



Monthly Generation Performance Report

January 2023

Introduction

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 the Puerto Rico Electric Power Authority (PREPA) 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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Executive Summary – January Performance

Overview

The demand is expected to remain low during the month of February and demand is expected to be supplied. Planned maintenance of generating units are ongoing.

Major Events

During January, the electric system experienced 1 generation event that caused underfrequency load shed to prevent a frequency decay.

System Reserves

In January, the hourly reserve levels averaged 1063 MW, with 56 hours during the month having less than 750 MW in reserves (equal to 7.5% of the time.)

The forecast for February 2023 shows lower reserve levels to the same month last year (February 2022), with 1162 MW average reserves forecasted for this February versus 1208 MW seen for the same month last year.

The System Availability for the month of January was 52%.

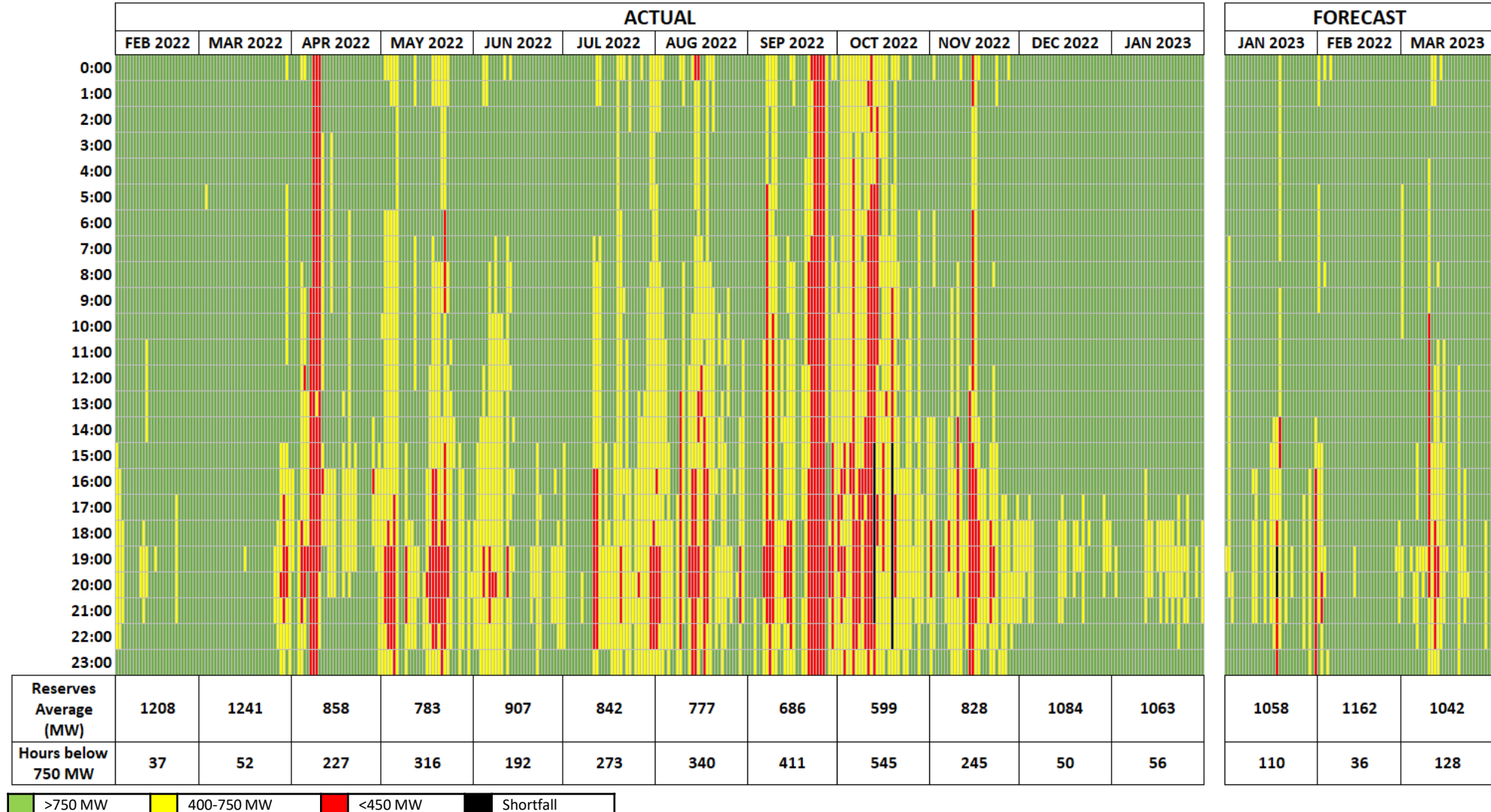
- PREPA – 42%
- AES – 86%
- EcoEléctrica – 100%



