

Monthly Generation Performance Report
October 2025

### Introduction

This report oversees Puerto Rico's electrical system overall performance; from system level to unit's level. System level measures shown are generation, availability and reserves level. Additionally, a summary of load shed events occurred in the last 12 months prior to this report's month. At plant and unit level, it oversees generation, availability, heat rate, and outage hours (planned, maintenance and forced). Finally, in terms of economics, fuel and variable costs are shown.

As part of the Transmission and Distribution System Operation and Maintenance Agreement (OMA), LUMA serves as both the operator of the electric grid and as the island's System Operator.

As the Operator of the electric grid, LUMA oversees and maintains the transmission and distribution system that is critical to delivering energy to over 1.5 million Puerto Rican customers.

As the System Operator, LUMA monitors the performance of Genera PR and other private generators' generation units, implements dispatch of available units, and plans and maintains adequate generation reserve levels to meet customer's energy demands.

While LUMA does not generate energy, LUMA's responsibility as the System Operator includes measuring the performance of the island's generation fleet. This report summarizes generation performance, identifies trends, compares facility performance, and provides a high-level picture of the entire generation portfolio.



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### **About This Report**

Glossary of Terms



## **Executive Summary**

### October 2025 performance

### **Electric System Overview**

#### Units offline:

- AES 1 (227 MW): unit entered in planned outage on October 5, 2025, expected to return on November 2, 2025.
- San Juan 5 CC (220 MW): planned outage was scheduled to start on October 4, 2025, but got deferred for November 15, 2025.
- EcoEléctrica CT 1 unit (175 MW): planned outage was scheduled to start on October 24, 2025, but got deferred for November 1, 2025.
- San Juan 6 CC STM unit (60 MW): expected date of return was moved from <u>January 30, 2026</u>, to <u>February 16, 2026</u>.
- San Juan 7 (100 MW): expected date of return is February 16, 2026.
- Aguirre 1 (450 MW): expected date of return was moved from <u>June 30, 2026</u>, to <u>December 1, 2026</u>.

#### Peak demand and Reserves:

- The maximum peak demand was approximately 2,979 MW.
- Hourly reserves levels averaged 767 MW, with 334 hours of the month having less than 750 MW of reserves (~45% of the time).
- Forecast average reserves for November 2025 is **995 MW**, higher than November 2024 actual average reserves with **966 MW**.

#### Load Shed Events: 4 total

- 3 Under-Frequency Load Sheds due to generation unit trips.
- 1 Manual Load Shed due to generation shortfall event.

### Weighted system availability rate was 55%

- Genera 50%
- AES 46%
- EcoEléctrica –100%



# **Operations**

**System-Level Performance** 



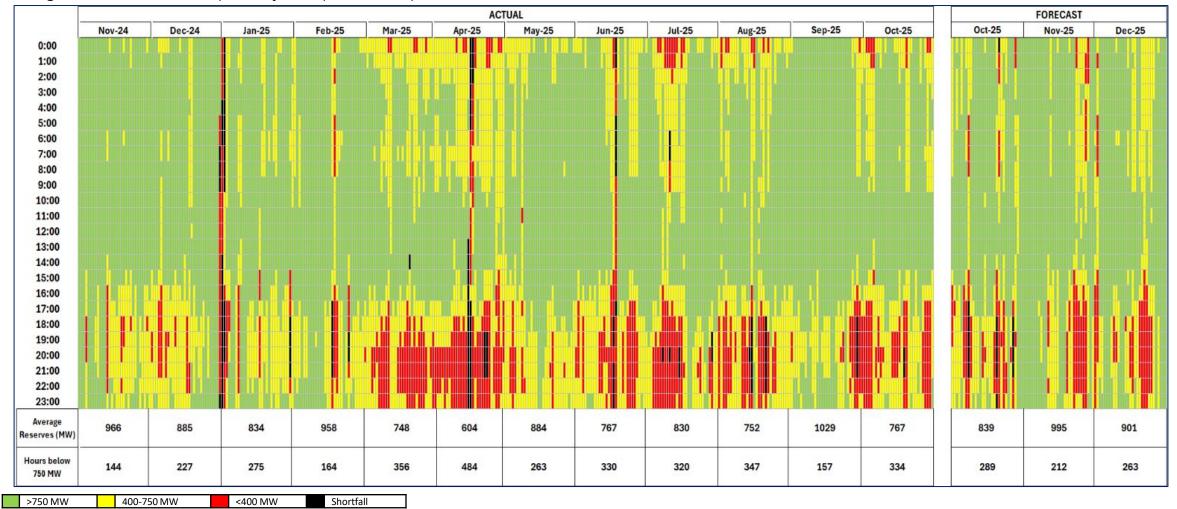
## **System Reserves**

Actual reserves timeframe: November 2024 – October 2025

Forecasted reserves timeframe: October 2025 – December 2025

System Reserves is the amount of generating capacity available to meet peak or abnormally high demands for power and to generate power during scheduled or unscheduled outages.

