45	45	45	45	44	44	45	45	494	45	45	45	45	**674**	**11519**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00															8	13	13	29	35	36	36	36	206	36	36	36	36	**350**	**350**
Aguirre CC Gas 2-1	50.00	35	30	9			74								74						10	20	30	134	30	30	30	30	**254**	**12872**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	32	30	11			73								73						10	20	29	132	30	30	30	30	**252**	**13392**
Aguirre CC Gas 2-4	50.00	39	29	29	29	29	155	29	29	29	29	30	30	30	361	31	30	30	30	30	28	20	29	589	30	30	30	30	**709**	**13930**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**236**	**127**	**79**	**59**	**59**	**560**	**58**	**58**	**59**	**65**	**120**	**120**	**123**	**1163**	**151**	**167**	**167**	**184**	**189**	**208**	**211**	**249**	**2689**	**251**	**251**	**251**	**251**	**3693**	**88805**
San Juan GT 5	160.00	137	136	135	135	119	662	120	119	120	119	120	119	120	1499	120	119	120	119	120	119	120	119	2455	119	120	120	120	**2934**	**33061**
San Juan STM 5	60.00	43	42	43	42	40	210	40	40	40	41	41	41	41	494	42	41	42	42	42	41	41	41	826	41	40	41	41	**989**	**7813**
San Juan GT 6	160.00															35	85	99	117	130	33			499					**499**	**1951**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**180**	**178**	**178**	**177**	**159**	**872**	**160**	**159**	**160**	**160**	**161**	**160**	**161**	**1993**	**197**	**245**	**261**	**278**	**292**	**193**	**161**	**160**	**3780**	**160**	**160**	**161**	**161**	**4422**	**42825**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													**954**
Cambalache 3	82.50																				15	62	76	153	77	77	77	47	**431**	**12424**
TOTAL CAMBALACHE G.P.																					**15**	**62**	**76**	**153**	**77**	**77**	**77**	**47**	**431**	**13378**
Mayagüez 1	55.00																				8	22	22	52	22	22	23	22	**141**	**5325**
Mayagüez 2	55.00																													
Mayagüez 3	55.00																				25	50	51	126	51	51	51	51	**330**	**8954**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.																					**33**	**72**	**73**	**178**	**73**	**73**	**74**	**73**	**471**	**14279**
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	19	20	96	20	20	19	19	19	19	19	231	19	19	19	19	19	19	19	19	383	19	19	19	19	**459**	**9787**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	21	21	21	21	105	22	22	21	10				180									180					**180**	**8434**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			7	21	21	49	21	21	19		**110**	**2544**
Daguao 1-1	21.00																			7	18	18	43	18	18	9		**88**	**1427**
Daguao 1-2	21.00																			3	16	16	35	16	16	9		**76**	**1150**
Yabucoa 1-1	21.00																			7	18	18	43	18	11			**72**	**1281**
Yabucoa 1-2	21.00																												**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																			1	18	18	37	18	13			**68**	**1286**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																			6	18	18	42	18	18	15		**93**	**1679**
TOTAL GAS TURBINES		**40**	**40**	**40**	**40**	**41**	**201**	**42**	**42**	**40**	**29**	**19**	**19**	**19**	**411**	**19**	**19**	**19**	**19**	**19**	**50**	**128**	**128**	**812**	**128**	**116**	**71**	**19**	**1146**	**30493**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**5354**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**5322**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**4966**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**15642**
TOTAL DIESEL		**70**	**70**	**70**	**70**	**71**	**351**	**72**	**72**	**70**	**59**	**49**	**49**	**49**	**771**	**49**	**49**	**49**	**49**	**49**	**128**	**292**	**307**	**1743**	**308**	**296**	**252**	**169**	**2768**	**73792**
COGENERATION																														
AES 1	227.15	228	228	228	228	228	1140	228	226	226	226	226	228	224	2724	228	229	229	229	229	228	228	228	4552	228	228	229	229	**5466**	**112502**
AES 2	227.15	171	171	171	172	172	857	172	171	170	170	170	170	170	2050	171	171	170	170	170	169	169	169	3409	169	170	170	170	**4088**	**94880**
TOTAL AES		**399**	**399**	**399**	**400**	**400**	**1997**	**400**	**397**	**396**	**396**	**396**	**398**	**394**	**4774**	**399**	**400**	**399**	**399**	**399**	**397**	**397**	**397**	**7961**	**397**	**398**	**399**	**399**	**9554**	**207382**
ECOELECTRICA		433	439	422	410	402	2106	405	395	443	462	436	433	462	5142	437	412	411	450	463	451	394	485	8645	484	486	479	465	**10559**	**210913**
TOTAL COGENERATION		**832**	**838**	**821**	**810**	**802**	**4103**	**805**	**792**	**839**	**858**	**832**	**831**	**856**	**9916**	**836**	**812**	**810**	**849**	**862**	**848**	**791**	**882**	**16606**	**881**	**884**	**878**	**864**	**20113**	**418295**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									3	3	13	16	17	52	18	17	15	13	7	4			126					**126**	**2601**
San Fermín	20.00								1	5	10	11	13	16	56	12	8	14	10	7	3			110					**110**	**2384**
Horizon	10.00									3	2	9	10	10	34	10	9	9	7	5	2			76					**76**	**1584**
Oriana	45.00								1	10	23	34	41	42	151	39	27	33	28	19	11	2		310					**310**	**5292**
Coto Laurel	10.00									2	4	6	5	8	25	9	8	7	6	4	2			61					**61**	**1025**
Fonroche	40.00								1	3	14	21	25	27	91	28	25	19	17	8	2			190					**190**	**3869**
TOTAL SOLAR									**3**	**26**	**56**	**94**	**110**	**120**	**409**	**116**	**94**	**97**	**81**	**50**	**24**	**2**		**873**					**873**	**16755**
Bechara	1.00																													
Pattern Santa Isabel	75.00	1	3	2		3	9	5	6	5	14	18	43	54	154	60	50	49	38	25	21	16	10	423	2	1	1	4	**431**	**7773**
Punta Lima	26.00																													
TOTAL WIND		**1**	**3**	**2**		**3**	**9**	**5**	**6**	**5**	**14**	**18**	**43**	**54**	**154**	**60**	**50**	**49**	**38**	**25**	**21**	**16**	**10**	**423**	**2**	**1**	**1**	**4**	**431**	**7773**
LandFill Gas Fajardo	2.40	1	1	1	1	1	5	1	1	1	1	1	1	1	12	1	1	1	1	1	1	1	1	20	1	1	1	1	**24**	**156**
LandFill Gas Toa Baja	2.40	1	1	1	1	1	5	1	1	1	1	1	1	1	12	1	1	1	1	1	1	1	1	20	1	1	1	1	**24**	**669**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**24**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**40**	**2**	**2**	**2**	**2**	**48**	**825**
TOTAL RENEWABLE		**3**	**5**	**4**	**2**	**5**	**19**	**7**	**11**	**33**	**72**	**114**	**155**	**176**	**587**	**178**	**146**	**148**	**121**	**77**	**47**	**20**	**12**	**1336**	**4**	**3**	**3**	**6**	**1352**	**25353**
.																														
TOTAL HOURLY GENERATION (NET)		**2036**	**1922**	**1867**	**1828**	**1801**	**9454**	**1817**	**1797**	**1878**	**1946**	**1981**	**2011**	**2051**	**22935**	**2092**	**2085**	**2103**	**2153**	**2188**	**2183**	**2215**	**2378**	**40332**	**2389**	**2349**	**2298**	**2213**	**49581**	**997320**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2389	**1797**	**2066**	**86.47%**	**75.22%**	**49581**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Wednesday, April 22, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	2				**18**	**263**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	1				**17**	**257**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																		3	6	6	6	6	27	6	3			**36**	**640**
Dos Bocas 3	5.00																		3	6	6	6	6	27	6	3			**36**	**646**
Yauco 1-1	25.00																													
Yauco 2-1	4.50										1	2	2	2	7	2	2	2	2	2	2	2	2	23	2	2	1		**28**	**277**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**3**	**4**	**4**	**4**	**17**	**4**	**4**	**4**	**10**	**16**	**18**	**18**	**18**	**109**	**17**	**8**	**1**		**135**	**2083**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	83	82	82	82	82	411	81	80	80	80	80	80	79	971	80	79	80	79	79	80	79	79	1606	79	80	80	79	**1924**	**39462**
San Juan 10	100.00																													
Palo Seco 1	85.00	60	60	60	60	60	300	60	60	60	60	60	60	60	720	60	60	60	60	60	60	60	60	1200	60	60	60	60	**1440**	**31199**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	135	135	131	131	131	663	131	135	135	135	135	135	135	1604	135	135	135	135	132	132	132	132	2672	132	130	130	130	**3194**	**73519**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150	150	150	150	150	150	3000	150	150	150	150	**3600**	**64192**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	340	320	300	300	260	1520	250	255	250	260	270	280	305	3390	290	295	310	325	350	305	310	345	5920	330	320	310	310	**7190**	**143890**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**768**	**747**	**723**	**723**	**683**	**3644**	**672**	**680**	**675**	**685**	**695**	**705**	**729**	**8485**	**715**	**719**	**735**	**749**	**771**	**727**	**731**	**766**	**14398**	**751**	**740**	**730**	**729**	**17348**	**363650**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	50	50	50	50	50	250	50	50	50	50	51	51	51	603	50	50	50	50	46	45	45	49	988	50	50	50	50	**1188**	**16949**
Aguirre CC Gas 1-2	50.00	30	17				47								47	23	30	30	30	30	30	30	39	289	50	50	50	50	**489**	**16761**
Aguirre CC Gas 1-3	50.00	45	45	45	45	45	225	45	45	45	45	45	45	46	541	45	45	45	45	45	45	45	45	901	45	45	45	45	**1081**	**12600**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00	36	36	36	36	36	180	35	35	35	35	36	36	36	428	36	36	36	36	36	35	35	37	715	36	37	37	37	**862**	**1212**
Aguirre CC Gas 2-1	50.00	30	30	30	30	30	150	29	29	29	30	30	30	30	357	30	30	30	30	30	30	36	49	622	50	50	50	50	**822**	**13694**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	30	18				48								48	28	30	30	30	30	30	35	49	310	50	50	50	50	**510**	**13902**
Aguirre CC Gas 2-4	50.00	30	30	30	30	30	150	29	29	29	30	30	30	30	357	30	30	30	30	30	30	30	34	601	35	30	30	30	**726**	**14656**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**251**	**226**	**191**	**191**	**191**	**1050**	**188**	**188**	**188**	**190**	**192**	**192**	**193**	**2381**	**242**	**251**	**251**	**251**	**247**	**245**	**256**	**302**	**4426**	**316**	**312**	**312**	**312**	**5678**	**94483**
San Juan GT 5	160.00	119	120	119	120	119	597	120	119	120	120	119	120	119	1434	120	119	120	119	120	120	130	134	2416	134	136	134	135	**2955**	**36016**
San Juan STM 5	60.00	40	41	40	40	40	201	41	40	41	40	42	41	41	487	42	41	42	41	41	42	42	44	822	43	43	43	43	**994**	**8807**
San Juan GT 6	160.00																													**1951**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**159**	**161**	**159**	**160**	**159**	**798**	**161**	**159**	**161**	**160**	**161**	**161**	**160**	**1921**	**162**	**160**	**162**	**160**	**161**	**162**	**172**	**178**	**3238**	**177**	**179**	**177**	**178**	**3949**	**46774**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													**954**
Cambalache 3	82.50																			15	67	77	77	236	78	77	78	28	**497**	**12921**
TOTAL CAMBALACHE G.P.																				**15**	**67**	**77**	**77**	**236**	**78**	**77**	**78**	**28**	**497**	**13875**
Mayagüez 1	55.00																									37	47	27	**111**	**5436**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	20					20								20			20	50	50	50	50	51	291	51	51	51	51	**495**	**9449**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**20**					**20**								**20**			**20**	**50**	**50**	**50**	**50**	**51**	**291**	**51**	**88**	**98**	**78**	**606**	**14885**
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	19	19	95	19	19	19	19	20	19	20	230	19	19	19	19	19	19	19	19	382	19	19	19	19	**458**	**10245**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00																			15	20	21	21	77	21	21	21	21	**161**	**8595**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			17	21	21	21	80	21	22	14		**137**	**2681**
Daguao 1-1	21.00																				12	18	18	48	18	15			**81**	**1508**
Daguao 1-2	21.00																				7	16	16	39	16	13			**68**	**1218**
Yabucoa 1-1	21.00																				13	18	18	49	18	8			**75**	**1356**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																				12	19	19	50	19	7			**76**	**1362**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																				3	18	18	39	18	7			**64**	**1743**
TOTAL GAS TURBINES		**19**	**19**	**19**	**19**	**19**	**95**	**19**	**19**	**19**	**19**	**20**	**19**	**20**	**230**	**19**	**19**	**19**	**19**	**51**	**107**	**150**	**150**	**764**	**150**	**112**	**54**	**40**	**1120**	**31613**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**5594**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**5562**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	10	10	10	10	10	200	10	10	10	10	**240**	**5206**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**600**	**30**	**30**	**30**	**30**	**720**	**16362**
TOTAL DIESEL		**69**	**49**	**49**	**49**	**49**	**265**	**49**	**49**	**49**	**49**	**50**	**49**	**50**	**610**	**49**	**49**	**69**	**99**	**146**	**254**	**307**	**308**	**1891**	**309**	**307**	**260**	**176**	**2943**	**76735**
COGENERATION																														
AES 1	227.15	229	228	228	229	229	1143	229	229	230	229	228	229	229	2746	229	229	229	228	228	229	228	229	4575	228	228	228	229	**5488**	**117990**
AES 2	227.15	170	169	170	170	170	849	170	168	168	166	173	172	171	2037	170	170	170	169	167	167	168	168	3386	168	167	167	167	**4055**	**98935**
TOTAL AES		**399**	**397**	**398**	**399**	**399**	**1992**	**399**	**397**	**398**	**395**	**401**	**401**	**400**	**4783**	**399**	**399**	**399**	**397**	**395**	**396**	**396**	**397**	**7961**	**396**	**395**	**395**	**396**	**9543**	**216925**
ECOELECTRICA		466	461	441	393	393	2154	413	389	429	463	465	464	474	5251	466	467	466	463	466	436	385	461	8861	463	437	434	432	**10627**	**221540**
TOTAL COGENERATION		**865**	**858**	**839**	**792**	**792**	**4146**	**812**	**786**	**827**	**858**	**866**	**865**	**874**	**10034**	**865**	**866**	**865**	**860**	**861**	**832**	**781**	**858**	**16822**	**859**	**832**	**829**	**828**	**20170**	**438465**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									4	9	13	13	15	54	17	17	14	8	7	2			119					**119**	**2720**
San Fermín	20.00									5	10	13	15	12	55	13	13	10	9	4	1			105					**105**	**2489**
Horizon	10.00									2	5	8	9	10	34	10	9	9	8	5	1			76					**76**	**1660**
Oriana	45.00								1	6	13	25	37	42	124	42	43	39	32	21	9	1		311					**311**	**5603**
Coto Laurel	10.00									2	4	5	6	8	25	8	7	4	4	2	1			51					**51**	**1076**
Fonroche	40.00								1	4	11	12	15	21	64	22	19	21	15	11	1			153					**153**	**4022**
TOTAL SOLAR									**2**	**23**	**52**	**76**	**95**	**108**	**356**	**112**	**108**	**97**	**76**	**50**	**15**	**1**		**815**					**815**	**17570**
Bechara	1.00																													
Pattern Santa Isabel	75.00	6	3	2		1	12	1	1	1	5	5	7	14	46	20	26	28	23	12	7	5	4	171					**171**	**7944**
Punta Lima	26.00																													
TOTAL WIND		**6**	**3**	**2**		**1**	**12**	**1**	**1**	**1**	**5**	**5**	**7**	**14**	**46**	**20**	**26**	**28**	**23**	**12**	**7**	**5**	**4**	**171**					**171**	**7944**
LandFill Gas Fajardo	2.40	1	1	1	1	1	5	1	1	1	1	1	1	1	12	1	1	1	1	1	1	1	1	20	1	1	1	1	**24**	**180**
LandFill Gas Toa Baja	2.40	1	1	1	1	1	5	1	1	1	1				9									9					**9**	**678**
TOTAL LANDFILL GAS		**2**	**2**	**2**	**2**	**2**	**10**	**2**	**2**	**2**	**2**	**1**	**1**	**1**	**21**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**29**	**1**	**1**	**1**	**1**	**33**	**858**
TOTAL RENEWABLE		**8**	**5**	**4**	**2**	**3**	**22**	**3**	**5**	**26**	**59**	**82**	**103**	**123**	**423**	**133**	**135**	**126**	**100**	**63**	**23**	**7**	**5**	**1015**	**1**	**1**	**1**	**1**	**1019**	**26372**
.																														