System Reserves

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

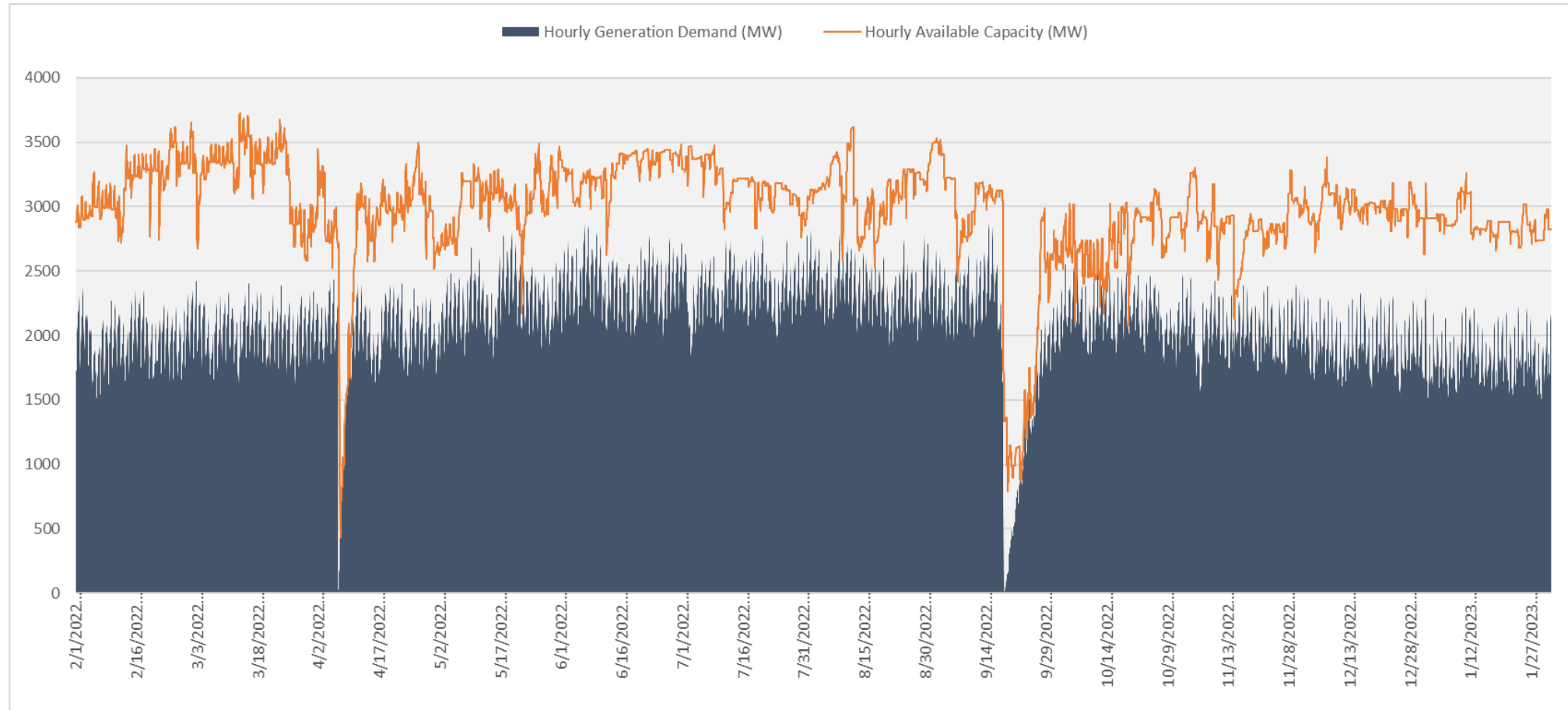


*Refer to Glossary of Terms on page 21 for a list of definitions and formulas.

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.