Target: ▲ Reserves >750MW per the System Operation Principles

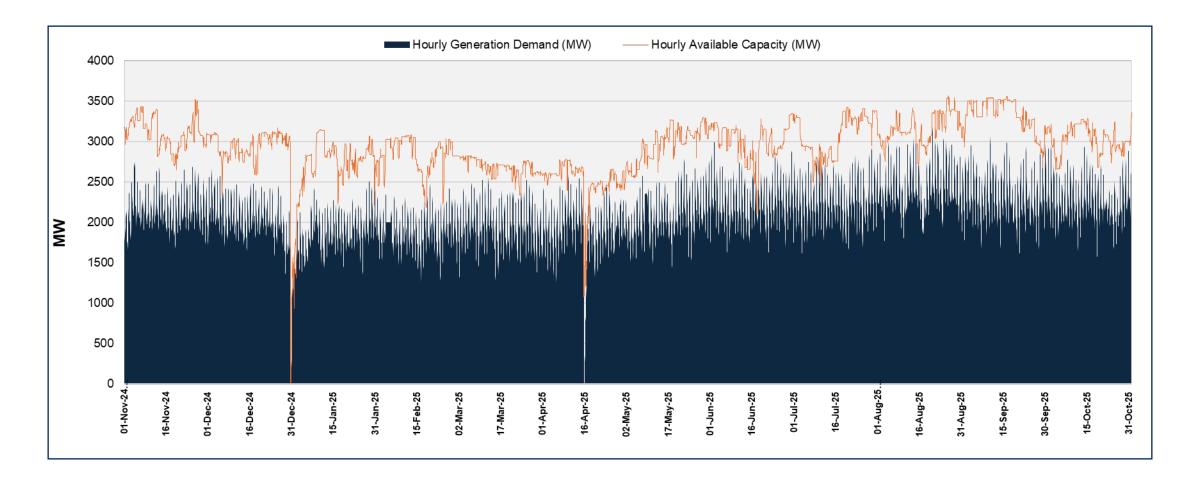


<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

## **System Availability**

The System Availability is the maximum expected output that generating units can supply to system load, adjusted for scheduled or unscheduled outages. In this graph, the availability is being compared with the total generation required to meet demand to visualize the gap between the two lines (the gap represents the reserves level).

Target: A bigger gap between availability and generation demand means a better chance of recovery in emergency events due to adequate reserves.

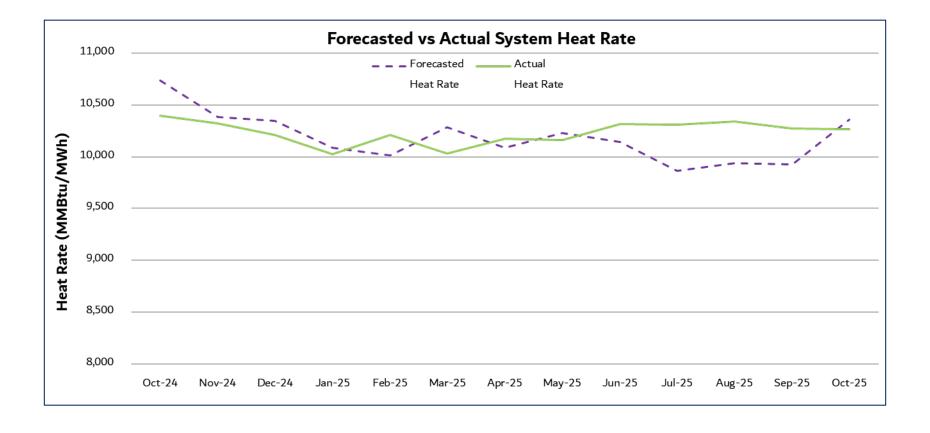


<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

## **System Heat Rate**

The System Heat Rate measures the efficiency of the system to convert fuel into electricity. System Heat Rate will vary depending on the available generation units and required resources to satisfy electrical demand. It is calculated as energy consumed (MMBtu) / energy produced (MWh). The forecasted Heat Rate is determined by the last forecast calculated for the Fuel Clause Adjustment Factor.

Target: ▼ Lower heat rates represent higher efficiency.