TOTAL HOURLY GENERATION (NET)		**2120**	**2046**	**1965**	**1917**	**1877**	**9925**	**1885**	**1867**	**1928**	**2004**	**2050**	**2079**	**2133**	**23871**	**2170**	**2184**	**2212**	**2229**	**2265**	**2261**	**2272**	**2435**	**41899**	**2430**	**2379**	**2310**	**2224**	**51242**	**1048562**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2435	**1867**	**2135**	**87.68%**	**76.67%**	**51242**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Thursday, April 23, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	1	2	2	2	2	17	1				**18**	**281**
Toro Negro 1-3	1.50									1	1	1	1	2	6	1	1	1	1	2	2	2	2	18	2				**20**	**277**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																													**640**
Dos Bocas 3	5.00																													**646**
Yauco 1-1	25.00																													
Yauco 2-1	4.50																2	2	2	2	2	2	2	14	2	2			**18**	**295**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**2**	**3**	**11**	**2**	**4**	**4**	**4**	**6**	**6**	**6**	**6**	**49**	**5**	**2**			**56**	**2139**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	79	80	80	79	80	398	76	76	76	79	79	79	80	943	81	81	80	80	80	80	81	80	1586	80	81	80	80	**1907**	**41369**
San Juan 10	100.00																													
Palo Seco 1	85.00	60	60	60	60	60	300	60	60	60	60	60	60	60	720	60	60	60	60	60	60	60	60	1200	60	60	60	60	**1440**	**32639**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	130	130	130	130	130	650	130	130	130	130	130	130	130	1560	130	130	130	130	130	130	130	130	2600	130	130	130	130	**3120**	**76639**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150			2	37	113	2402	135	150	150	150	**2987**	**67179**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	300	300	290	250	250	1390	250	250	260	275	250	250	250	3175	250	250	285	295	250	250	250	250	5255	255	250	255	235	**6250**	**150140**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**719**	**720**	**710**	**669**	**670**	**3488**	**666**	**666**	**676**	**694**	**669**	**669**	**670**	**8198**	**671**	**671**	**705**	**565**	**520**	**522**	**558**	**633**	**13043**	**660**	**671**	**675**	**655**	**15704**	**379354**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	50	50	50	50	50	250	50	50	50	50	50	51	51	602	50	50	50	50	50	50	50	50	1002	50	50	50	50	**1202**	**18151**
Aguirre CC Gas 1-2	50.00	50	47	17			114								114			19	30	30	30	30	30	283	30	30	30	30	**403**	**17164**
Aguirre CC Gas 1-3	50.00	45	45	45	45	45	225	45	45	45	45	45	45	46	541	45	45	45	45	45	45	45	46	902	45	45	45	45	**1082**	**13682**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00	36	36	37	37	37	183	36	36	36	37	37	37	37	439	36	36	37	37	37	37	37	37	733	36	37	37	37	**880**	**2092**
Aguirre CC Gas 2-1	50.00	50	30				80				11	30	30	30	181	30	30	30	32	30	30	30	30	423	30	30	30	30	**543**	**14237**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	50	32				82				10	30	30	30	182	30	16		22	30	30	30	30	370	30	30	30	30	**490**	**14392**
Aguirre CC Gas 2-4	50.00	30	30	30	30	30	150	29	29	30	30	30	30	30	358	30	30	30	32	30	30	30	30	600	30	30	30	30	**720**	**15376**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**311**	**270**	**179**	**162**	**162**	**1084**	**160**	**160**	**161**	**183**	**222**	**223**	**224**	**2417**	**221**	**207**	**211**	**248**	**252**	**252**	**252**	**253**	**4313**	**251**	**252**	**252**	**252**	**5320**	**99803**
San Juan GT 5	160.00	135	134	135	134	134	672	128	120	119	120	119	120	119	1517	120	119	119	140	149	150	149	150	2613	149	150	149	150	**3211**	**39227**
San Juan STM 5	60.00	43	42	42	43	42	212	42	41	40	40	41	41	41	498	40	41	40	44	45	47	45	46	846	45	45	45	44	**1025**	**9832**
San Juan GT 6	160.00															64	90	3						157					**157**	**2108**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**178**	**176**	**177**	**177**	**176**	**884**	**170**	**161**	**159**	**160**	**160**	**161**	**160**	**2015**	**224**	**250**	**162**	**184**	**194**	**197**	**194**	**196**	**3616**	**194**	**195**	**194**	**194**	**4393**	**51167**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																			14	53	75	76	218	76	76	77	41	**488**	**1442**
Cambalache 3	82.50																				10	54	76	140	77	77	77	76	**447**	**13368**
TOTAL CAMBALACHE G.P.																				**14**	**63**	**129**	**152**	**358**	**153**	**153**	**154**	**117**	**935**	**14810**
Mayagüez 1	55.00																		35	46	46	31	20	178	20	20	8		**226**	**5662**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	13					13								13				40	51	51	30	24	209	25	25	9		**268**	**9717**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**13**					**13**								**13**				**75**	**97**	**97**	**61**	**44**	**387**	**45**	**45**	**17**		**494**	**15379**
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	19	19	95	19	19	19	19	19	19	19	228	19	19	19	19	19	19	19	20	381	19	19	19	19	**457**	**10702**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	21	22	21	21	106	22	22	21	21	21	21	21	255	21	21	21	21	21	21	21	21	423	21	21	21	21	**507**	**9102**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																				16	21	21	58	22	11			**91**	**2772**
Daguao 1-1	21.00																			18	18	18	18	72	18	2			**92**	**1600**
Daguao 1-2	21.00																			12	16	16	16	60	16	2			**78**	**1296**
Yabucoa 1-1	21.00																				14	18	18	50	18	3			**71**	**1427**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																			5	19	19	19	62	19	6			**87**	**1449**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																			2	18	18	18	56	18	7			**81**	**1824**
TOTAL GAS TURBINES		**40**	**40**	**41**	**40**	**40**	**201**	**41**	**41**	**40**	**40**	**40**	**40**	**40**	**483**	**40**	**40**	**40**	**40**	**77**	**141**	**150**	**151**	**1162**	**151**	**71**	**40**	**40**	**1464**	**33077**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	20	22	22	22	22	258	22	22	22	22	**346**	**5940**
Palo Seco MP 2	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	20	22	22	22	22	258	22	22	22	22	**346**	**5908**
Palo Seco MP 3	27.00	10	10	10	10	10	50	10	10	10	10	10	10	10	120	10	10	10	18	22	22	22	22	256	22	22	22	22	**344**	**5550**
TOTAL PALO SECO MP		**30**	**30**	**30**	**30**	**30**	**150**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**360**	**30**	**30**	**30**	**58**	**66**	**66**	**66**	**66**	**772**	**66**	**66**	**66**	**66**	**1036**	**17398**
TOTAL DIESEL		**83**	**70**	**71**	**70**	**70**	**364**	**71**	**71**	**70**	**70**	**70**	**70**	**70**	**856**	**70**	**70**	**70**	**173**	**254**	**367**	**406**	**413**	**2679**	**415**	**335**	**277**	**223**	**3929**	**80664**
COGENERATION																														
AES 1	227.15	229	229	228	229	229	1144	224	224	226	227	227	224	224	2720	229	229	228	228	229	228	228	228	4547	227	227	228	227	**5456**	**123446**
AES 2	227.15	167	169	170	169	168	843	167	167	167	168	168	169	167	2016	168	168	169	169	168	168	168	168	3362	167	167	168	168	**4032**	**102967**
TOTAL AES		**396**	**398**	**398**	**398**	**397**	**1987**	**391**	**391**	**393**	**395**	**395**	**393**	**391**	**4736**	**397**	**397**	**397**	**397**	**397**	**396**	**396**	**396**	**7909**	**394**	**394**	**396**	**395**	**9488**	**226413**
ECOELECTRICA		436	401	443	449	429	2158	444	437	463	443	429	413	449	5236	387	386	462	407	404	348	298	415	8343	395	427	412	398	**9975**	**231515**
TOTAL COGENERATION		**832**	**799**	**841**	**847**	**826**	**4145**	**835**	**828**	**856**	**838**	**824**	**806**	**840**	**9972**	**784**	**783**	**859**	**804**	**801**	**744**	**694**	**811**	**16252**	**789**	**821**	**808**	**793**	**19463**	**457928**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									3	6	13	12	16	50	17	17	15	13	7	2			121					**121**	**2841**
San Fermín	20.00									3	5	7	11	14	40	8	9	13	7	6	2			85					**85**	**2574**
Horizon	10.00									2	4	6	7	8	27	9	10	10	5	5	1			67					**67**	**1727**
Oriana	45.00								1	9	22	33	41	43	149	40	33	19	8	9	3			261					**261**	**5864**
Coto Laurel	10.00									2	4	3	4	4	17	4	2	3	4	2	1			33					**33**	**1109**
Fonroche	40.00									2	4	8	26	27	67	23	21	13	5	9	3			141					**141**	**4163**
TOTAL SOLAR									**1**	**21**	**45**	**70**	**101**	**112**	**350**	**101**	**92**	**73**	**42**	**38**	**12**			**708**					**708**	**18278**
Bechara	1.00																													
Pattern Santa Isabel	75.00				1	1	2				11	24	43	33	113	48	48	51	58	60	44	35	22	479	9	3	2	2	**495**	**8439**
Punta Lima	26.00																													
TOTAL WIND					**1**	**1**	**2**				**11**	**24**	**43**	**33**	**113**	**48**	**48**	**51**	**58**	**60**	**44**	**35**	**22**	**479**	**9**	**3**	**2**	**2**	**495**	**8439**
LandFill Gas Fajardo	2.40	1	1	1	1	1	5	1	1	1	1	1	1	1	12	1	1	1	1	1	1	1	1	20	1	1	1	1	**24**	**204**
LandFill Gas Toa Baja	2.40																													**678**
TOTAL LANDFILL GAS		**1**	**1**	**1**	**1**	**1**	**5**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**12**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**20**	**1**	**1**	**1**	**1**	**24**	**882**
TOTAL RENEWABLE		**1**	**1**	**1**	**2**	**2**	**7**	**1**	**2**	**22**	**57**	**95**	**145**	**146**	**475**	**150**	**141**	**125**	**101**	**99**	**57**	**36**	**23**	**1207**	**10**	**4**	**3**	**3**	**1227**	**27599**
.																														