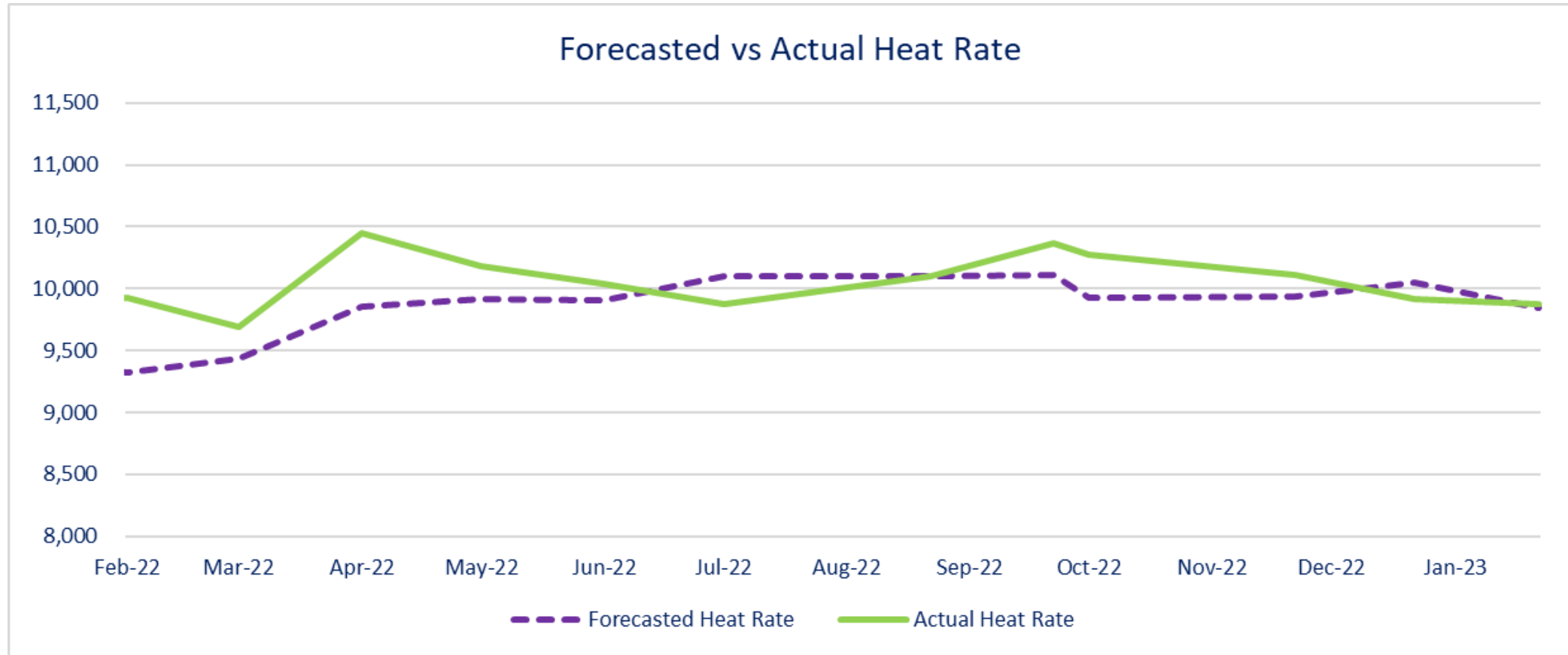


- The dip in availability and generation in April is due to the April blackout event.
- The dip in availability and generation in September is due to the passing of Hurricane Fiona.

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.