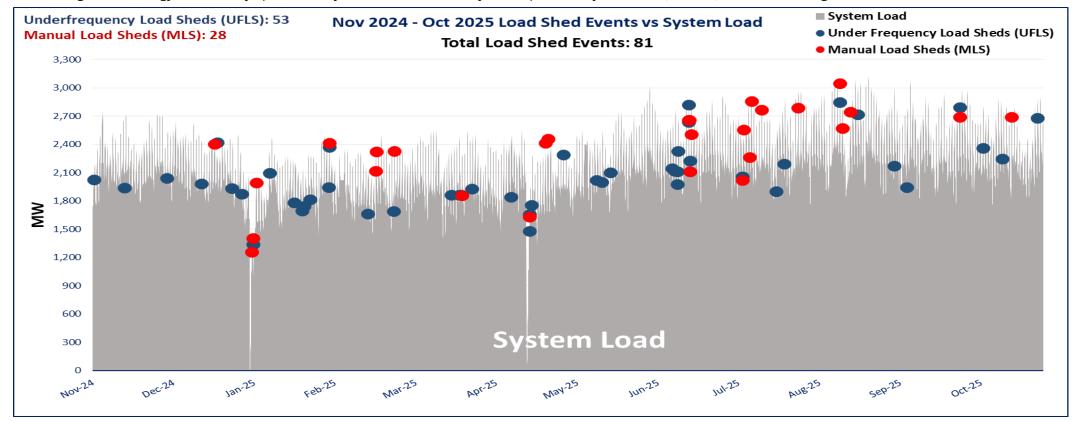


<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

## **Load Shed Events**

Load shed events can occur due to unexpected generation unit losses (Unit Performance Load Shed Events). Also, when the demand for electricity exceeds available supply levels, LUMA, as the system operator and in compliance with its responsibilities under the T&D OMA, implements load shedding to stabilize the electric system and prevent larger and longer outages (Generation Shortfall Events).

LUMA does not generate energy and can only operate the system with the electricity that is provided by Genera PR, PREPA, and other island generators.



MTD (October 1, 2025 – October 31, 2025)	Total Events	Average Customers Affected	Average Duration (min)
Generation Shortfall Events	1	26,339	147
Unit Performance Load Shed Events	3	81,107	22

Rolling 12 Months	Total	Average	Average
(November 1, 2024 – October 31, 2025)	Events	<b>Customers Affected</b>	<b>Duration (min)</b>
Generation Shortfall Events	28	75,521	162
Unit Performance Load Shed Events	53	164,781	23

<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

# **Operations**

**Plant/Units-Level Performance** 



# **Available Capacity – Baseload Units**

Available Capacity is the maximum output that a unit can generate at any given time. The Availability Rate indicates the percent of available capacity out of the total nameplate capacity. Variables in the chart below are shown in MW (gross) representing an average over the month.

Target: A higher availability indicates the plant is able to produce power closer to its nameplate capacity.

	Availa	able Capacity (MW) and Availability Rate (AR)		Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25
AES	510 255		Cap	353	484	294	325	498	391	453	456	409	436	451	232
Nameplate Capacity: 508 MW	°	N D J F M A M J J A S O	AR (%)	69%	95%	58%	64%	98%	77%	89%	90%	81%	86%	89%	46%
EcoEléctrica	566 283		Cap	566	556	542	531	566	558	566	496	566	566	566	566
Nameplate Capacity: 566 MW	۰	N D J F M A M J J A S O	AR (%)	100%	98%	96%	94%	100%	99%	100%	88%	100%	100%	100%	100%
Aguirre	900 450		Cap	220	0	99	131	0	0	0	71	271	243	335	281
Nameplate Capacity: 900 MW	0	N D J F M A M J J A S O	AR (%)	24%	0%	11%	15%	0%	0%	0%	8%	30%	27%	37%	31%
Costa Sur	820 410		Cap	574	525	555	550	351	334	625	571	548	683	512	635
Nameplate Capacity: 820 MW	0	N D J F M A M J J A S O	AR (%)	70%	64%	68%	67%	43%	41%	76%	70%	67%	83%	62%	77%
Palo Seco	432 216	<b>*</b>	Cap	146	162	174	176	149	135	167	117	124	126	123	230
Nameplate Capacity: 432 MW	0		AR (%)	34%	37%	40%	41%	34%	31%	39%	27%	29%	29%	28%	53%
San Juan	740 370	A N	Cap	254	205	204	283	295	290	331	444	391	340	394	392
Nameplate Capacity: 740 MW	۰		AR (%)	34%	28%	28%	38%	40%	39%	45%	60%	53%	46%	53%	53%
Total Baseloads	3970 1985	- -	Cap	2113	1931	1868	1996	1859	1709	2140	2155	2309	2394	2381	2336
Nameplate Capacity: 3966 MW	(	N D J F M A M J J A S O	AR (%)	53%	49%	47%	50%	47%	43%	54%	54%	58%	60%	60%	59%

<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

# **Available Capacity – Peaker Units**

Available Capacity is the maximum output that a unit can generate at any given time. The Availability Rate indicates the percent of available capacity out of the total nameplate capacity. Variables in the chart below are shown in MW (gross) representing an average over the month.

Target: A higher availability indicates the plant is able to produce power closer to its nameplate capacity.