TOTAL HOURLY GENERATION (NET)		**2124**	**2036**	**1979**	**1927**	**1906**	**9972**	**1903**	**1888**	**1946**	**2004**	**2042**	**2076**	**2113**	**23944**	**2122**	**2126**	**2136**	**2079**	**2126**	**2145**	**2146**	**2335**	**41159**	**2324**	**2280**	**2209**	**2120**	**50092**	**1098654**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2335	**1888**	**2087**	**89.39%**	**80.86%**	**50092**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Friday, April 24, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	2				**18**	**299**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	1	1	1	2	2	2	16	1				**17**	**294**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																				3	6	6	15	6	3			**24**	**664**
Dos Bocas 3	5.00																				3	6	6	15	6	3			**24**	**670**
Yauco 1-1	25.00																													
Yauco 2-1	4.50											2	2	2	6	2	2	2	2	2	2	2	2	22	2	2	1	1	**28**	**323**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**4**	**4**	**4**	**16**	**4**	**4**	**4**	**4**	**4**	**12**	**18**	**18**	**84**	**17**	**8**	**1**	**1**	**111**	**2250**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	81	80	80	80	80	401	80	80	80	80	79	79	79	958	80	80	79	78	80	80	80	80	1595	80	80	81	79	**1915**	**43284**
San Juan 10	100.00																													
Palo Seco 1	85.00	60	60	60	60	60	300	60	60	60	60	60	60	60	720	60	60	60	60	60	60	60	60	1200	60	60	60	60	**1440**	**34079**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	130	130	130	130	130	650	130	130	130	130	130	130	130	1560	130	130	130	130	128	128	128	128	2592	128	128	128	128	**3104**	**79743**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150	150	150	150	150	150	3000	150	150	150	150	**3600**	**70779**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	240	240	240	240	240	1200	245	240	240	240	240	240	240	2885	240	240	245	250	235	240	240	245	4820	235	245	260	280	**5840**	**155980**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**661**	**660**	**660**	**660**	**660**	**3301**	**665**	**660**	**660**	**660**	**659**	**659**	**659**	**7923**	**660**	**660**	**664**	**668**	**653**	**658**	**658**	**663**	**13207**	**653**	**663**	**679**	**697**	**15899**	**395253**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	50	50	50	50	50	250	50	50	50	50	50	50	51	601	50	43	45	45	45	50	50	50	979	50	50	50	50	**1179**	**19330**
Aguirre CC Gas 1-2	50.00	30	18				48								48						10	30	30	118	30	30	30	26	**234**	**17398**
Aguirre CC Gas 1-3	50.00	45	45	45	45	45	225	45	45	45	45	45	45	46	541	45	45	45	45	45	45	45	45	901	45	34			**980**	**14662**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00	36	36	37	37	37	183	36	36	36	37	37	37	37	439	36	34	34	34	32	37	37	37	720	37	32	17	17	**823**	**2915**
Aguirre CC Gas 2-1	50.00	27					27								27				28	29	30	30	30	174	30	30	30	30	**294**	**14531**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	13					13								13				29	29	30	30	30	161	30	30	30	30	**281**	**14673**
Aguirre CC Gas 2-4	50.00	30	30	30	30	30	150	29	29	29	29	30	30	30	356	18	10	12	41	38	40	40	40	595	40	40	40	37	**752**	**16128**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**231**	**179**	**162**	**162**	**162**	**896**	**160**	**160**	**160**	**161**	**162**	**162**	**164**	**2025**	**149**	**132**	**136**	**222**	**218**	**242**	**262**	**262**	**3648**	**262**	**246**	**197**	**190**	**4543**	**104346**
San Juan GT 5	160.00	149	150	150	149	149	747	150	149	150	149	149	150	150	1794	149	140	120	120	119	120	119	120	2801	120	119	120	119	**3279**	**42506**
San Juan STM 5	60.00	44	44	43	43	42	216	43	42	44	45	46	46	46	528	47	43	43	40	40	41	40	40	862	40	40	40	40	**1022**	**10854**
San Juan GT 6	160.00													32	32	98	134	134		28	92	95	95	708	111	120	89	88	**1116**	**3224**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**193**	**194**	**193**	**192**	**191**	**963**	**193**	**191**	**194**	**194**	**195**	**196**	**228**	**2354**	**294**	**317**	**297**	**160**	**187**	**253**	**254**	**255**	**4371**	**271**	**279**	**249**	**247**	**5417**	**56584**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													**1442**
Cambalache 3	82.50	3					3								3									3					**3**	**13371**
TOTAL CAMBALACHE G.P.		**3**					**3**								**3**									**3**					**3**	**14813**
Mayagüez 1	55.00																						21	21	46	46	40	4	**157**	**5819**
Mayagüez 2	55.00																													
Mayagüez 3	55.00																				6	27	51	84	51	51	47		**233**	**9950**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.																					**6**	**27**	**72**	**105**	**97**	**97**	**87**	**4**	**390**	**15769**
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	19	20	96	20	20	19	19	19	19	19	231	19	17	10	19	19	19	19	19	372	19	19	19	19	**448**	**11150**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	21	21	21	21	105	21	22	21	21	21	21	21	253	21	18	10	19	21	21	21	21	405	21	21	21	21	**489**	**9591**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																													**2772**
Daguao 1-1	21.00																													**1600**
Daguao 1-2	21.00																													**1296**
Yabucoa 1-1	21.00																													**1427**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																													**1449**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																													**1824**
TOTAL GAS TURBINES		**40**	**40**	**40**	**40**	**41**	**201**	**41**	**42**	**40**	**40**	**40**	**40**	**40**	**484**	**40**	**35**	**20**	**38**	**40**	**40**	**40**	**40**	**777**	**40**	**40**	**40**	**40**	**937**	**34014**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	22	22	22	22	22	110	22	22	22	22	22	22	22	264	22	20	10	10	20	20	20	20	406	20	20	20	20	**486**	**6426**
Palo Seco MP 2	27.00	22	22	22	22	22	110	22	22	22	22	22	22	22	264	22	20	10	10	19	20	20	20	405	20	20	20	20	**485**	**6393**
Palo Seco MP 3	27.00	22	22	22	22	22	110	22	22	22	22	22	22	22	264	22	19	10	10	19	20	20	20	404	20	20	20	20	**484**	**6034**
TOTAL PALO SECO MP		**66**	**66**	**66**	**66**	**66**	**330**	**66**	**66**	**66**	**66**	**66**	**66**	**66**	**792**	**66**	**59**	**30**	**30**	**58**	**60**	**60**	**60**	**1215**	**60**	**60**	**60**	**60**	**1455**	**18853**
TOTAL DIESEL		**109**	**106**	**106**	**106**	**107**	**534**	**107**	**108**	**106**	**106**	**106**	**106**	**106**	**1279**	**106**	**94**	**50**	**68**	**98**	**106**	**127**	**172**	**2100**	**197**	**197**	**187**	**104**	**2785**	**83449**
COGENERATION																														
AES 1	227.15	228	228	228	228	228	1140	228	228	229	228	228	228	228	2737	229	230	229	230	229	229	229	229	4571	229	230	230	229	**5489**	**128935**
AES 2	227.15	168	169	170	169	169	845	172	164	163	167	170	170	170	2021	173	174	175	175	174	174	175	174	3415	174	174	176	175	**4114**	**107081**
TOTAL AES		**396**	**397**	**398**	**397**	**397**	**1985**	**400**	**392**	**392**	**395**	**398**	**398**	**398**	**4758**	**402**	**404**	**404**	**405**	**403**	**403**	**404**	**403**	**7986**	**403**	**404**	**406**	**404**	**9603**	**236016**
ECOELECTRICA		438	415	369	324	303	1849	310	285	329	346	349	339	314	4121	292	307	391	454	433	368	344	458	7168	444	430	460	449	**8951**	**240466**
TOTAL COGENERATION		**834**	**812**	**767**	**721**	**700**	**3834**	**710**	**677**	**721**	**741**	**747**	**737**	**712**	**8879**	**694**	**711**	**795**	**859**	**836**	**771**	**748**	**861**	**15154**	**847**	**834**	**866**	**853**	**18554**	**476482**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									4	9	13	16	12	54	14	12	13	7	7	3			110					**110**	**2951**
San Fermín	20.00								1	4	8	12	12	14	51	15	14	13	11	10	2			116					**116**	**2690**
Horizon	10.00									2	6	5	9	6	28	8	7	8	4	2	1			58					**58**	**1785**
Oriana	45.00									9	23	31	40	42	145	43	43	40	10	7	4	1		293					**293**	**6157**
Coto Laurel	10.00									2	4	3	3	3	15	4	4	3	2	1				29					**29**	**1138**
Fonroche	40.00								1	6	13	18	15	22	75	18	15	13	16	5	1			143					**143**	**4306**
TOTAL SOLAR									**2**	**27**	**63**	**82**	**95**	**99**	**368**	**102**	**95**	**90**	**50**	**32**	**11**	**1**		**749**					**749**	**19027**
Bechara	1.00																													
Pattern Santa Isabel	75.00	1	4	3		1	9	3	4	7	31	43	56	73	226	64	63	49	59	58	48	40	26	633	6		4	7	**650**	**9089**
Punta Lima	26.00																													
TOTAL WIND		**1**	**4**	**3**		**1**	**9**	**3**	**4**	**7**	**31**	**43**	**56**	**73**	**226**	**64**	**63**	**49**	**59**	**58**	**48**	**40**	**26**	**633**	**6**		**4**	**7**	**650**	**9089**
LandFill Gas Fajardo	2.40	1	1	1	1	1	5	1	1	1	1	1	1	1	12	1	1	1	1	1	1	1	1	20	1	1	1	1	**24**	**228**
LandFill Gas Toa Baja	2.40																													**678**
TOTAL LANDFILL GAS		**1**	**1**	**1**	**1**	**1**	**5**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**12**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**20**	**1**	**1**	**1**	**1**	**24**	**906**
TOTAL RENEWABLE		**2**	**5**	**4**	**1**	**2**	**14**	**4**	**7**	**35**	**95**	**126**	**152**	**173**	**606**	**167**	**159**	**140**	**110**	**91**	**60**	**42**	**27**	**1402**	**7**	**1**	**5**	**8**	**1423**	**29022**
.																														