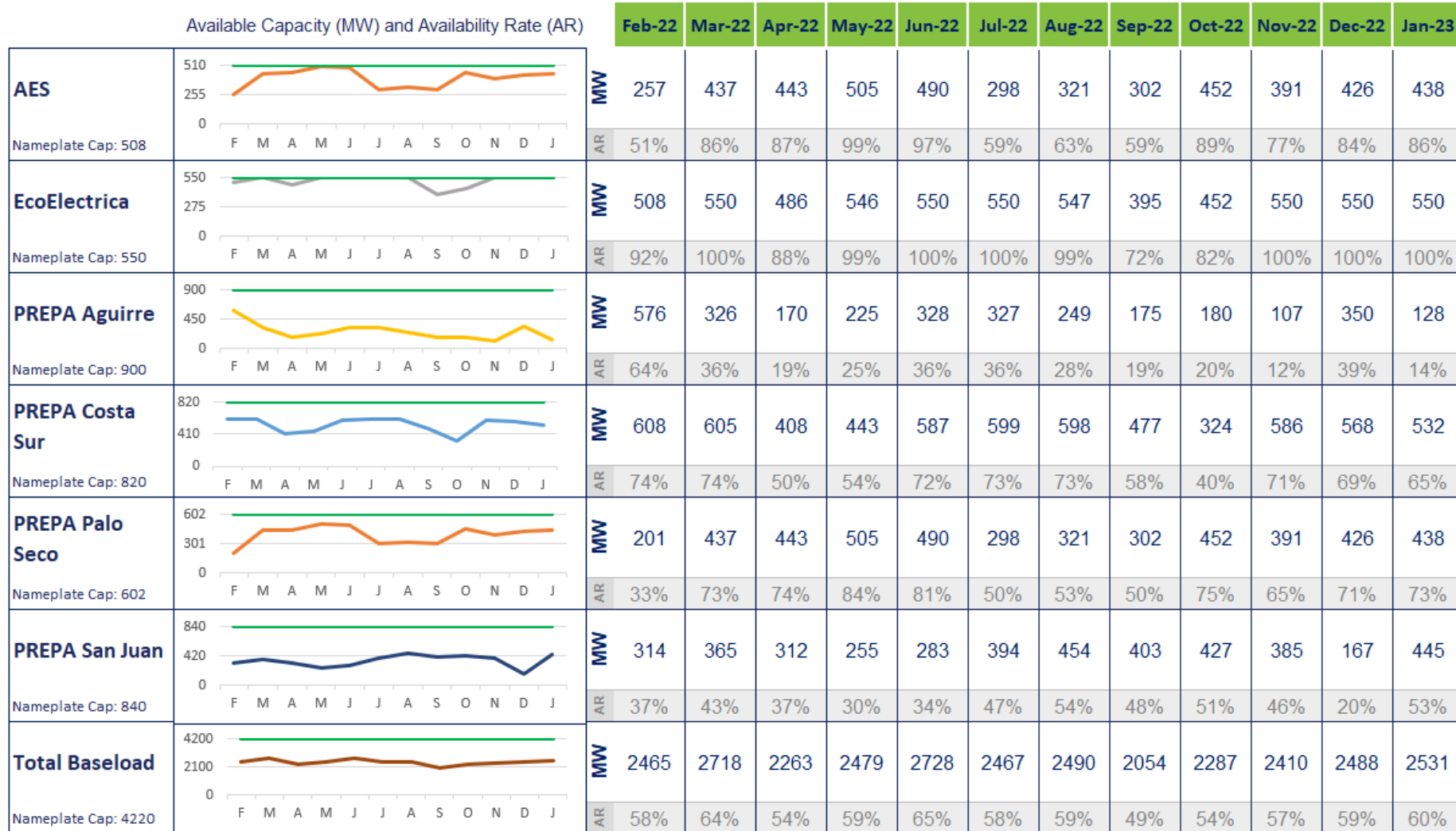
Target: ▼ Lower heat rates represent higher efficiency.



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 representing an average over the month.

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

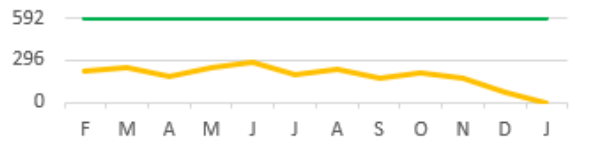
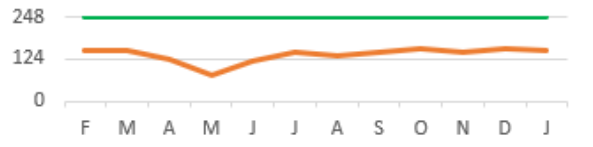
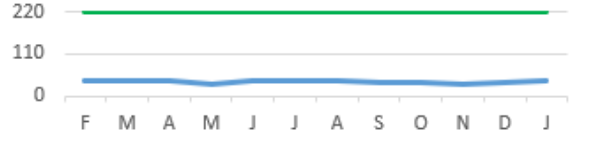
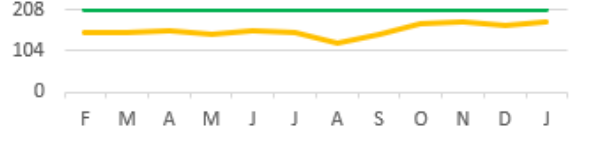
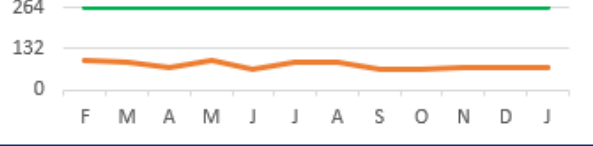



*Refer to Glossary of Terms on page 21 for a list of definitions and formulas.

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 representing an average over the month.