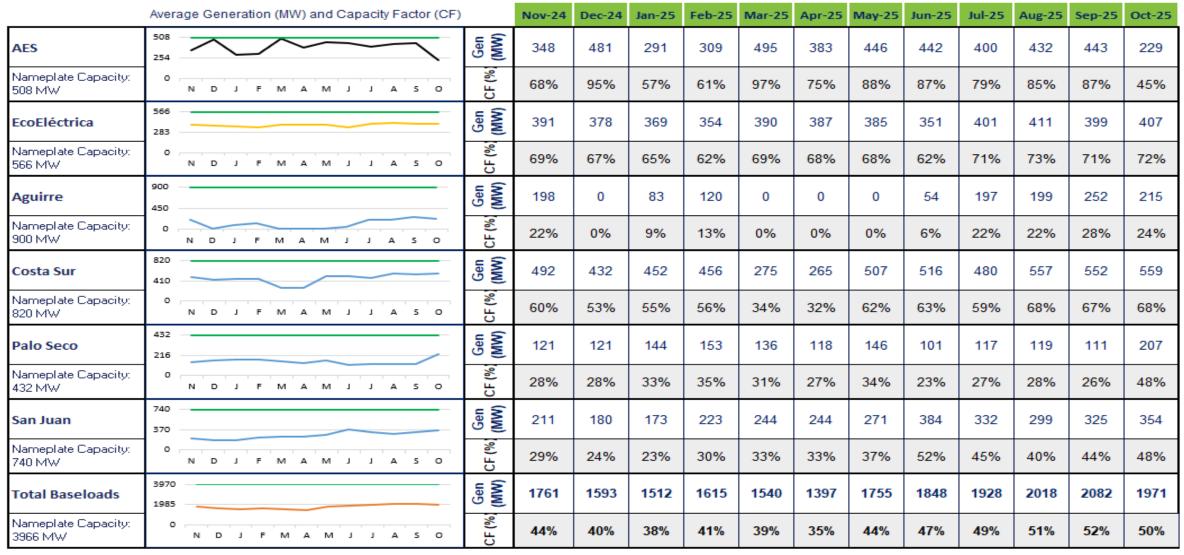
Availa	ble Capacity (MW) and Availability Rate (AR)	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25
Aguirre Combined Cycle	592 296	239	246	112	148	129	147	243	297	278	235	248	218
Nameplate Capacity: 592 MW	O N D J F M A M J J A S O	40%	42%	19%	25%	22%	25%	41%	50%	47%	40%	42%	37%
Cambalache	170	106	149	159	154	155	151	97	78	76	77	77	76
Nameplate Capacity: 165 MW	N D J F M A M J J A S O	64%	91%	96%	93%	94%	91%	59%	47%	46%	47%	47%	46%
Mayagüez	220	143	138	138	104	94	95	95	71	46	45	47	46
Nameplate Capacity: 220 MW	N D J F M A M J J A S O	65%	63%	63%	47%	43%	43%	43%	32%	21%	21%	21%	21%
Palo Seco Mobile- Packs	82 41	74	78	50	66	79	60	33	77	78	77	78	79
Nameplate Capacity: 81 MW	N D J F M A M J J A S O	92%	96%	62%	81%	97%	74%	41%	95%	96%	96%	96%	97%
Palo Seco TMs	90 AS	90	83	90	81	86	78	89	68	62	57	47	43
Nameplate Capacity: 90 MW	N D J F M A M J J A S O	60%	93%	100%	90%	95%	87%	99%	76%	69%	63%	52%	48%
San Juan TMs	250	221	200	167	183	185	182	177	168	143	174	178	131
Nameplate Capacity: 250 MW	N D J F M A M J J A S O	88%	80%	67%	73%	74%	73%	71%	67%	57%	70%	71%	52%
Frame 5's Peakers	75	126	117	116	112	106	90	79	81	84	79	81	81
Nameplate Capacity: 147 MW	SAR O S A L L M A M 3 L D N	86%	80%	79%	76%	72%	61%	54%	55%	57%	54%	55%	55%
Total Peakers	775 Z	999	1013	833	846	834	803	815	839	768	745	756	674
Nameplate Capacity: 1545 MW	N D J F M A M J J A S O	65%	66%	54%	55%	54%	52%	53%	54%	50%	48%	49%	44%

<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

## **Generation and Capacity Factor – Baseload Units**

Generation indicates the average amount of energy each plant produced per month, in MW (gross). The Capacity Factor measures what percentage of the nameplate capacity was used to produce energy during that time period.

Target: A Higher Capacity Factor, and a Generation closer to the nameplate capacity will represent a better utilization of the units.