TOTAL HOURLY GENERATION (NET)		**2030**	**1956**	**1892**	**1842**	**1822**	**9542**	**1839**	**1803**	**1878**	**1959**	**1999**	**2016**	**2046**	**23082**	**2074**	**2077**	**2086**	**2091**	**2087**	**2102**	**2109**	**2258**	**39966**	**2254**	**2228**	**2184**	**2100**	**48732**	**1147386**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2258	**1803**	**2031**	**89.92%**	**79.85%**	**48732**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Saturday, April 25, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1-1	1.50																											
Toro Negro 1-2	1.50																											**299**
Toro Negro 1-3	1.50																											**294**
Toro Negro 1-4	4.00																											
Toro Negro 2-1	2.00																											
Caonillas 1-1	9.00																											
Caonillas 1-2	9.00																											
Caonillas 2-1	3.60																											
Dos Bocas 1	5.00																											
Dos Bocas 2	5.00																		6	6	6	6	6	30	6	3			**39**	**703**
Dos Bocas 3	5.00																		6	6	6	6	6	30	6	3			**39**	**709**
Yauco 1-1	25.00																													
Yauco 2-1	4.50	1	1	1	1	1	5	1	1	1	1	1			10									10				1	**11**	**334**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													
Garzas 1-2	3.60																													
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS		**1**	**1**	**1**	**1**	**1**	**5**	**1**	**1**	**1**	**1**	**1**			**10**				**12**	**12**	**12**	**12**	**12**	**70**	**12**	**6**		**1**	**89**	**2339**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	81	79	80	80	80	400	81	80	80	80	80	81	80	962	81	80	80	79	82	79	80	79	1602	81	81	80	80	**1924**	**45208**
San Juan 10	100.00																													
Palo Seco 1	85.00	60	60	60	60	60	300	60	60	60	60	60	60	60	720	60	60	60	60	60	60	60	60	1200	60	60	60	60	**1440**	**35519**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	128	128	128	128	128	640	128	128	128	128	128	128	128	1536	128	128	128	128	128	128	128	128	2560	128	128	125	125	**3066**	**82809**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	121	144	150	150	150	150	150	2965	150	150	150	150	**3565**	**74344**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	300	280	280	280	280	1420	275	265	245	240	240	240	240	3165	240	240	265	260	275	290	285	295	5315	245	245	240	235	**6280**	**162260**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**719**	**697**	**698**	**698**	**698**	**3510**	**694**	**683**	**663**	**658**	**658**	**659**	**658**	**8183**	**659**	**629**	**677**	**677**	**695**	**707**	**703**	**712**	**13642**	**664**	**664**	**655**	**650**	**16275**	**411528**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	50	50	50	50	50	250	50	50	50	50	50	51	51	602	50	50	50	50	50	50	50	50	1002	50	50	50	50	**1202**	**20532**
Aguirre CC Gas 1-2	50.00																			10	30	30	37	107	40	40	40	40	**267**	**17665**
Aguirre CC Gas 1-3	50.00																						22	22	40	40	40	40	**182**	**14844**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00	17	17	17	17	17	85	16	17	17	17	17	17	17	203	17	17	17	17	17	17	17	17	339	17	17	17	17	**407**	**3322**
Aguirre CC Gas 2-1	50.00	30	30	30	30	30	150	13							163				3	30	30	30	36	292	40	40	40	40	**452**	**14983**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	30	30	30	30	30	150	6							156			10	30	30	30	30	36	322	40	40	40	40	**482**	**15155**
Aguirre CC Gas 2-4	50.00	30	30	30	30	30	150	30	30	30	30	26			296							28	36	360	40	40	40	40	**520**	**16648**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**157**	**157**	**157**	**157**	**157**	**785**	**115**	**97**	**97**	**97**	**93**	**68**	**68**	**1420**	**67**	**67**	**77**	**100**	**137**	**157**	**185**	**234**	**2444**	**267**	**267**	**267**	**267**	**3512**	**107858**
San Juan GT 5	160.00	120	119	120	119	120	598	122	118	119	120	119	119	120	1435	120	121	119	118	121	119	120	128	2401	135	136	134	129	**2935**	**45441**
San Juan STM 5	60.00	40	40	39	40	40	199	41	38	41	40	40	40	41	480	41	42	40	40	41	40	40	41	805	42	42	42	41	**972**	**11826**
San Juan GT 6	160.00	6					6								6									6	34	105	120	119	**384**	**3608**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**166**	**159**	**159**	**159**	**160**	**803**	**163**	**156**	**160**	**160**	**159**	**159**	**161**	**1921**	**161**	**163**	**159**	**158**	**162**	**159**	**160**	**169**	**3212**	**211**	**283**	**296**	**289**	**4291**	**60875**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													**1442**
Cambalache 3	82.50																													**13371**
TOTAL CAMBALACHE G.P.																														**14813**
Mayagüez 1	55.00																					41	46	87	36	22			**145**	**5964**
Mayagüez 2	55.00																													
Mayagüez 3	55.00																				25	50	51	126	39				**165**	**10115**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.																					**25**	**91**	**97**	**213**	**75**	**22**			**310**	**16079**
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	19	20	96	20	20	19	19	19	19	19	231	19	19	19	19	19	19	19	20	384	20	19	19	19	**461**	**11611**
Palo Seco 1-2	21.00																													**2837**
Palo Seco 2-1	21.00	21	21	21	22	22	107	22	22	21	21	21	21	21	256	21	21	21	21	21	21	21	21	424	21	21	21	22	**509**	**10100**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																													**2772**
Daguao 1-1	21.00																													**1600**
Daguao 1-2	21.00																													**1296**
Yabucoa 1-1	21.00																													**1427**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																													**1449**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																													**1824**
TOTAL GAS TURBINES		**40**	**40**	**40**	**41**	**42**	**203**	**42**	**42**	**40**	**40**	**40**	**40**	**40**	**487**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**41**	**808**	**41**	**40**	**40**	**41**	**970**	**34984**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	20	20	20	20	20	100	20	11	10	10	10	10	10	181	10	10	10	10	10	19	20	20	290	20	20	20	20	**370**	**6796**
Palo Seco MP 2	27.00	20	20	20	20	20	100	20	10	10	10	10	10	10	180	10	10	10	10	10	18	20	20	288	20	20	20	20	**368**	**6761**
Palo Seco MP 3	27.00	20	20	20	20	20	100	20	10	10	10	10	10	10	180	10	10	10	10	10	18	20	20	288	20	20	20	20	**368**	**6402**
TOTAL PALO SECO MP		**60**	**60**	**60**	**60**	**60**	**300**	**60**	**31**	**30**	**30**	**30**	**30**	**30**	**541**	**30**	**30**	**30**	**30**	**30**	**55**	**60**	**60**	**866**	**60**	**60**	**60**	**60**	**1106**	**19959**
TOTAL DIESEL		**100**	**100**	**100**	**101**	**102**	**503**	**102**	**73**	**70**	**70**	**70**	**70**	**70**	**1028**	**70**	**70**	**70**	**70**	**70**	**120**	**191**	**198**	**1887**	**176**	**122**	**100**	**101**	**2386**	**85835**
COGENERATION																														
AES 1	227.15	229	229	229	229	229	1145	229	229	229	230	230	230	230	2752	230	230	229	230	229	229	229	229	4587	229	229	229	231	**5505**	**134440**
AES 2	227.15	175	176	176	176	175	878	174	174	174	175	175	175	175	2100	175	175	175	173	173	174	175	175	3495	175	173	173	174	**4190**	**111271**
TOTAL AES		**404**	**405**	**405**	**405**	**404**	**2023**	**403**	**403**	**403**	**405**	**405**	**405**	**405**	**4852**	**405**	**405**	**404**	**403**	**402**	**403**	**404**	**404**	**8082**	**404**	**402**	**402**	**405**	**9695**	**245711**
ECOELECTRICA		464	420	363	318	286	1851	321	292	348	346	321	367	399	4245	424	462	453	456	464	465	460	453	7882	431	373	358	303	**9347**	**249813**
TOTAL COGENERATION		**868**	**825**	**768**	**723**	**690**	**3874**	**724**	**695**	**751**	**751**	**726**	**772**	**804**	**9097**	**829**	**867**	**857**	**859**	**866**	**868**	**864**	**857**	**15964**	**835**	**775**	**760**	**708**	**19042**	**495524**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00							1	4	8	12	14	16	15	70	11	6	9	8	3				107					**107**	**3058**
San Fermín	20.00							1	4	8	10	14	14	11	62	10	10	4	4	2				92					**92**	**2782**
Horizon	10.00							1	2	5	6	9	9	10	42	7	5	4	3	1				62					**62**	**1847**
Oriana	45.00							2	10	13	31	38	36	34	164	35	30	24	9	2				264					**264**	**6421**
Coto Laurel	10.00									4	3	3	5	7	22	3	2	2	2	1				32					**32**	**1170**
Fonroche	40.00							2	5	15	17	20	21	17	97	15	14	14	7	3				150					**150**	**4456**
TOTAL SOLAR								**7**	**25**	**53**	**79**	**98**	**101**	**94**	**457**	**81**	**67**	**57**	**33**	**12**				**707**					**707**	**19734**
Bechara	1.00																													
Pattern Santa Isabel	75.00	3	2	3	7	1	16	12	10	30	50	46	57	69	290	60	44	32		12	15	9	7	469	1	1	2	5	**478**	**9567**
Punta Lima	26.00																													
TOTAL WIND		**3**	**2**	**3**	**7**	**1**	**16**	**12**	**10**	**30**	**50**	**46**	**57**	**69**	**290**	**60**	**44**	**32**		**12**	**15**	**9**	**7**	**469**	**1**	**1**	**2**	**5**	**478**	**9567**
LandFill Gas Fajardo	2.40	1		1		1	3		1		1			1	6	1		1	1		1		1	11	1		1		**13**	**241**
LandFill Gas Toa Baja	2.40																													**678**
TOTAL LANDFILL GAS		**1**		**1**		**1**	**3**		**1**		**1**			**1**	**6**	**1**		**1**	**1**		**1**		**1**	**11**	**1**		**1**		**13**	**919**
TOTAL RENEWABLE		**4**	**2**	**4**	**7**	**2**	**19**	**19**	**36**	**83**	**130**	**144**	**158**	**164**	**753**	**142**	**111**	**90**	**34**	**24**	**16**	**9**	**8**	**1187**	**2**	**1**	**3**	**5**	**1198**	**30220**
.																														
TOTAL HOURLY GENERATION (NET)		**2015**	**1941**	**1887**	**1846**	**1810**	**9499**	**1818**	**1741**	**1825**	**1867**	**1851**	**1886**	**1925**	**22412**	**1928**	**1907**	**1930**	**1910**	**1966**	**2039**	**2124**	**2190**	**38406**	**2167**	**2118**	**2081**	**2021**	**46793**	**1194179**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2190	**1741**	**1950**	**89.03%**	**79.50%**	**46793**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Sunday, April 26, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1-1	1.50																											
Toro Negro 1-2	1.50																											**299**
Toro Negro 1-3	1.50																											**294**
Toro Negro 1-4	4.00																											
Toro Negro 2-1	2.00																											
Caonillas 1-1	9.00																											
Caonillas 1-2	9.00																											
Caonillas 2-1	3.60																											
Dos Bocas 1	5.00																											
Dos Bocas 2	5.00																											**703**
Dos Bocas 3	5.00																											**709**
Yauco 1-1	25.00																											
Yauco 2-1	4.50																											**334**
Yauco 2-2	4.50																											
Garzas 1-1	3.60																											
Garzas 1-2	3.60																											
Garzas 2-1	5.04																											
Río Blanco 1	2.50																											
Río Blanco 2	2.50																											
TOTAL HYDROELECTRICS																												**2339**
THERMOELECTRICS																												
San Juan 7	100.00																											**11388**
San Juan 8	100.00																											
San Juan 9	100.00	81	80	81	81	80	403	81	81	80	81	81	81	80	968	80	80	81	80	80	81	80	80	1610	81	80	81	80	**1932**	**47140**
San Juan 10	100.00																											
Palo Seco 1	85.00	60	60	60	60	60	300	60	60	60	60	60	60	60	720	60	60	60	60	60	60	60	60	1200	60	60	60	60	**1440**	**36959**
Palo Seco 2	85.00																											
Palo Seco 3	216.00	125	125	125	125	123	623	120	120	120	120	120	120	120	1463	120	120	120	120	120	120	120	120	2423	120	120	120	120	**2903**	**85712**
Palo Seco 4	216.00	150	150	150	150	150	750	148	148	148	148	148	148	148	1786	148	148	148	150	150	150	150	150	2980	150	150	150	150	**3580**	**77924**
Costa Sur 3	85.00																											
Costa Sur 4	85.00																											
Costa Sur 5	410.00																											
Costa Sur 6	410.00																											
Aguirre 1	450.00	240	240	240	240	240	1200	240	235	235	240	240	240	240	2870	240	240	240	240	240	240	240	240	4790	240	245	240	265	**5780**	**168040**
Aguirre 2	450.00																											
TOTAL THERMOELECTRICS		**656**	**655**	**656**	**656**	**653**	**3276**	**649**	**644**	**643**	**649**	**649**	**649**	**648**	**7807**	**648**	**648**	**649**	**650**	**650**	**651**	**650**	**650**	**13003**	**651**	**655**	**651**	**675**	**15635**	**427163**
COMBINED CYCLES																												
Aguirre CC Gas 1-1	50.00	50	50	50	50	50	250	50	50	50	50	51	51	51	603	49	50	50	50	50	50	50	50	1002	50	50	50	50	**1202**	**21734**
Aguirre CC Gas 1-2	50.00	40	40	40	40	40	200	15							215		8	30	30	30	30	30	30	403	30	30	30	31	**524**	**18189**
Aguirre CC Gas 1-3	50.00	42					42							17	59	47	38					9	30	183	30	30	30	26	**299**	**15143**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00	17	17	17	17	17	85	17	17	17	17	17	17	17	204	16	16	16	16	17	17	17	17	336	16	16	16	17	**401**	**3723**
Aguirre CC Gas 2-1	50.00	32					32								32	19	30	30	30	30	29	30	30	260	30	30	30	30	**380**	**15363**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	24					24								24	19	30	30	30	30	30	30	30	253	30	30	30	29	**372**	**15527**
Aguirre CC Gas 2-4	50.00	40	40	40	40	40	200	40							240					23	29	30	30	352	30	30	30	30	**472**	**17120**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**245**	**147**	**147**	**147**	**147**	**833**	**122**	**67**	**67**	**67**	**68**	**68**	**85**	**1377**	**150**	**172**	**156**	**156**	**180**	**185**	**196**	**217**	**2789**	**216**	**216**	**216**	**213**	**3650**	**111508**
San Juan GT 5	160.00	23					23								23						9	77	101	210	122	118	122	119	**691**	**46132**
San Juan STM 5	60.00	10					10								10								28	38	40	39	40	38	**195**	**12021**
San Juan GT 6	160.00	119	120	120	120	120	599	120	119	119	119	120	120	120	1436	11								1447					**1447**	**5055**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**152**	**120**	**120**	**120**	**120**	**632**	**120**	**119**	**119**	**119**	**120**	**120**	**120**	**1469**	**11**					**9**	**77**	**129**	**1695**	**162**	**157**	**162**	**157**	**2333**	**63208**
DIESEL																												
Cambalache 1	82.50																											
Cambalache 2	82.50																											**1442**
Cambalache 3	82.50																					9	46	55	77	78	78	8	**296**	**13667**
TOTAL CAMBALACHE G.P.																						**9**	**46**	**55**	**77**	**78**	**78**	**8**	**296**	**15109**
Mayagüez 1	55.00													7	7				9	37	46	45	46	190	46	39			**275**	**6239**
Mayagüez 2	55.00																													
Mayagüez 3	55.00													15	15				32	50	50	51	51	249	51	52	38		**390**	**10505**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.														**22**	**22**				**41**	**87**	**96**	**96**	**97**	**439**	**97**	**91**	**38**		**665**	**16744**