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

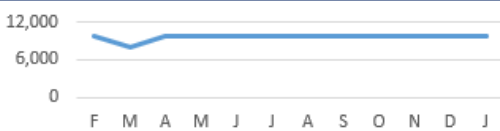
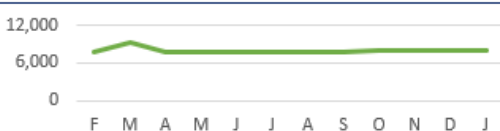
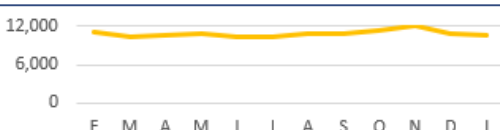

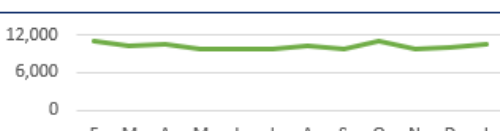


Available Capacity (MW) and Availability Rate (AR)		Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
PREPA Aguirre Combined Cycle Nameplate Cap: 592		MW	213	240	184	246	278	201	236	171	202	166	65	0
	AR	36%	41%	31%	42%	47%	34%	40%	29%	34%	28%	11%	0%	
PREPA Cambalache Nameplate Cap: 248		MW	151	151	125	77	118	143	134	146	152	146	156	151
	AR	61%	61%	50%	31%	48%	58%	54%	59%	62%	59%	63%	61%	
PREPA Mayaguez Nameplate Cap: 220		MW	38	40	41	30	40	38	38	37	37	29	37	38
	AR	17%	18%	18%	14%	18%	17%	17%	17%	17%	13%	17%	17%	
PREPA Palo Seco (Inc. Mobile-Pack) Nameplate Cap: 207		MW	150	150	155	146	155	153	122	148	175	177	170	177
	AR	73%	73%	75%	70%	75%	74%	59%	71%	84%	85%	82%	85%	
Other Peakers Nameplate Cap: 264		MW	97	88	71	94	67	91	89	68	68	71	73	69
	AR	37%	33%	27%	36%	25%	34%	34%	26%	26%	27%	28%	26%	
Total Peakers Nameplate Cap: 1531		MW	650	670	575	593	658	626	618	569	634	589	501	435
	AR	42%	44%	38%	39%	43%	41%	40%	37%	41%	38%	33%	28%	

*Refer to Glossary of Terms on page 21 for a list of definitions and formulas.

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.







		PREPA	Calculated										
Heat Rate (MMBtu/MWh)		Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
AES		9,826	8,104	9,726	9,694	9,766	9,800	9,800	9,800	9,800	9,800	9,800	9,800
EcoElectrica		7,719	9,182	7,718	7,739	7,692	7,683	7,683	7,683	7,932	7,932	7,932	7,932
PREPA Aguirre		11,103	10,406	10,610	10,767	10,362	10,366	10,847	10,935	11,486	12,016	10,957	10,699
PREPA Costa Sur		11,471	10,778	10,899	10,791	10,362	10,447	10,620	10,749	10,724	10,736	10,845	10,909
PREPA Palo Seco		11,128	10,337	10,403	9,840	9,839	9,738	10,249	9,865	10,960	9,876	10,131	10,483
PREPA San Juan		10,596	8,836	9,369	10,872	10,768	10,102	9,662	10,271	11,417	11,404	11,603	10,559
Total Baseload		9,778	9,539	9,617	9,794	9,723	9,651	9,729	9,871	10,189	10,079	10,010	9,957

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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.

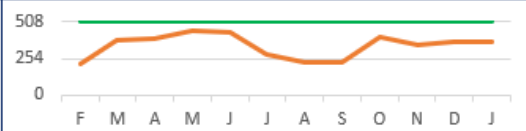

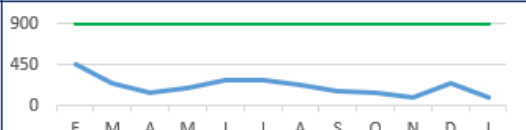
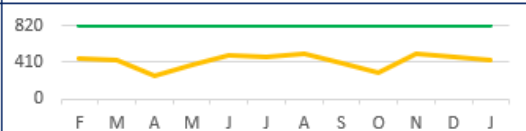
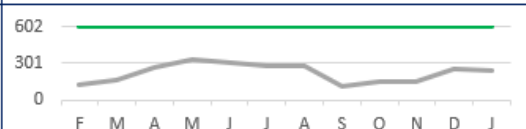


Heat Rate (MMBtu/MWh)		Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
PREPA Aguirre Combined Cycle		15,535	13,071	14,686	14,316	13,796	11,602	12,169	13,170	12,150	13,145	15,978	-
PREPA Cambalache		13,699	13,059	12,450	13,005	13,117	13,001	12,530	12,481	12,646	13,185	14,794	14,509
PREPA Mayaguez		10,333	10,599	10,626	10,878	10,557	10,552	10,406	10,728	13,418	10,919	10,413	10,816
PREPA Palo Seco (Inc. Mobile Pack)		14,904	15,548	15,556	16,687	15,226	19,157	15,922	12,234	11,818	11,481	11,719	11,341
Other Peakers		15,458	15,381	15,082	14,951	15,888	13,496	15,487	14,860	15,750	14,053	15,681	16,101
Total Peakers		14,692	12,950	13,394	13,501	13,306	11,936	12,319	12,421	12,587	12,438	12,628	12,332

*Refer to Glossary of Terms on page 21 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 (MW). The Capacity Factor measures what percentage of the nameplate capacity was used to produce energy during that time period.