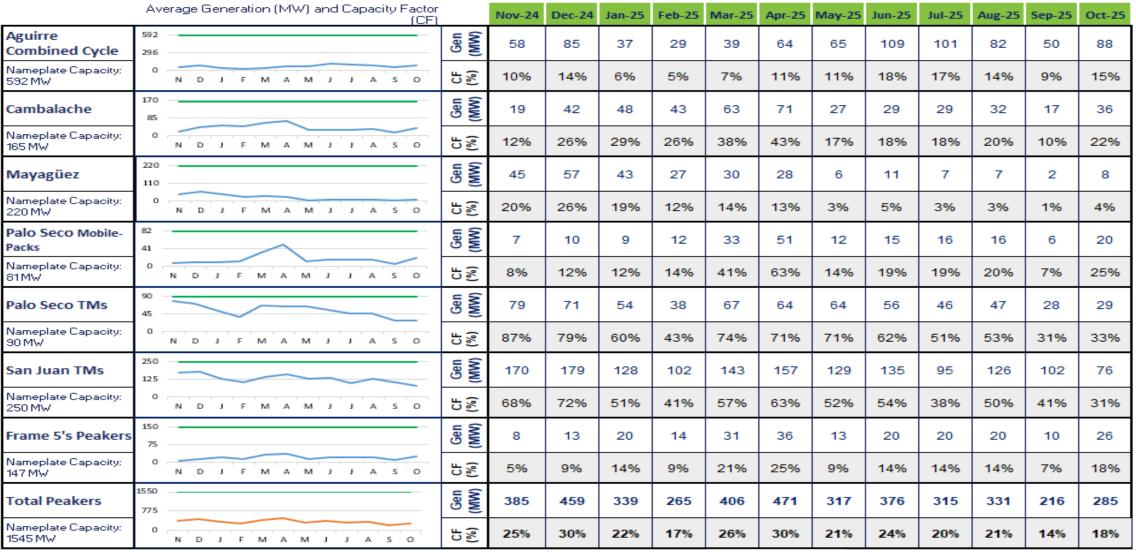


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## **Heat Rate - Baseload Units**

Heat Rate measures the efficiency of a power plant to convert fuel into electricity. It is calculated as energy consumed (MMBtu) / energy produced (MWh).

Target: ▼ Lower heat rates represent higher efficiency.

		Heat Rate (MMBtu/MWh)	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25
AES	6,000	D J F M A M J J A S O	10,620	10,620	10,620	10,620	10,620	10,620	10,620	10,620	10,620	10,620	10,620	10,620
EcoElectrica	12,000 6,000 0 N	D J F M A M J J A S O	7,881	7,881	7,881	7,881	7,881	7,881	7,881	7,881	7,881	7,881	7,881	7,881
Aguirre	12,000 6,000 0 N	D J F M A M J J A S O	10,813	1	12,429	11,314	ı	ı	ı	11,488	10,718	11,107	10,762	10,813
Costa Sur	6,000 — 0 —	D J F M A M J J A S O	11,075	11,052	11,185	10,951	10,827	10,892	10,489	10,449	10,793	10,762	10,792	10,701
Palo Seco	6,000 — 0 —	D J F M A M J J A S O	9,669	9,817	11,181	9,321	9,376	9,534	9,437	9,718	9,800	9,998	10,284	10,201
San Juan	12,000 — 6,000 — 0 — N	D J F M A M J J A S O	9,486	8,166	8,916	9,108	8,859	8,799	9,275	9,585	9,501	9,410	9,515	9,299
Total Baseloads	6,000 — 0 —	D J F M A M J J A S O	9,807	9,711	9,988	9,643	9,407	9,329	9,533	9,680	9,736	9,812	9,846	9,723

<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

### **Heat Rate – Peaker Units**

Heat Rate measures the efficiency of a power plant to convert fuel into electricity. It is calculated as energy consumed (MMBtu) / energy produced (MWh).

Target: ▼ Lower heat rates represent higher efficiency.



<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

# Planned Outage Hours – Baseload Units

Planned Outage Hours represents the shutdown of a generating unit or facility for inspection or maintenance, in accordance with an advance schedule, represented in hours per unit. This scoreboard compares the scheduled outage hours (shown in color blue) with the actual duration of the outage (shown in color orange).

Target: ▼A smaller gap between actuals and planned hours represents a more accurate planification.

	Planned Outage Hours and Rate	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25
AES	50% - de	0	0	264	399	0	0	0	0	0	0	0	648
ALS	0% N D J F M A M J J A S O Completed — Planned	0	0	0	672	0	0	0	0	0	0	0	672
EcoElectrica	100%	0	0	0	0	0	0	0	0	0	0	0	0
EcoElectrica	N D J F M A M J J A S O Completed — Planned	0	0	0	0	0	0	0	0	0	0	0	168
	100% 50%	0	0	0	0	0	0	0	0	0	0	0	0
Aguirre	N D J F M A M J J A S O Completed — Planned	0	0	0	192	744	720	480	0	0	0	0	0
	100% 50%	0	0	0	0	0	0	0	0	0	0	0	0
Costa Sur	0% N D J F M A M J J A S O Completed — Planned	0	0	480	624	0	0	0	0	0	0	0	0
Pala Casa	100%	0	0	0	0	0	0	0	0	0	0	0	0
Palo Seco	N D J F M A M J J A S O Completed — Planned	0	0	0	0	0	0	0	0	0	0	0	0
San Ivas	100% 50%	25	786	523	0	0	0	0	0	0	0	0	0
San Juan	0% N D J F M A M J J A S O Completed — Planned	48	696	0	0	0	0	0	0	0	0	0	1392
Total	100% - G G G G G G G G G G G G G G G G G G	25	786	787	399	0	0	0	0	0	0	0	648
Baseloads	N D J F M A M J J A S O Completed — Planned	48	696	480	1488	744	720	480	0	0	0	0	2232

<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

## Forced Outage Hours and Rate – Baseload Units

Forced Outage Hours represent the shutdown of a generating unit or facility for emergency reasons or a condition in which the generating equipment is unavailable for load due to an unanticipated breakdown; represented in hours per unit. The Forced Outage Rate represents the percentage of time the unit was in a Forced Outage condition out of the total time the unit was expected to be available.