DIESEL																												

Palo Seco 1-1	21.00	19	20	19	19	19	96	20	19	19	20	19	19	19	231	19	19	19	19	19	19	19	19	383	19	19	19	19	**459**	**12070**
Palo Seco 1-2	21.00	21	22	22	22	22	109	22	22	21	21	21	21	21	258	21	20	21	21	21	21	21	21	425	21	21	21	21	**509**	**3346**
Palo Seco 2-1	21.00																													**10100**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			20	21	21	22	84	20				**104**	**2876**
Daguao 1-1	21.00																				9	18	18	45	15				**60**	**1660**
Daguao 1-2	21.00																				3	16	16	35	13				**48**	**1344**
Yabucoa 1-1	21.00																					14	18	32	18	10			**60**	**1487**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																			10	19	19	9	57					**57**	**1506**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																			16	18	18	18	70	17				**87**	**1911**
TOTAL GAS TURBINES		**40**	**42**	**41**	**41**	**41**	**205**	**42**	**41**	**40**	**41**	**40**	**40**	**40**	**489**	**40**	**39**	**40**	**40**	**86**	**110**	**146**	**141**	**1131**	**123**	**50**	**40**	**40**	**1384**	**36368**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	20	20	20	20	20	100	19	19	19	19	19	19	19	233	20	20	20	20	20	20	20	20	393	20	19	19	19	**470**	**7266**
Palo Seco MP 2	27.00	20	20	20	20	20	100	20	20	20	20	20	20	20	240	20	20	20	20	20	20	20	20	400	20	20	20	20	**480**	**7241**
Palo Seco MP 3	27.00	19	19	19	19	19	95	20	20	20	20	20	20	20	235	19	19	19	19	19	19	19	19	387	20	20	20	20	**467**	**6869**
TOTAL PALO SECO MP		**59**	**59**	**59**	**59**	**59**	**295**	**59**	**59**	**59**	**59**	**59**	**59**	**59**	**708**	**59**	**59**	**59**	**59**	**59**	**59**	**59**	**59**	**1180**	**60**	**59**	**59**	**59**	**1417**	**21376**
TOTAL DIESEL		**99**	**101**	**100**	**100**	**100**	**500**	**101**	**100**	**99**	**100**	**99**	**99**	**121**	**1219**	**99**	**98**	**99**	**140**	**232**	**265**	**310**	**343**	**2805**	**357**	**278**	**215**	**107**	**3762**	**89597**
COGENERATION																														
AES 1	227.15	231	231	230	230	230	1152	230	230	230	231	230	230	230	2763	230	230	231	231	231	231	231	230	4608	202	225	230	230	**5495**	**139935**
AES 2	227.15	174	173	171	172	172	862	170	172	172	173	172	173	173	2067	171	173	175	174	175	175	175	175	3460	175	175	175	175	**4160**	**115431**
TOTAL AES		**405**	**404**	**401**	**402**	**402**	**2014**	**400**	**402**	**402**	**404**	**402**	**403**	**403**	**4830**	**401**	**403**	**406**	**405**	**406**	**406**	**406**	**405**	**8068**	**377**	**400**	**405**	**405**	**9655**	**255366**
ECOELECTRICA		368	426	366	326	291	1777	296	283	288	287	310	317	305	3863	342	365	381	409	438	431	356	420	7005	407	456	433	448	**8749**	**258562**
TOTAL COGENERATION		**773**	**830**	**767**	**728**	**693**	**3791**	**696**	**685**	**690**	**691**	**712**	**720**	**708**	**8693**	**743**	**768**	**787**	**814**	**844**	**837**	**762**	**825**	**15073**	**784**	**856**	**838**	**853**	**18404**	**513928**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00							1	2	6	12	12	11	18	62	16	15	12	8	3				116					**116**	**3174**
San Fermín	20.00							1	5	8	9	12	14	14	63	15	16	14	9	3				120					**120**	**2902**
Horizon	10.00								2	4	7	6	7	9	35	10	10	9	6	2				72					**72**	**1919**
Oriana	45.00							2	9	23	34	38	27	35	168	25	27	35	22	5	1			283					**283**	**6704**
Coto Laurel	10.00							1	2	3	3	4	2	4	19	6	7	6	3	1				42					**42**	**1212**
Fonroche	40.00							2	8	14	8	17	28	28	105	21	23	19	12	5				185					**185**	**4641**
TOTAL SOLAR								**7**	**28**	**58**	**73**	**89**	**89**	**108**	**452**	**93**	**98**	**95**	**60**	**19**	**1**			**818**					**818**	**20552**
Bechara	1.00																													
Pattern Santa Isabel	75.00	5	11	5	10	10	41	7	14	31	38	47	54	61	293	75	75	75	75	60	27	24	19	723	6	2	3	2	**736**	**10303**
Punta Lima	26.00																													
TOTAL WIND		**5**	**11**	**5**	**10**	**10**	**41**	**7**	**14**	**31**	**38**	**47**	**54**	**61**	**293**	**75**	**75**	**75**	**75**	**60**	**27**	**24**	**19**	**723**	**6**	**2**	**3**	**2**	**736**	**10303**
LandFill Gas Fajardo	2.40	1		1		1	3		1		1		1		6	1		1		1		1		10	1		1	1	**13**	**254**
LandFill Gas Toa Baja	2.40	2	2	2	2	2	10	2	2	2	2	2	2	1	23		1		1		1		1	27		1		2	**30**	**708**
TOTAL LANDFILL GAS		**3**	**2**	**3**	**2**	**3**	**13**	**2**	**3**	**2**	**3**	**2**	**3**	**1**	**29**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**37**	**1**	**1**	**1**	**3**	**43**	**962**
TOTAL RENEWABLE		**8**	**13**	**8**	**12**	**13**	**54**	**16**	**45**	**91**	**114**	**138**	**146**	**170**	**774**	**169**	**174**	**171**	**136**	**80**	**29**	**25**	**20**	**1578**	**7**	**3**	**4**	**5**	**1597**	**31817**
.																														
TOTAL HOURLY GENERATION (NET)		**1933**	**1866**	**1798**	**1763**	**1726**	**9086**	**1704**	**1660**	**1709**	**1740**	**1786**	**1802**	**1852**	**21339**	**1820**	**1860**	**1862**	**1896**	**1986**	**1976**	**2020**	**2184**	**36943**	**2177**	**2165**	**2086**	**2010**	**45381**	**1239560**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2184	**1660**	**1891**	**86.58%**	**76.01%**	**45381**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Monday, April 27, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																												
Toro Negro 1-1	1.50																											
Toro Negro 1-2	1.50									1	2	1	1	1	6	1	1	1	1	1	2	2	2	17	2				**19**	**318**
Toro Negro 1-3	1.50										1	1	1	1	4	1	1	1	1	1	2	2	2	15	1				**16**	**310**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																			6	6	6	6	24	6	3			**33**	**736**
Dos Bocas 3	5.00																			6	6	6	6	24	6	3			**33**	**742**
Yauco 1-1	25.00																													
Yauco 2-1	4.50								1	2	1	1	2	1	8	2	2	2	2	2	2	2	2	24	2	2			**28**	**362**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																2	2						4					**4**	**4**
Garzas 1-2	3.60																2	2						4					**4**	**4**
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS									**1**	**3**	**4**	**3**	**4**	**3**	**18**	**4**	**8**	**8**	**4**	**16**	**18**	**18**	**18**	**112**	**17**	**8**			**137**	**2476**
THERMOELECTRICS																												
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	80	81	80	80	81	402	81	80	81	80	80	81	80	965	79	76	79	80	79	79	80	79	1596	79	80	79	80	**1914**	**49054**
San Juan 10	100.00																													
Palo Seco 1	85.00	60	60	60	60	60	300	60	60	60	60	60	60	60	720	60	60	60	60	60	60	60	60	1200	60	60	60	60	**1440**	**38399**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	121	121	121	121	121	605	121	121	121	121	121	121	121	1452	121	121	121	121	121	121	121	121	2420	118	118	118	116	**2890**	**88602**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	144	121	121	121	121	135	150	150	2863	150	150	150	150	**3463**	**81387**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	280	275	280	280	275	1390	240	240	240	240	240	240	240	3070	240	240	240	240	260	255	240	245	5030	240	240	240	260	**6010**	**174050**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**691**	**687**	**691**	**691**	**687**	**3447**	**652**	**651**	**652**	**651**	**651**	**652**	**651**	**8007**	**644**	**618**	**621**	**622**	**641**	**650**	**651**	**655**	**13109**	**647**	**648**	**647**	**666**	**15717**	**442880**
COMBINED CYCLES																												
Aguirre CC Gas 1-1	50.00	50	50	50	50	50	250	50	50	50	50	50	50	51	601	50	50	50	50	50	50	49	49	999	52	50	52	53	**1206**	**22940**
Aguirre CC Gas 1-2	50.00	10					10								10				24	30	49	40	41	194	42	41	41	42	**360**	**18549**
Aguirre CC Gas 1-3	50.00																						24	24	42	40	41	42	**189**	**15332**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00	16	16	16	17	17	82	17	17	17	17	17	17	18	202	17	17	17	17	17	17	17	18	339	17	18	17	18	**409**	**4132**
Aguirre CC Gas 2-1	50.00	30	30	30	30	30	150	29	29	30	30	30	30	30	358	27	30	30	30	30	41	40	40	626	41	40	41	42	**790**	**16153**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	15					15								15	15	30	30	30	30	46	40	40	276	41	40	41	42	**440**	**15967**
Aguirre CC Gas 2-4	50.00	30	30	30	30	30	150	29	29	30	30	30	30	30	358	27	30	30	30	30	41	40	41	627	41	40	41	42	**791**	**17911**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**151**	**126**	**126**	**127**	**127**	**657**	**125**	**125**	**127**	**127**	**127**	**127**	**129**	**1544**	**136**	**157**	**157**	**181**	**187**	**244**	**226**	**253**	**3085**	**276**	**269**	**274**	**281**	**4185**	**115693**
San Juan GT 5	160.00	119	120	119	119	119	596	122	119	119	118	120	120	119	1433	120	119	120	119	104	132	140	139	2426	140	140	139	140	**2985**	**49117**
San Juan STM 5	60.00	39	40	38	39	39	195	40	38	40	39	40	40	40	472	40	40	40	40	38	42	42	42	796	44	44	44	43	**971**	**12992**
San Juan GT 6	160.00													61	61	139	119	102	119	120	9			669					**669**	**5724**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**158**	**160**	**157**	**158**	**158**	**791**	**162**	**157**	**159**	**157**	**160**	**160**	**220**	**1966**	**299**	**278**	**262**	**278**	**262**	**183**	**182**	**181**	**3891**	**184**	**184**	**183**	**183**	**4625**	**67833**
DIESEL																												
Cambalache 1	82.50																													
Cambalache 2	82.50																													**1442**
Cambalache 3	82.50																					11	60	71	76	77	77	32	**333**	**14000**
TOTAL CAMBALACHE G.P.																						**11**	**60**	**71**	**76**	**77**	**77**	**32**	**333**	**15442**
Mayagüez 1	55.00																		20	41	45	45	46	197	46	47	28		**318**	**6557**
Mayagüez 2	55.00																													
Mayagüez 3	55.00																		19	42	50	51	51	213	51	51	49		**364**	**10869**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.																			**39**	**83**	**95**	**96**	**97**	**410**	**97**	**98**	**77**		**682**	**17426**
DIESEL																												

Palo Seco 1-1	21.00	19	19	20	19	20	97	20	19	19	19	19	19	19	231	19	19	19	19	19	19	19	19	383	19	19	19	19	**459**	**12529**
Palo Seco 1-2	21.00																													**3346**
Palo Seco 2-1	21.00	22	21	22	22	22	109	22	22	21	21	21	21	21	258	21	20	21	20	21	21	21	21	424	21	21	21	22	**509**	**10609**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			20	21	21	22	84	22	21			**127**	**3003**
Daguao 1-1	21.00																				10	18	18	46	18	11			**75**	**1735**
Daguao 1-2	21.00																				4	16	16	36	16	10			**62**	**1406**
Yabucoa 1-1	21.00																					14	18	32	18	14			**64**	**1551**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																			9	19	19	10	57					**57**	**1563**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																			16	18	18	18	70	18	17			**105**	**2016**
TOTAL GAS TURBINES		**41**	**40**	**42**	**41**	**42**	**206**	**42**	**41**	**40**	**40**	**40**	**40**	**40**	**489**	**40**	**39**	**40**	**39**	**85**	**112**	**146**	**142**	**1132**	**132**	**113**	**40**	**41**	**1458**	**37826**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	19	19	19	19	19	95	20	20	20	20	20	20	20	235	19	19	19	19	19	19	19	19	387	20	20	20	20	**467**	**7733**
Palo Seco MP 2	27.00	20	20	20	20	20	100	20	20	20	20	20	20	20	240	20	20	20	20	20	20	20	20	400	20	20	20	20	**480**	**7721**
Palo Seco MP 3	27.00	20	20	20	20	20	100	19	19	19	19	19	19	19	233	20	20	20	20	20	20	20	20	393	20	19	19	19	**470**	**7339**
TOTAL PALO SECO MP		**59**	**59**	**59**	**59**	**59**	**295**	**59**	**59**	**59**	**59**	**59**	**59**	**59**	**708**	**59**	**59**	**59**	**59**	**59**	**59**	**59**	**59**	**1180**	**60**	**59**	**59**	**59**	**1417**	**22793**
TOTAL DIESEL		**100**	**99**	**101**	**100**	**101**	**501**	**101**	**100**	**99**	**99**	**99**	**99**	**99**	**1197**	**99**	**98**	**99**	**137**	**227**	**266**	**312**	**358**	**2793**	**365**	**347**	**253**	**132**	**3890**	**93487**
COGENERATION																														
AES 1	227.15	229	229	229	229	230	1146	229	230	230	230	230	228	230	2753	230	230	230	231	230	229	229	230	4592	229	229	230	230	**5510**	**145445**
AES 2	227.15	173	173	173	175	176	870	176	176	177	179	179	180	180	2117	180	179	179	177	178	177	177	177	3541	177	177	179	177	**4251**	**119682**
TOTAL AES		**402**	**402**	**402**	**404**	**406**	**2016**	**405**	**406**	**407**	**409**	**409**	**408**	**410**	**4870**	**410**	**409**	**409**	**408**	**408**	**406**	**406**	**407**	**8133**	**406**	**406**	**409**	**407**	**9761**	**265127**
ECOELECTRICA		429	382	329	288	277	1705	321	321	377	431	428	435	393	4411	323	368	394	404	402	375	322	442	7441	439	427	443	433	**9183**	**267745**
TOTAL COGENERATION		**831**	**784**	**731**	**692**	**683**	**3721**	**726**	**727**	**784**	**840**	**837**	**843**	**803**	**9281**	**733**	**777**	**803**	**812**	**810**	**781**	**728**	**849**	**15574**	**845**	**833**	**852**	**840**	**18944**	**532872**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00							1	4	8	10	15	17	18	73	17	15	11	8	4				128					**128**	**3302**
San Fermín	20.00							1	3	4	10	17	18	18	71	18	17	13	10	4				133					**133**	**3035**
Horizon	10.00								3	4	6	9	10	10	42	10	10	9	5	2				78					**78**	**1997**
Oriana	45.00							2	10	19	32	37	43	44	187	44	39	33	19	5	1			328					**328**	**7032**
Coto Laurel	10.00							1	2	4	4	6	5	6	28	5	7	5	4	1				50					**50**	**1262**
Fonroche	40.00							3	8	15	18	21	25	27	117	25	23	14	10	4	1			194					**194**	**4835**
TOTAL SOLAR								**8**	**30**	**54**	**80**	**105**	**118**	**123**	**518**	**119**	**111**	**85**	**56**	**20**	**2**			**911**					**911**	**21463**
Bechara	1.00																													
Pattern Santa Isabel	75.00	6	3	3	4	4	20	6	4	20	41	43	59	68	261	66	69	75	75	72	65	38	10	731	10	6	4	8	**759**	**11062**
Punta Lima	26.00																													
TOTAL WIND		**6**	**3**	**3**	**4**	**4**	**20**	**6**	**4**	**20**	**41**	**43**	**59**	**68**	**261**	**66**	**69**	**75**	**75**	**72**	**65**	**38**	**10**	**731**	**10**	**6**	**4**	**8**	**759**	**11062**
LandFill Gas Fajardo	2.40	1		1		1	3		1		1		1		6	1		1		1		1		10		1	1	1	**13**	**267**
LandFill Gas Toa Baja	2.40	1	1	1	1	1	5	1	1						7			1		1		1		10	1		1	1	**13**	**721**
TOTAL LANDFILL GAS		**2**	**1**	**2**	**1**	**2**	**8**	**1**	**2**		**1**		**1**		**13**	**1**		**2**		**2**		**2**		**20**	**1**	**1**	**2**	**2**	**26**	**988**
TOTAL RENEWABLE		**8**	**4**	**5**	**5**	**6**	**28**	**15**	**36**	**74**	**122**	**148**	**178**	**191**	**792**	**186**	**180**	**162**	**131**	**94**	**67**	**40**	**10**	**1662**	**11**	**7**	**6**	**10**	**1696**	**33513**
.																														