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

Average Generation (MW) and Capacity Factor		Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
AES Nameplate Cap: 508		MW	216	382	386	450	434	279	225	233	400	342	365	367
		CF	43%	75%	76%	89%	85%	55%	44%	46%	79%	67%	72%	72%
EcoElectrica Nameplate Cap: 550		MW	372	402	351	388	407	412	406	292	356	395	390	360
		CF	68%	73%	64%	70%	74%	75%	74%	53%	65%	72%	71%	66%
PREPA Aguirre Nameplate Cap: 900		MW	448	239	146	194	287	281	231	155	145	83	250	87
		CF	50%	27%	16%	22%	32%	31%	26%	17%	16%	9%	28%	10%
PREPA Costa Sur Nameplate Cap: 820		MW	460	442	262	377	495	473	498	400	299	503	471	441
		CF	56%	54%	32%	46%	60%	58%	61%	49%	37%	61%	57%	54%
PREPA Palo Seco Nameplate Cap: 602		MW	122	167	270	326	305	277	275	114	149	152	258	239
		CF	20%	28%	45%	54%	51%	46%	46%	19%	25%	25%	43%	40%
PREPA San Juan Nameplate Cap: 840		MW	246	280	285	242	262	374	419	353	404	365	141	293
		CF	29%	33%	34%	29%	31%	45%	50%	42%	48%	43%	17%	35%
Total Baseload Nameplate Cap: 4220		MW	1864	1913	1701	1978	2189	2096	2054	1547	1752	1842	1875	1787
		CF	44%	45%	40%	47%	52%	50%	49%	37%	42%	44%	44%	42%

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Generation and Capacity Factor – Peaker Units

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

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

Average Generation (MW) and Capacity Factor		Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
PREPA Aguirre Combined Cycle Nameplate Cap: 592	 F M A M J J A S O N D J	MW	28	33	76	114	92	100	113	80	149	76	5	0
	CF	5%	6%	13%	19%	15%	17%	19%	14%	25%	13%	1%	0%	
PREPA Cambalache Nameplate Cap: 248	 F M A M J J A S O N D J	MW	6	10	33	25	17	16	35	63	53	22	10	7
	CF	2%	4%	13%	10%	7%	6%	14%	25%	21%	9%	4%	3%	
PREPA Mayaguez Nameplate Cap: 220	 F M A M J J A S O N D J	MW	3	6	38	42	22	26	29	53	46	51	18	8
	CF	1%	3%	17%	19%	10%	12%	13%	24%	21%	23%	8%	4%	
PREPA Palo Seco (Inc. Mobile-Pack) Nameplate Cap: 207	 F M A M J J A S O N D J	MW	1	1	9	2	5	7	7	39	62	21	4	8
	CF	1%	1%	4%	1%	2%	3%	3%	19%	30%	10%	2%	4%	
Other Peakers Nameplate Cap: 264	 F M A M J J A S O N D J	MW	3	2	12	15	4	3	12	14	23	16	2	1
	CF	1%	1%	4%	6%	2%	1%	5%	5%	9%	6%	1%	0%	
Total Peakers Nameplate Cap: 1531	 F M A M J J A S O N D J	MW	42	53	167	198	140	151	196	249	332	186	39	24
	CF	3%	3%	11%	13%	9%	10%	13%	16%	22%	12%	3%	2%	

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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. This scoreboard compares the scheduled outage hours with the actual duration of the outage.

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








	Planned Outage Hours (FEB 2022 - JAN 2023)	Planned Outage Hours	Completed Outage Hours	Notes for In-Progress Planned Outages (as of 2/15/2022)	Expected Return-to- Service Date
AES		1872	1188		
EcoElectrica		0	43		
PREPA Aguirre		4416	4819	Aguirre 1 - Out since 3/16/2022 (Major and Environmental Maintenance) Aguirre 2 - Out since 1/12/2023 (Environmental Maintenance)	Aguirre 1 - 2/28/2023 Aguirre 2 - 2/23/2023
PREPA Costa Sur		576	3231		
PREPA Palo Seco		768	1258		
PREPA San Juan		5160	8894		
Total Baseload		12792	19433		

*Refer to Glossary of Terms on page 21 for a list of definitions and formulas.