Target: Less forced outage hours and a smaller outage rate represents more available capacity in the system to meet demand.

	Forced Outage Hours and Outage Rate		Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25
AES	100%	%	24%	0%	23%	0%	0%	18%	2%	1%	9%	3%	0%	14%
7,25	0% N D J F M A M J J A S O	Hrs	346	0	287	0	3	263	26	19	137	47	0	121
EcoElectrica	50%	%	0%	2%	21%	2%	0%	4%	0%	8%	0%	0%	0%	0%
	0% N D J F M A M J J A S O	Hrs	0	55	465	48	0	80	0	174	0	0	0	0
Aguirre	100% 50%	%	60%	100%	76%	75%	100%	100%	100%	89%	61%	58%	50%	59%
	0% N D J F M A M J J A S O	Hrs	857	1487	1127	1009	1487	1439	1487	1277	904	860	723	879
Costa Sur	100%	%	0%	15%	5%	4%	52%	52%	4%	3%	8%	7%	5%	5%
	0% N D J F M A M J J A S O	Hrs	0	216	71	51	743	745	54	44	119	97	65	74
Palo Seco	100% — 50% —	%	51%	60%	51%	50%	56%	62%	50%	55%	50%	50%	43%	15%
	0% NDJFMAMJJASO	Hrs	739	891	756	672	831	891	743	787	748	744	626	227
San Juan	100% 50%	%	77%	86%	70%	63%	49%	60%	60%	43%	45%	51%	45%	47%
	0% NDJFMAMJJASO	Hrs	3825	3794	3258	2906	2467	2992	3086	2176	2336	2630	2248	2438
Total Baseload	100%	%	45%	51%	48%	40%	42%	50%	40%	35%	32%	33%	28%	29%
	N D J F M A M J J A S O	Hrs	5767	6444	5963	4686	5531	6411	5396	4478	4243	4378	3662	3739

<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

## Forced Outage Hours and Rate – Peaker Units

Forced Outage Hours represent the shutdown of a generating unit or facility for emergency reasons or a condition in which the generating equipment is unavailable for load due to an unanticipated breakdown; represented in hours per unit. The Forced Outage Rate represents the percentage of time the unit was in a Forced Outage condition out of the total time the unit was expected to be available.

Target: Less forced outage hours and a smaller outage rate represents more available capacity in the system to meet demand.

	Forced Outage Hours and Outage Rate	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25
Aguirre	100%	45%	46%	77%	70%	74%	71%	49%	40%	44%	53%	50%	56%
Combined Cycle	0% N D J F M A M J J A S O	3225	3446	5756	4737	5527	5088	3654	2912	3289	3912	3577	4134
Cambalache	100%	29%	0%	1%	1%	1%	3%	27%	50%	50%	50%	50%	51%
Callibalacile	0% N D J F M A M J J A S O	424	6	9	12	9	50	398	720	749	744	720	755
Mayaguez	100% 50%		3%	4%	18%	27%	26%	27%	42%	51%	52%	50%	51%
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	N D J F M A M J J A S O	82	101	116	476	806	754	802	1199	1516	1537	1441	1513
Palo Seco	100% 50%	0%	2%	33%	16%	0%	21%	55%	2%	0%	2%	1%	0%
Mobile-Packs	N D J F M A M J J A S O	2	35	735	326	1	455	1224	35	0	46	28	1
Palo Seco TMs	100%	1%	9%	3%	13%	7%	15%	4%	25%	33%	36%	48%	50%
	N D J F M A M J J A S O	25	273	77	336	223	437	114	722	969	1072	1380	1488
San Juan TMs	100% %	12%	19%	33%	27%	25%	27%	32%	33%	41%	29%	28%	44%
	NDJFMAMJJASO	828	1437	2468	1820	1874	1972	2382	2362	3027	2166	1989	3243
Frame 5's	100% %	16%	6%	10%	15%	18%	30%	40%	37%	35%	37%	30%	31%
Peakers	N D J F M A M J J A S O	792	331	511	709	916	1517	2083	1887	1836	1915	1502	1610
Total Peakers	100% %	19%	19%	33%	31%	31%	36%	36%	34%	38%	38%	37%	43%
	N D J F M A M J J A S O	5378	5629	9672	8416	9356	10273	10657	9837	11386	11392	10637	12744

<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

# **Renewables Capacity Factor – Solar**

The Capacity Factor measures the actual production of electricity over the theoretical maximum output (nameplate capacity). For Renewable projects, the Capacity Factor is expected to be lower than thermal resources due to the solar and wind cycles.

Target: ▲ A higher Capacity Factor represents a better utilization of the maximum capacity the project is able to produce.