TOTAL HOURLY GENERATION (NET)		**1939**	**1860**	**1811**	**1773**	**1762**	**9145**	**1781**	**1797**	**1898**	**2000**	**2025**	**2063**	**2096**	**22805**	**2101**	**2116**	**2112**	**2165**	**2237**	**2209**	**2157**	**2324**	**40226**	**2345**	**2296**	**2215**	**2112**	**49194**	**1288754**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2345	**1762**	**2050**	**87.41%**	**75.14%**	**49194**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Tuesday, April 28, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	2	1	2	1	2	1	16	1				**17**	**335**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	2	1	2	1	2	1	16	2				**18**	**328**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																													**736**
Dos Bocas 3	5.00																													**742**
Yauco 1-1	25.00																													
Yauco 2-1	4.50												1	2	3	1	2	2	2	2	2	2	2	18	2	1			**21**	**383**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													**4**
Garzas 1-2	3.60																													**4**
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**3**	**4**	**13**	**3**	**4**	**6**	**4**	**6**	**4**	**6**	**4**	**50**	**5**	**1**			**56**	**2532**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	79	80	79	79	79	396	80	80	80	80	80	80	80	956	80	80	79	80	80	79	79	79	1592	80	79	80	79	**1910**	**50964**
San Juan 10	100.00																													
Palo Seco 1	85.00	60	60	60	60	60	300	60	60	60	60	60	60	60	720	60	60	60	60	60	60	60	60	1200	60	60	60	60	**1440**	**39839**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	116	118	118	118	118	588	118	118	118	118	118	118	118	1414	118	118	118	118	118	118	118	118	2358	115	102	101	101	**2777**	**91379**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150	150	150	150	150	150	3000	150	150	150	150	**3600**	**84987**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	280	280	275	280	265	1380	240	240	240	240	240	240	250	3070	250	250	280	310	330	300	250	295	5335	270	280	280	285	**6450**	**180500**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**685**	**688**	**682**	**687**	**672**	**3414**	**648**	**648**	**648**	**648**	**648**	**648**	**658**	**7960**	**658**	**658**	**687**	**718**	**738**	**707**	**657**	**702**	**13485**	**675**	**671**	**671**	**675**	**16177**	**459057**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	49	49	49	49	50	246	50	50	50	51	53	50	32	582				12	30	30	30	41	725	50	50	50	50	**925**	**23865**
Aguirre CC Gas 1-2	50.00	39	40	40	40	40	199	40	40	40	41	34	30	30	454	31	31	30	30	30	30	31	30	697	30	30	30	31	**818**	**19367**
Aguirre CC Gas 1-3	50.00	25					25				23	34	30	30	142	31	31	30	30	30	30	30	28	382	30	30	30	31	**503**	**15835**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00	17	17	17	17	17	85	17	17	17	17	17	17	13	200								9	209	17	17	17	18	**278**	**4410**
Aguirre CC Gas 2-1	50.00	39	39	39	39	40	196	40	40	40	39	36	30	32	453	41	41	39	39	40	40	40	31	764	30	30	30	30	**884**	**17037**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	40	4				44								44	22	30	30	30	30	30	28	30	274	30	30	30	30	**394**	**16361**
Aguirre CC Gas 2-4	50.00	39	39	40	39	39	196	40	40	40	39	36	30	32	453	41	41	40	40	40	39	39	31	764	30	30	30	31	**885**	**18796**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**248**	**188**	**185**	**184**	**186**	**991**	**187**	**187**	**187**	**210**	**210**	**187**	**169**	**2328**	**166**	**174**	**169**	**181**	**200**	**199**	**198**	**200**	**3815**	**217**	**217**	**217**	**221**	**4687**	**120380**
San Juan GT 5	160.00	139	140	139	140	139	697	140	140	139	139	139	139	146	1679	129	124	120	119	120	119	120	120	2650	119	120	119	120	**3128**	**52245**
San Juan STM 5	60.00	44	44	44	42	43	217	43	43	44	44	44	45	45	525	43	41	41	40	41	40	40	40	851	39	40	40	40	**1010**	**14002**
San Juan GT 6	160.00																						40	40	111	119	120	120	**510**	**6234**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**183**	**184**	**183**	**182**	**182**	**914**	**183**	**183**	**183**	**183**	**183**	**184**	**191**	**2204**	**172**	**165**	**161**	**159**	**161**	**159**	**160**	**200**	**3541**	**269**	**279**	**279**	**280**	**4648**	**72481**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																													**1442**
Cambalache 3	82.50																			5	44	77	77	203	77	77	75	3	**435**	**14435**
TOTAL CAMBALACHE G.P.																				**5**	**44**	**77**	**77**	**203**	**77**	**77**	**75**	**3**	**435**	**15877**
Mayagüez 1	55.00																					36	46	82	46	34	19		**181**	**6738**
Mayagüez 2	55.00																													
Mayagüez 3	55.00																					45	51	96	51	41	25	20	**233**	**11102**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.																						**81**	**97**	**178**	**97**	**75**	**44**	**20**	**414**	**17840**
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	19	19	95	20	19	19	19	19	19	19	229	19	19	19	19	19	19	19	19	381	19	19	19	19	**457**	**12986**
Palo Seco 1-2	21.00																													**3346**
Palo Seco 2-1	21.00	21	21	21	22	22	107	22	21	21	21	21	21	21	255	21	21	21	21	21	21	21	21	423	21	21	21	21	**507**	**11116**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																		18	21	21	21	22	103	22	21			**146**	**3149**
Daguao 1-1	21.00																				2	18	18	38	18	12			**68**	**1803**
Daguao 1-2	21.00																					12	16	28					**28**	**1434**
Yabucoa 1-1	21.00																				2	18	18	38	18	14			**70**	**1621**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																			10	20	20	20	70	20	13			**103**	**1666**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																			4	18	18	18	58	18	3			**79**	**2095**
TOTAL GAS TURBINES		**40**	**40**	**40**	**41**	**41**	**202**	**42**	**40**	**40**	**40**	**40**	**40**	**40**	**484**	**40**	**40**	**40**	**58**	**75**	**103**	**147**	**152**	**1139**	**136**	**103**	**40**	**40**	**1458**	**39284**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	19	19	19	19	19	95	20	20	20	20	20	20	20	235	19	19	20	21	21	21	21	21	398	22	22	22	19	**483**	**8216**
Palo Seco MP 2	27.00	20	20	20	20	20	100	20	20	20	20	20	20	20	240	20	20	21	22	22	22	22	22	411	22	22	22	20	**497**	**8218**
Palo Seco MP 3	27.00	20	20	20	20	20	100	19	19	19	19	19	19	19	233	20	20	21	22	22	22	22	22	404	21	21	21	20	**487**	**7826**
TOTAL PALO SECO MP		**59**	**59**	**59**	**59**	**59**	**295**	**59**	**59**	**59**	**59**	**59**	**59**	**59**	**708**	**59**	**59**	**62**	**65**	**65**	**65**	**65**	**65**	**1213**	**65**	**65**	**65**	**59**	**1467**	**24260**
TOTAL DIESEL		**99**	**99**	**99**	**100**	**100**	**497**	**101**	**99**	**99**	**99**	**99**	**99**	**99**	**1192**	**99**	**99**	**102**	**123**	**145**	**212**	**370**	**391**	**2733**	**375**	**320**	**224**	**122**	**3774**	**97261**
COGENERATION																														
AES 1	227.15	230	230	230	230	230	1150	230	230	230	230	230	231	230	2761	229	229	229	229	230	230	229	230	4596	229	230	230	230	**5515**	**150960**
AES 2	227.15	177	177	177	177	178	886	178	178	178	177	178	178	178	2131	178	178	176	176	175	177	176	176	3543	176	176	177	177	**4249**	**123931**
TOTAL AES		**407**	**407**	**407**	**407**	**408**	**2036**	**408**	**408**	**408**	**407**	**408**	**409**	**408**	**4892**	**407**	**407**	**405**	**405**	**405**	**407**	**405**	**406**	**8139**	**405**	**406**	**407**	**407**	**9764**	**274891**
ECOELECTRICA		435	424	373	329	317	1878	348	336	378	394	385	370	372	4461	434	461	462	462	463	461	450	478	8132	428	413	443	463	**9879**	**277624**
TOTAL COGENERATION		**842**	**831**	**780**	**736**	**725**	**3914**	**756**	**744**	**786**	**801**	**793**	**779**	**780**	**9353**	**841**	**868**	**867**	**867**	**868**	**868**	**855**	**884**	**16271**	**833**	**819**	**850**	**870**	**19643**	**552515**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00							1	5	8	13	16	16	16	75	17	14	10	7	2				125					**125**	**3427**
San Fermín	20.00							1	5	10	14	17	18	18	83	16	12	10	5	3				129					**129**	**3164**
Horizon	10.00								4	7	7	10	10	10	48	10	9	7	5	1				80					**80**	**2077**
Oriana	45.00							2	10	23	33	40	44	44	196	45	32	32	22	9	1			337					**337**	**7369**
Coto Laurel	10.00							1	2	5	3	4	6	5	26	8	6	6	4	2				52					**52**	**1314**
Fonroche	40.00							2	7	12	20	25	27	26	119	24	18	17	12	5				195					**195**	**5030**
TOTAL SOLAR								**7**	**33**	**65**	**90**	**112**	**121**	**119**	**547**	**120**	**91**	**82**	**55**	**22**	**1**			**918**					**918**	**22381**
Bechara	1.00																													
Pattern Santa Isabel	75.00					2	2				17	48	74	65	206	56	75	75	74	69	48	25	10	638	4	1			**643**	**11705**
Punta Lima	26.00																													
TOTAL WIND						**2**	**2**				**17**	**48**	**74**	**65**	**206**	**56**	**75**	**75**	**74**	**69**	**48**	**25**	**10**	**638**	**4**	**1**			**643**	**11705**
LandFill Gas Fajardo	2.40	1		1		1	3		1		1		1		6					1		1		8	1		1	1	**11**	**278**
LandFill Gas Toa Baja	2.40																													**721**
TOTAL LANDFILL GAS		**1**		**1**		**1**	**3**		**1**		**1**		**1**		**6**					**1**		**1**		**8**	**1**		**1**	**1**	**11**	**999**
TOTAL RENEWABLE		**1**		**1**		**3**	**5**	**7**	**34**	**65**	**108**	**160**	**196**	**184**	**759**	**176**	**166**	**157**	**129**	**92**	**49**	**26**	**10**	**1564**	**5**	**1**	**1**	**1**	**1572**	**35085**
.																														