Maintenance Outage Hours – Baseload Units

Maintenance Outage Hours represent 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.

Target: ▼ Less maintenance hours represents more available capacity in the system to meet demand.

Maintenance Outage Hours		Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
AES		25	0	0	0	0	0	0	0	0	0	0	0
EcoElectrica		0	0	0	0	0	0	0	0	3	0	0	0
PREPA Aguirre		0	103	0	0	0	0	43	0	0	0	0	0
PREPA Costa Sur		0	0	0	48	3	0	37	0	0	0	90	0
PREPA Palo Seco		0	31	0	57	0	21	9	71	18	0	0	0
PREPA San Juan		66	0	41	0	0	98	15	0	19	137	421	0
Total Baseload		91	135	41	105	3	119	104	71	40	137	511	0

*Refer to Glossary of Terms on page 21 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.





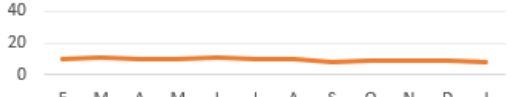



Forced Outage Hours and Outage Rate			Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
AES		Hrs	2	100	161	0	0	0	281	543	36	175	178	173
		%	0%	7%	11%	0%	0%	0%	21%	38%	2%	12%	12%	12%
EcoElectrica		Hrs	104	0	256	16	0	0	7	118	211	0	4	0
		%	5%	0%	12%	1%	0%	0%	0%	5%	10%	0%	0%	0%
PREPA Aguirre		Hrs	2	28	320	213	0	0	130	899	1055	1180	720	815
		%	0%	4%	43%	29%	0%	0%	16%	67%	71%	82%	48%	75%
PREPA Costa Sur		Hrs	9	0	475	19	14	0	2	268	553	46	0	0
		%	1%	0%	35%	2%	1%	0%	0%	19%	37%	3%	0%	0%
PREPA Palo Seco		Hrs	1384	1551	1543	1487	1482	1492	1507	2198	2250	2120	1572	1537
		%	69%	64%	54%	51%	51%	50%	51%	80%	77%	74%	53%	52%
PREPA San Juan		Hrs	1823	1601	1634	2230	2196	2574	2530	2432	3000	3071	2930	3174
		%	46%	36%	39%	54%	53%	44%	43%	42%	51%	55%	64%	55%
Total Baseload		Hrs	3324	3280	4390	3965	3691	4066	4455	6458	7105	6592	5405	5699
		%	29%	26%	34%	31%	29%	29%	30%	43%	46%	44%	38%	38%

*Refer to Glossary of Terms on page 21 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 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.








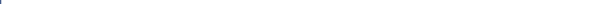
Average Production (MW) and Capacity Factor			Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
AES Ilumina		MW	4	5	4	4	4	4	4	3	4	4	3	3
Nameplate Cap: 20		CF	21%	24%	22%	21%	22%	21%	21%	16%	19%	18%	17%	17%
Windmar Cantera Martinó		MW	0.6	0.5	0.6	0.5	0.6	0.4	0.4	0.3	0.5	0.4	0.5	0.4
Nameplate Cap: 2.1		CF	27%	25%	27%	25%	27%	20%	17%	15%	22%	21%	23%	19%
San Fermín		MW	3	4	3	3	3	1	2	1	2	2	2	2
Nameplate Cap: 20		CF	14%	19%	17%	17%	17%	7%	10%	6%	8%	10%	12%	10%
Horizon Energy		MW	3	3	1	2	3	2	3	2	2	2	2	2
Nameplate Cap: 10		CF	25%	28%	14%	20%	27%	25%	27%	17%	23%	22%	23%	20%
Oriana Energy		MW	10	11	10	10	11	10	10	8	9	9	9	8
Nameplate Cap: 45		CF	22%	24%	21%	23%	24%	23%	23%	17%	19%	20%	20%	17%
Windmar Coto Laurel		MW	2	2	2	2	2	2	2	1	2	2	2	2
Nameplate Cap: 10		CF	21%	24%	23%	22%	23%	21%	21%	14%	21%	20%	22%	15%
Fonroche Humacao		MW	8	9	9	8	8	7	8	5	7	7	7	5
Nameplate Cap: 40		CF	19%	22%	22%	19%	20%	19%	20%	14%	18%	17%	18%	13%
Total Solar		MW	30	34	30	31	32	28	30	21	26	26	27	22
Nameplate Cap: 147		CF	20%	23%	20%	21%	22%	19%	20%	14%	18%	18%	18%	15%

*Refer to Glossary of Terms on page 21 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 due to the solar and wind cycles.