		Average Production (MW) and Capacity Factor		Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25
AES Ilumina	20 10		Gen (MW)	3.0	3.0	3.4	3.7	3.9	3.7	3.7	3.6	3.8	3.6	3.4	2.9
Nameplate Capacity: 20 MW	0	N D J F M A M J J A S O	P (%)	15%	15%	17%	19%	20%	18%	19%	18%	19%	18%	17%	15%
Windmar Cantera Martinó	2.2		Gen (MW)	0.3	0.2	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.4	0.5
Nameplate Capacity: 2.1 MW	0.0	N D J F M A M J J A S O	P %	13%	9%	18%	25%	25%	25%	24%	26%	26%	25%	20%	22%
San Fermín	20 10		Gen (MW)	1.0	1.1	1.2	1.0	1.1	1.1	1.0	1.2	1.2	1.1	1.0	0.9
Nameplate Capacity: 20 MW	0	N D J F M A M J J A S O	P (%)	5%	5%	6%	5%	6%	5%	5%	6%	6%	6%	5%	5%
Horizon Energy	10 5		Gen (MW)	2.3	2.2	2.5	2.7	2.8	2.4	2.8	2.7	2.8	2.8	2.7	2.3
Nameplate Capacity: 10 MW	0	N D J F M A M J J A S O	P (%)	23%	22%	25%	27%	28%	24%	28%	27%	28%	28%	27%	23%
Oriana Energy	46 23		Gen (MW)	7.7	8.2	8.7	9.9	10.9	10.8	11.1	10.2	11.6	10.4	9.3	8.7
Nameplate Capacity: 45 MW	0	N D J F M A M J J A S O	R)(%)	17%	18%	19%	22%	24%	24%	25%	23%	26%	23%	21%	19%
Windmar Coto Laurel	10 5		Gen (MW)	1.7	1.6	1.8	2.0	2.1	1.9	1.8	1.9	1.9	1.9	1.6	1.4
Nameplate Capacity: 10 MW	0	N D J F M A M J J A S O	P (%)	17%	16%	18%	20%	21%	19%	18%	19%	19%	19%	16%	14%
Fonroche Humacao	40 20		Gen (MW)	5.6	6.2	7.1	8.4	9.5	9.0	9.2	10.0	10.0	9.8	9.2	7.8
Nameplate Capacity: 40 MW	0	N D J F M A M J J A S O	R)	14%	16%	18%	21%	24%	23%	23%	25%	25%	25%	23%	19%
Total Solar	150 75		Gen (MW)	21.7	22.6	25.1	28.3	30.9	29.4	30.0	30.1	31.8	30.2	27.5	24.5
Nameplate Capacity: 147.1 MW	0	N D J F M A M J J A S O	S (%)	15%	15%	17%	19%	21%	20%	20%	20%	22%	21%	19%	17%

<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

## Renewables Capacity Factor – Wind and Landfill

The Capacity Factor measures the actual production of electricity over the theoretical maximum output (nameplate capacity). For Renewable projects, the Capacity Factor is expected to be lower than thermal resources due to the solar and wind cycles.

Target: ▲ A higher Capacity Factor represents a better utilization of the maximum capacity the project is able to produce.



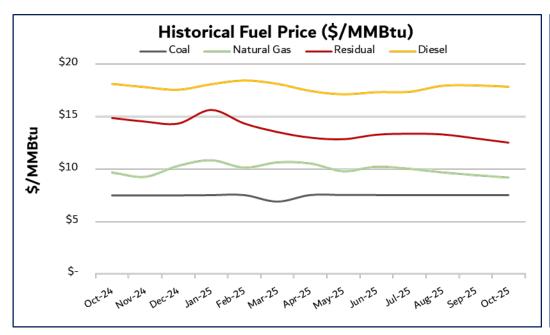
<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

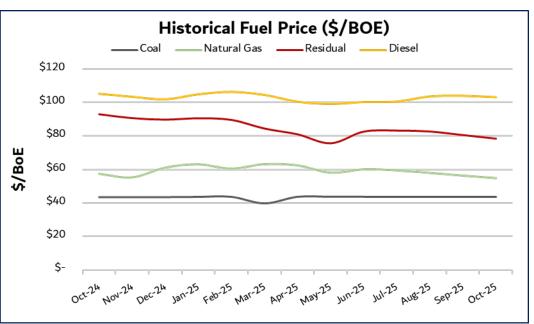
# **Economics**



### **Fuel Prices**

Fuel Price shows the prices paid for fuel used by PREPA and private generators, both in terms of MMBtus and Barrel of Oil Equivalent (BOE). The Fuel Price is divided by Fuel Type to better illustrate the contribution to the total Fuel Price for the month.