TOTAL HOURLY GENERATION (NET)		**2058**	**1990**	**1930**	**1889**	**1868**	**9735**	**1882**	**1895**	**1970**	**2051**	**2095**	**2096**	**2085**	**23809**	**2115**	**2134**	**2149**	**2181**	**2210**	**2198**	**2272**	**2391**	**41459**	**2379**	**2308**	**2242**	**2169**	**50557**	**1339311**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2391	**1868**	**2107**	**88.10%**	**78.13%**	**50557**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT

Wednesday, April 29, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	2	1	2	1	2	1	16	2				**18**	**353**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	2	1	2	1	2	1	16	1				**17**	**345**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00												3	6	9	6	6		3	6	2		5	37	6	6	6		**55**	**791**
Dos Bocas 3	5.00												3	6	9	6	6		3	6	2		5	37	6	6	6		**55**	**797**
Yauco 1-1	25.00																													
Yauco 2-1	4.50															1	2	2	2		2			9					**9**	**392**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													**4**
Garzas 1-2	3.60																													**4**
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**8**	**14**	**28**	**15**	**16**	**6**	**10**	**16**	**8**	**4**	**12**	**115**	**15**	**12**	**12**		**154**	**2686**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	80	79	80	79	80	398	80	80	80	80	79	79	79	955	80	80	79	80	79	80	79	79	1591	79	79	80	79	**1908**	**52872**
San Juan 10	100.00																													
Palo Seco 1	85.00	60	60	60	60	60	300	60	60	60	60	60	60	60	720	60	60	60	60	60	64	64	64	1212	61	61	61	61	**1456**	**41295**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	101	101	101	101	101	505	101	101	101	101	101	101	101	1212	101	101	101	101	101	101	101	101	2020	101	101	101	101	**2424**	**93803**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150	150	150	150	150	150	3000	150	150	150	150	**3600**	**88587**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00	260	270	255	240	240	1265	240	235	250	230	230	190	190	2830	190	195	165	150	140	20			3690					**3690**	**184190**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**651**	**660**	**646**	**630**	**631**	**3218**	**631**	**626**	**641**	**621**	**620**	**580**	**580**	**7517**	**581**	**586**	**555**	**541**	**530**	**415**	**394**	**394**	**11513**	**391**	**391**	**392**	**391**	**13078**	**472135**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	50	50	50	50	51	251	50	50	50	50	51	51	52	605	47	49	49	50	50	50	49	50	999	53	50	50	50	**1202**	**25067**
Aguirre CC Gas 1-2	50.00	30	16				46					1	30	32	109	29	30	30	36	40	48	49	50	421	52	50	50	50	**623**	**19990**
Aguirre CC Gas 1-3	50.00	22					22						31	32	85	30	42	40	40	40	33	30	31	371	32	30	30	30	**493**	**16328**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00	17	17	17	17	18	86	17	17	17	17	17	17	19	207	16	17	17	17	17	17	17	18	343					**343**	**4753**
Aguirre CC Gas 2-1	50.00	30	2				32			14	30	30	30	32	168	28	30	30	34	40	38	28	40	436	42	40	40	40	**598**	**17635**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	18					18					3	30	23	74				9	30	37	29	42	221	53	50	50	50	**424**	**16785**
Aguirre CC Gas 2-4	50.00	30	30	30	31	31	152	29	29	29	29	29	30	32	359	28	30	30	34	40	39	28	42	630	47	45	45	45	**812**	**19608**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**197**	**115**	**97**	**98**	**100**	**607**	**96**	**96**	**110**	**126**	**131**	**219**	**222**	**1607**	**178**	**198**	**196**	**220**	**257**	**262**	**230**	**273**	**3421**	**279**	**265**	**265**	**265**	**4495**	**124875**
San Juan GT 5	160.00	119	120	119	120	119	597	120	120	120	120	119	119	119	1434	120	120	119	120	119	120	120	128	2400	149	149	150	150	**2998**	**55243**
San Juan STM 5	60.00	40	40	40	39	40	199	40	40	40	39	41	41	41	481	40	39	40	41	40	41	40	41	803	45	45	44	44	**981**	**14983**
San Juan GT 6	160.00	120	119	120	120	119	598	119	119	120	120	120	120	120	1436	120	120	119	119	120	120	120	120	2394	119	119	120	120	**2872**	**9106**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**279**	**279**	**279**	**279**	**278**	**1394**	**279**	**279**	**280**	**279**	**280**	**280**	**280**	**3351**	**280**	**279**	**278**	**280**	**279**	**281**	**280**	**289**	**5597**	**313**	**313**	**314**	**314**	**6851**	**79332**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50																			8	43	54	76	181	76	77	77	52	**463**	**1905**
Cambalache 3	82.50																			12	71	76	77	236	78	78	78	78	**548**	**14983**
TOTAL CAMBALACHE G.P.																				**20**	**114**	**130**	**153**	**417**	**154**	**155**	**155**	**130**	**1011**	**16888**
Mayagüez 1	55.00																				39	45	46	130	46	46	46	31	**299**	**7037**
Mayagüez 2	55.00																													
Mayagüez 3	55.00											10	32		42						35	50	51	178	51	51	51	44	**375**	**11477**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.												**10**	**32**		**42**						**74**	**95**	**97**	**308**	**97**	**97**	**97**	**75**	**674**	**18514**
DIESEL																														

Palo Seco 1-1	21.00	20	19	19	19	19	96	19	19	19	19	19	19	19	229	19	19	19	19	19	19	19	20	382	19	19	19	19	**458**	**13444**
Palo Seco 1-2	21.00																													**3346**
Palo Seco 2-1	21.00	21	21	21	21	21	105	21	22	21	21	21	21	21	253	22	22	22	11			11	18	359	21	21	21	21	**443**	**11559**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			20	21	21	22	84	22	22	21		**149**	**3298**
Daguao 1-1	21.00																				13	18	18	49	18	18	18	2	**105**	**1908**
Daguao 1-2	21.00																				7	16	16	39	16	16	16	2	**89**	**1523**
Yabucoa 1-1	21.00																				12	18	18	48	18	18			**84**	**1705**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																					9	18	27	18	18	5		**68**	**1734**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																				9	9	18	36	18	18	18	17	**107**	**2202**
TOTAL GAS TURBINES		**41**	**40**	**40**	**40**	**40**	**201**	**40**	**41**	**40**	**40**	**40**	**40**	**40**	**482**	**41**	**41**	**41**	**30**	**39**	**81**	**121**	**148**	**1024**	**150**	**150**	**118**	**61**	**1503**	**40787**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	21	21	21	21	21	105	22	22	22	22	22	22	22	259	21	21	21	21	21	21	21	21	427	22	22	22	22	**515**	**8731**
Palo Seco MP 2	27.00	22	22	22	22	22	110	22	22	22	22	22	22	22	264	22	22	22	22	22	22	22	22	440	22	22	22	22	**528**	**8746**
Palo Seco MP 3	27.00	22	22	22	22	21	109	21	21	21	21	21	21	21	256	22	22	22	22	22	22	22	22	432	21	21	21	21	**516**	**8342**
TOTAL PALO SECO MP		**65**	**65**	**65**	**65**	**64**	**324**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**779**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**1299**	**65**	**65**	**65**	**65**	**1559**	**25819**
TOTAL DIESEL		**106**	**105**	**105**	**105**	**104**	**525**	**105**	**106**	**105**	**105**	**115**	**137**	**105**	**1303**	**106**	**106**	**106**	**95**	**124**	**334**	**411**	**463**	**3048**	**466**	**467**	**435**	**331**	**4747**	**102008**
COGENERATION																														
AES 1	227.15	230	231	229	229	225	1144	232	230	230	231	229	230	230	2756	230	230	229	229	230	230	230	229	4593	227	230	224	230	**5504**	**156464**
AES 2	227.15	177	178	177	177	177	886	179	177	176	176	175	178	175	2122	175	175	175	176	176	176	178	178	3531	178	179	179	183	**4250**	**128181**
TOTAL AES		**407**	**409**	**406**	**406**	**402**	**2030**	**411**	**407**	**406**	**407**	**404**	**408**	**405**	**4878**	**405**	**405**	**404**	**405**	**406**	**406**	**408**	**407**	**8124**	**405**	**409**	**403**	**413**	**9754**	**284645**
ECOELECTRICA		463	461	452	414	387	2177	372	372	389	399	424	307	329	4769	372	363	409	475	469	444	396	472	8169	444	404	364	399	**9780**	**287404**
TOTAL COGENERATION		**870**	**870**	**858**	**820**	**789**	**4207**	**783**	**779**	**795**	**806**	**828**	**715**	**734**	**9647**	**777**	**768**	**813**	**880**	**875**	**850**	**804**	**879**	**16293**	**849**	**813**	**767**	**812**	**19534**	**572049**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00								1	4	8	12	14	16	55	18	16	15	12	8	3			127					**127**	**3554**
San Fermín	20.00								1	5	9	9	12	13	49	17	18	16	13	9	3			125					**125**	**3289**
Horizon	10.00									3	6	7	9	9	34	8	8	10	7	4	2			73					**73**	**2150**
Oriana	45.00								2	11	24	33	41	44	155	45	44	35	13	7	6	1		306					**306**	**7675**
Coto Laurel	10.00									2	3	4	6	6	21	4	4	4	5	2	1			41					**41**	**1355**
Fonroche	40.00								2	7	9	11	18	25	72	19	23	21	13	7	5			160					**160**	**5190**
TOTAL SOLAR									**6**	**32**	**59**	**76**	**100**	**113**	**386**	**111**	**113**	**101**	**63**	**37**	**20**	**1**		**832**					**832**	**23213**
Bechara	1.00																													
Pattern Santa Isabel	75.00					12	12	25	1	2	23	33	42	64	202	66	57	64	66	66	55	48	27	651	11	11	3		**676**	**12381**
Punta Lima	26.00																													
TOTAL WIND						**12**	**12**	**25**	**1**	**2**	**23**	**33**	**42**	**64**	**202**	**66**	**57**	**64**	**66**	**66**	**55**	**48**	**27**	**651**	**11**	**11**	**3**		**676**	**12381**
LandFill Gas Fajardo	2.40	1		1		1	3		1		1		1		6	1		1		1		1		10		1	1	1	**13**	**291**
LandFill Gas Toa Baja	2.40	1		1		1	3		1		1		1		6		1		1		1		1	10	1	1	1	1	**14**	**735**
TOTAL LANDFILL GAS		**2**		**2**		**2**	**6**		**2**		**2**		**2**		**12**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**20**	**1**	**2**	**2**	**2**	**27**	**1026**
TOTAL RENEWABLE		**2**		**2**		**14**	**18**	**25**	**9**	**34**	**84**	**109**	**144**	**177**	**600**	**178**	**171**	**166**	**130**	**104**	**76**	**50**	**28**	**1503**	**12**	**13**	**5**	**2**	**1535**	**36620**
.																														