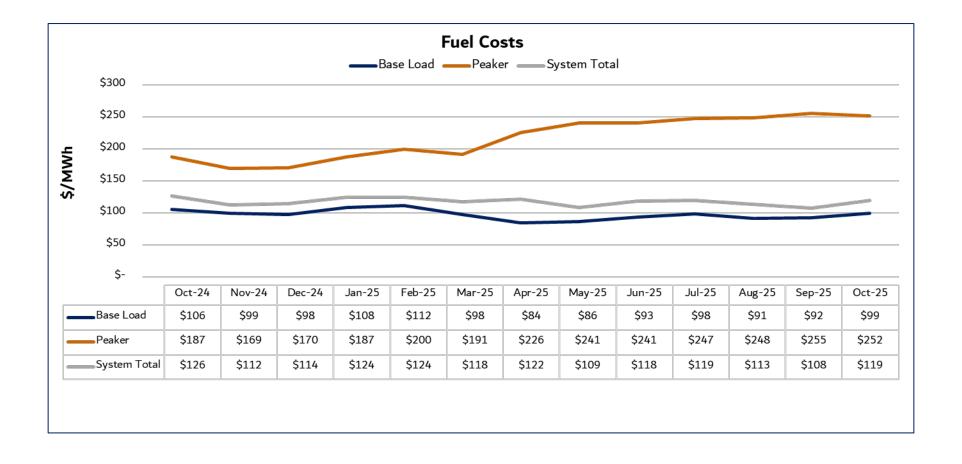


\$/MMBtu	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	June-25	July-25	Aug-25	Sep-25	Oct-25
Diesel	18.09	17.78	17.53	18.06	18.41	18.09	17.42	17.10	17.31	17.34	17.91	17.94	17.82
Residual	14.83	14.49	14.30	15.60	14.32	13.50	12.97	12.82	13.25	13.35	13.28	12.90	12.50
Natural Gas	9.66	9.25	10.31	10.86	10.14	10.65	10.54	9.79	10.23	10.02	9.68	9.41	9.17
Coal	7.49	7.49	7.49	7.52	7.52	6.87	7.53	7.53	7.53	7.51	7.51	7.51	7.52
\$/BOE													
Diesel	105.02	103.26	101.76	104.72	106.14	104.34	100.32	99.98	100.16	100.38	103.47	103.83	102.97
Residual	92.79	90.55	89.65	90.45	89.50	84.43	81.06	75.80	82.65	83.24	82.69	80.60	78.51
Natural Gas	57.58	55.49	61.29	63.23	60.68	63.34	62.6	58.25	60.25	59.64	58.13	56.51	55.01
Coal	43.45	43.45	43.45	43.60	43.63	39.83	43.67	43.66	43.65	43.56	43.57	43.59	43.6

<sup>\*</sup>Refer to Glossary of Terms on page 26 for a list of definitions and formulas.

## **Variable Production Costs**

Variable Production Costs are predominantly fuel costs and reflect the cost to produce one MWh of energy. In the graph, the cost is shown separately for Baseload units and Peaker units. The weighted average cost indicates the cost per MWh of energy produced for the System Portfolio.



# **Appendix**



# **Glossary of Terms**

Term	Definition	Formula
Heat Rate	Measures the efficiency of a power plant to convert fuel into electricity. It is the amount of energy used by a power plant to generate one kilowatt-hour (kWh) of electricity. The more efficient the generator is, the lower the heat rate.	MMBtu consumption by all units in the station during a specific period / MWh produced by the same units in the same period
Reserves	Amount of generating capacity available to meet peak or abnormally high demands for power and to generate power during scheduled or unscheduled outages.	Available Capacity (MW) during the reported period minus the Actual Generation (MW) during the same period
Available Capacity	The maximum output, commonly expressed in megawatts (MW), that generating equipment can supply to system load, adjusted for scheduled or unscheduled outages.	N/A – value is provided for each unit
Availability Rate	The ratio of the maximum output that can be supplied to system load for the period of time considered to the nameplate capacity.	Average available capacity for a specific period (MW) / nameplate capacity
Production	The amount of electric energy produced.	N/A – value is provided for each unit
Capacity Factor	The ratio of the electrical energy produced by a generating unit for the period of time considered to the nameplate capacity.	The average energy produced by all units in the plant during a specific period (MWh) / Nameplate capacity for the plant
Planned Outage Hours	The shutdown of a generating unit or facility for inspection or maintenance, in accordance with an advance schedule; represented in hours per unit (Equivalent Planned Outage Hours).  Planned Hours – hours provided in the Generation Outage Schedule for the following 90-day outlook.  Actual Hours – number of hours a unit was out of service due to a planned outage.	N/A – values is provided for each unit
Maintenance Outage Hours	The shutdown of a generating unit or facility for nonemergency reasons or conditions which need repair outside of the advance schedule; represented in hours per unit.	N/A – value is provided for each unit
Forced Outage Hours	The shutdown of a generating unit or facility for emergency reasons or a condition in which the generating equipment is unavailable for load due to unanticipated breakdown; represented in hours per unit.	N/A – value is provided for each unit
Forced Outage Rate	The ratio of the forced outages hours to the hours the unit was anticipated to be available for the reporting period.	Forced Outage Hours / Period Hours (excluding planned and unplanned outage hours)
Nameplate Capacity	The maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer.	N/A – value is provided for each unit
Generation Shortfall Events	An event in which customer demand for electricity is unable to be met due to lack of Available Capacity, leading to customers being manually disconnected from the grid.	N/A – Value is all events which occur in a specified time frame
Unit Performance Load Shed Events	An event in which a generating unit has an unanticipated breakdown and causes customers to be automatically disconnected from the grid to prevent potential damage to the system.	N/A – Value is all events which occur in a specified time frame