TOTAL HOURLY GENERATION (NET)		**2105**	**2029**	**1987**	**1932**	**1916**	**9969**	**1919**	**1895**	**1967**	**2023**	**2085**	**2083**	**2112**	**24053**	**2115**	**2124**	**2120**	**2156**	**2185**	**2226**	**2173**	**2338**	**41490**	**2325**	**2274**	**2190**	**2115**	**50394**	**1389705**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2338	**1895**	**2100**	**89.81%**	**81.05%**	**50394**

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PUERTO RICO ELECTRIC POWER AUTHORITY
ENERGY CONTROL CENTER

HOURLY GENERATION REPORT
Thursday, April 30, 2020

UNITS	MAXIMUM CAPACITY	HOUR																									TOTAL	MONTH
		0100	0200	0300	0400	0500		0600	0700	0800	0900	1000	1100	1200		1300	1400	1500	1600	1700	1800	1900	2000		2100	2200	2300	2400		
HYDROELECTRICS																														
Toro Negro 1-1	1.50																													
Toro Negro 1-2	1.50									1	1	1	1	1	5	1	1	2	1	2	1	2	1	16	1				**17**	**370**
Toro Negro 1-3	1.50									1	1	1	1	1	5	1	1	2	1	2	1	2	1	16	2				**18**	**363**
Toro Negro 1-4	4.00																													
Toro Negro 2-1	2.00																													
Caonillas 1-1	9.00																													
Caonillas 1-2	9.00																													
Caonillas 2-1	3.60																													
Dos Bocas 1	5.00																													
Dos Bocas 2	5.00																			5	6	6	6	23	6	6	6	3	**44**	**835**
Dos Bocas 3	5.00																			5	6	6	6	23	6	6	6	3	**44**	**841**
Yauco 1-1	25.00																													
Yauco 2-1	4.50												2	2	4	2	2	2	2	2	1	2	2	19	2	2	2	2	**27**	**419**
Yauco 2-2	4.50																													
Garzas 1-1	3.60																													**4**
Garzas 1-2	3.60																													**4**
Garzas 2-1	5.04																													
Río Blanco 1	2.50																													
Río Blanco 2	2.50																													
TOTAL HYDROELECTRICS										**2**	**2**	**2**	**4**	**4**	**14**	**4**	**4**	**6**	**4**	**16**	**15**	**18**	**16**	**97**	**17**	**14**	**14**	**8**	**150**	**2836**
THERMOELECTRICS																														
San Juan 7	100.00																													**11388**
San Juan 8	100.00																													
San Juan 9	100.00	79	79	79	80	80	397	79	79	72	72	72	72	72	915	72	72	72	72	72	72	72	71	1490	72	72	72	72	**1778**	**54650**
San Juan 10	100.00																													
Palo Seco 1	85.00	61	61	61	61	61	305	61	61	61	61	61	61	61	732	61	61	61	61	61	61	61	61	1220	61	61	61	61	**1464**	**42759**
Palo Seco 2	85.00																													
Palo Seco 3	216.00	100	100	100	100	100	500	100	100	100	100	100	100	100	1200	100	100	100	100	100	100	100	100	2000	100	100	100	100	**2400**	**96203**
Palo Seco 4	216.00	150	150	150	150	150	750	150	150	150	150	150	150	150	1800	150	150	150	150	150	150	150	150	3000	150	150	150	150	**3600**	**92187**
Costa Sur 3	85.00																													
Costa Sur 4	85.00																													
Costa Sur 5	410.00																													
Costa Sur 6	410.00																													
Aguirre 1	450.00																													**184190**
Aguirre 2	450.00																													
TOTAL THERMOELECTRICS		**390**	**390**	**390**	**391**	**391**	**1952**	**390**	**390**	**383**	**383**	**383**	**383**	**383**	**4647**	**383**	**383**	**383**	**383**	**383**	**383**	**383**	**382**	**7710**	**383**	**383**	**383**	**383**	**9242**	**481377**
COMBINED CYCLES																														
Aguirre CC Gas 1-1	50.00	50	50	50	49	49	248	49	50	50	50	50	50	50	597	50	50	50	50	50	51	51	48	997	50	50	50	50	**1197**	**26264**
Aguirre CC Gas 1-2	50.00	45	28	30	30	30	163	30	30	30	30	30	30	31	374	30	30	30	30	47	50	50	47	688	49	50	49	50	**886**	**20876**
Aguirre CC Gas 1-3	50.00	30	30	30	30	30	150	29	30	30	30	30	30	30	359	30	30	30	32	40	40	40	39	640	39	40	40	40	**799**	**17127**
Aguirre CC Gas 1-4	50.00																													**4709**
Aguirre CC STM 1	96.00	17	17	17	17	16	84	17	17	17	17	17	17	17	203	17	17	17	17	17	18	18	18	342	17	18	17	18	**412**	**5165**
Aguirre CC Gas 2-1	50.00	37	29	29	29	29	153	29	29	30	30	30	30	30	361	30	30	30	30	30	30	31	41	613	45	45	45	46	**794**	**18429**
Aguirre CC Gas 2-2	50.00																													
Aguirre CC Gas 2-3	50.00	43	29	29	29	29	159	29	29	30	30	30	30	30	367	30	30	30	30	30	30	30	50	627	50	50	50	50	**827**	**17612**
Aguirre CC Gas 2-4	50.00	43	28	29	29	29	158	29	29	29	30	30	30	30	365	30	30	30	30	36	40	40	41	642	45	45	45	46	**823**	**20431**
Aguirre CC STM 2	96.00																													
TOTAL AGUIRRE C.C.		**265**	**211**	**214**	**213**	**212**	**1115**	**212**	**214**	**216**	**217**	**217**	**217**	**218**	**2626**	**217**	**217**	**217**	**219**	**250**	**259**	**260**	**284**	**4549**	**295**	**298**	**296**	**300**	**5738**	**130613**
San Juan GT 5	160.00	149	149	149	149	120	716	119	119	119	119	119	119	119	1549	120	119	120	119	119	119	120	150	2535	149	149	150	150	**3133**	**58376**
San Juan STM 5	60.00	45	44	44	44	40	217	39	41	40	40	40	40	40	497	41	41	41	40	40	40	40	43	823	44	44	45	45	**1001**	**15984**
San Juan GT 6	160.00	120	120	120	120	119	599	120	120	119	107	99	100	100	1364	100	98	101	99	100	100	100	116	2178	119	119	120	120	**2656**	**11762**
San Juan STM 6	60.00																													
TOTAL SAN JUAN C.C.		**314**	**313**	**313**	**313**	**279**	**1532**	**278**	**280**	**278**	**266**	**258**	**259**	**259**	**3410**	**261**	**258**	**262**	**258**	**259**	**259**	**260**	**309**	**5536**	**312**	**312**	**315**	**315**	**6790**	**86122**
DIESEL																														
Cambalache 1	82.50																													
Cambalache 2	82.50	50	50	51	51	51	253	50	50	50	50	50	50	50	603	50	50	50	50	76	77	77	77	1110	76	76	76	77	**1415**	**3320**
Cambalache 3	82.50	78	78	79	79	79	393	78	78	77	76	76	75	76	929	76	75	76	76	76	77	77	77	1539	77	78	78	78	**1850**	**16833**
TOTAL CAMBALACHE G.P.		**128**	**128**	**130**	**130**	**130**	**646**	**128**	**128**	**127**	**126**	**126**	**125**	**126**	**1532**	**126**	**125**	**126**	**126**	**152**	**154**	**154**	**154**	**2649**	**153**	**154**	**154**	**155**	**3265**	**20153**
Mayagüez 1	55.00	10					10								10								40	50	46	46	46	47	**235**	**7272**
Mayagüez 2	55.00																													
Mayagüez 3	55.00	22					22								22		36	50	50	50	51	51	51	361	51	51	51	45	**559**	**12036**
Mayagüez 4	55.00																													
TOTAL MAYAGUEZ G.P.		**32**					**32**								**32**		**36**	**50**	**50**	**50**	**51**	**51**	**91**	**411**	**97**	**97**	**97**	**92**	**794**	**19308**
DIESEL																														

Palo Seco 1-1	21.00	19	19	19	19	19	95	20	19	19	19	19	19	19	229	19	19	19	19	19	19	19	19	381	19	19	19	19	**457**	**13901**
Palo Seco 1-2	21.00																													**3346**
Palo Seco 2-1	21.00	21	22	21	22	21	107	21	22	21	21	21	21	21	255	21	21	21	21	21	21	21	21	423	21	21	22	21	**508**	**12067**
Palo Seco 2-2	21.00																													
Palo Seco 3-1	21.00																													
Palo Seco 3-2	21.00																													
Costa Sur 1-1	21.00																													
Costa Sur 1-2	21.00																													
Aguirre 2-1	21.00																													
Aguirre 2-2	21.00																			20	21	21	62	22	22	22	21	**149**	**3447**
Daguao 1-1	21.00																		5	18	18	18	59	18	18	14		**109**	**2017**
Daguao 1-2	21.00																			13	16	16	45	16	16	13		**90**	**1613**
Yabucoa 1-1	21.00																			18	18	18	54	18	18	17		**107**	**1812**
Yabucoa 1-2	21.00																													**68**
Vega Baja 1-1	21.00																													
Vega Baja 1-2	21.00																					9	9	18	18	9		**54**	**1788**
Jobos 1-1	21.00																													
Jobos 1-2	21.00																				17	18	35	18	18	18	17	**106**	**2308**
TOTAL GAS TURBINES		**40**	**41**	**40**	**41**	**40**	**202**	**41**	**41**	**40**	**40**	**40**	**40**	**40**	**484**	**40**	**40**	**40**	**40**	**45**	**109**	**130**	**140**	**1068**	**150**	**150**	**134**	**78**	**1580**	**42367**
Culebra 1	2.00																													
Culebra 2	2.00																													
Culebra 3	2.00																													
Vieques 1	3.00																													
Vieques 2	3.00																													
TOTAL DIESEL GENERATORS																														
Palo Seco MP 1	27.00	21	22	22	21	22	108	22	21	22	22	21	22	22	260	21	22	22	21	22	21	21	22	432	22	21	22	22	**519**	**9250**
Palo Seco MP 2	27.00	22	21	22	22	21	108	22	22	21	22	22	21	22	260	22	21	22	22	21	22	22	21	433	22	22	21	22	**520**	**9266**
Palo Seco MP 3	27.00	22	22	21	22	22	109	21	22	22	21	22	22	21	260	22	22	21	22	22	21	22	22	434	21	22	22	21	**520**	**8862**
TOTAL PALO SECO MP		**65**	**65**	**65**	**65**	**65**	**325**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**780**	**65**	**65**	**65**	**65**	**65**	**64**	**65**	**65**	**1299**	**65**	**65**	**65**	**65**	**1559**	**27378**
TOTAL DIESEL		**265**	**234**	**235**	**236**	**235**	**1205**	**234**	**234**	**232**	**231**	**231**	**230**	**231**	**2828**	**231**	**266**	**281**	**281**	**312**	**378**	**400**	**450**	**5427**	**465**	**466**	**450**	**390**	**7198**	**109206**
COGENERATION																														
AES 1	227.15	230	230	229	230	230	1149	230	230	230	229	229	229	229	2755	228	228	228	228	227	228	228	228	4578	228	228	228	228	**5490**	**161954**
AES 2	227.15	180	178	180	180	180	898	180	180	180	180	180	177	177	2152	180	180	180	180	180	180	180	180	3592	180	180	180	180	**4312**	**132493**
TOTAL AES		**410**	**408**	**409**	**410**	**410**	**2047**	**410**	**410**	**410**	**409**	**409**	**406**	**406**	**4907**	**408**	**408**	**408**	**408**	**407**	**408**	**408**	**408**	**8170**	**408**	**408**	**408**	**408**	**9802**	**294447**
ECOELECTRICA		401	393	335	287	295	1711	313	297	350	398	403	383	423	4278	444	463	464	479	480	406	387	453	7854	410	399	365	365	**9393**	**296797**
TOTAL COGENERATION		**811**	**801**	**744**	**697**	**705**	**3758**	**723**	**707**	**760**	**807**	**812**	**789**	**829**	**9185**	**852**	**871**	**872**	**887**	**887**	**814**	**795**	**861**	**16024**	**818**	**807**	**773**	**773**	**19195**	**591244**
RENEWABLE SYSTEMS																														
WindMar Martino	2.10																													
AES Ilumina	20.00									3	5	11	12	14	45	17	16	12	11	7	3			111					**111**	**3665**
San Fermín	20.00								1	4	5	6	13	11	40	7	5	6	9	2	1			70					**70**	**3359**
Horizon	10.00									3	5	8	8	9	33	9	9	8	8	4	2			73					**73**	**2223**
Oriana	45.00								2	7	21	34	35	25	124	43	32	23	13	5	3	1		244					**244**	**7919**
Coto Laurel	10.00								1	2	3	4	5	7	22	7	7	6	6	3	1			52					**52**	**1407**
Fonroche	40.00								3	6	11	17	23	24	84	18	20	19	14	6	3	1		165					**165**	**5355**
TOTAL SOLAR									**7**	**25**	**50**	**80**	**96**	**90**	**348**	**101**	**89**	**74**	**61**	**27**	**13**	**2**		**715**					**715**	**23928**
Bechara	1.00																													
Pattern Santa Isabel	75.00		1	3	4	2	10	4	6	10	28	35	53	62	208	59	53	47	45	34	36	28	17	527	9	8	14	5	**563**	**12944**
Punta Lima	26.00																													
TOTAL WIND			**1**	**3**	**4**	**2**	**10**	**4**	**6**	**10**	**28**	**35**	**53**	**62**	**208**	**59**	**53**	**47**	**45**	**34**	**36**	**28**	**17**	**527**	**9**	**8**	**14**	**5**	**563**	**12944**
LandFill Gas Fajardo	2.40	1		1		1	3	1		1		1		1	7		1		1		1		1	11		1		1	**13**	**304**
LandFill Gas Toa Baja	2.40	1		1		1	3	1		1		1		1	7	1		1	1		1		1	12		1		1	**14**	**749**
TOTAL LANDFILL GAS		**2**		**2**		**2**	**6**	**2**		**2**		**2**		**2**	**14**	**1**	**1**	**1**	**2**		**2**		**2**	**23**		**2**		**2**	**27**	**1053**
TOTAL RENEWABLE		**2**	**1**	**5**	**4**	**4**	**16**	**6**	**13**	**37**	**78**	**117**	**149**	**154**	**570**	**161**	**143**	**122**	**108**	**61**	**51**	**30**	**19**	**1265**	**9**	**10**	**14**	**7**	**1305**	**37925**
.																														
TOTAL HOURLY GENERATION (NET)		**2047**	**1950**	**1901**	**1854**	**1826**	**9578**	**1843**	**1838**	**1908**	**1984**	**2020**	**2031**	**2078**	**23280**	**2109**	**2142**	**2143**	**2140**	**2168**	**2159**	**2146**	**2321**	**40608**	**2299**	**2290**	**2245**	**2176**	**49618**	**1439323**

PEAK	MINIMUM	AVERAGE	AVERAGE PEAK	MINIMUM PEAK	TOTAL
2321	**1826**	**2067**	**89.07%**	**78.67%**	**49618**

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