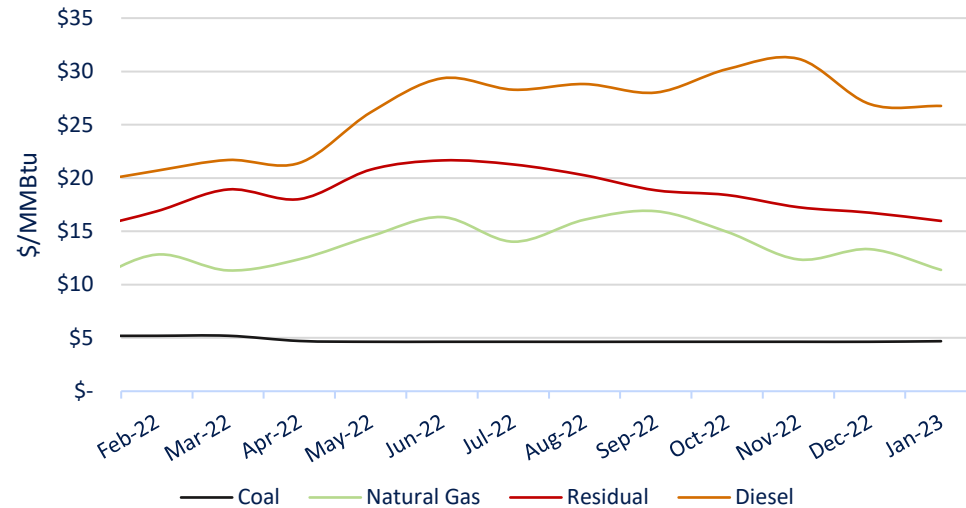
Target: ▲ A higher Capacity Factor represents a better utilization of the maximum capacity the project is able to produce.

Average Production (MW) and Capacity Factor		Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	
Pattern Santa Isabel		MW	19	25	24	24	24	26	18	7	10	10	11	14
Nameplate Cap: 75		CF	25%	33%	33%	32%	32%	35%	25%	9%	13%	13%	14%	19%
Landfill Gas Fajardo		MW	1	1	0	1	1	0	1	0	0	0	0	0
Nameplate Cap: 2.4		CF	21%	33%	18%	24%	33%	14%	25%	16%	6%	9%	18%	10%
Landfill Gas Toa Baja		MW	2	1	1	2	2	1	1	1	1	1	1	0
Nameplate Cap: 2.4		CF	63%	48%	44%	64%	65%	33%	62%	31%	36%	26%	21%	17%
Total Wind and Landfill		MW	21	27	26	26	26	27	20	8	11	11	12	15
Nameplate Cap: 80		CF	26%	34%	32%	32%	33%	34%	26%	10%	14%	14%	14%	18%

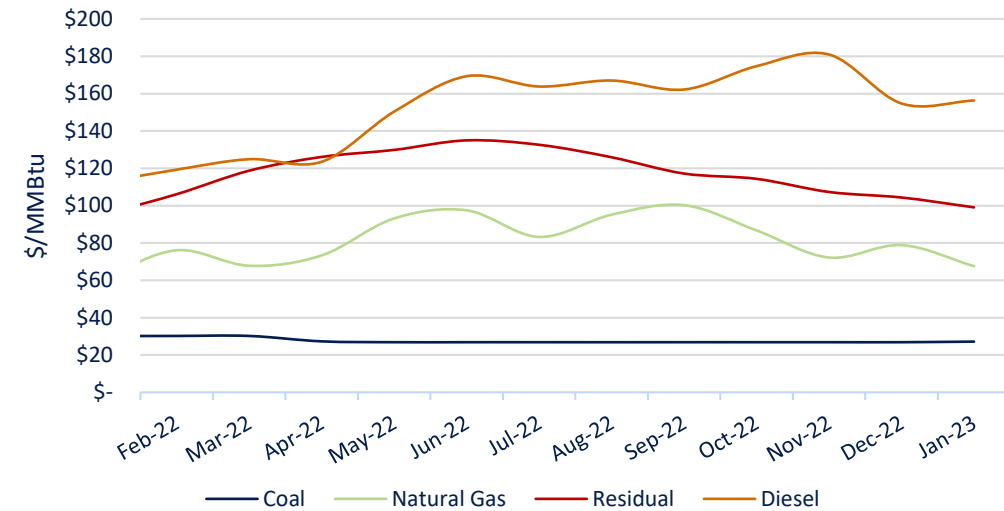
Fuel Prices

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.

Historical Fuel Price (\$/MMBtu)



Historical Fuel Price (\$/BOE)

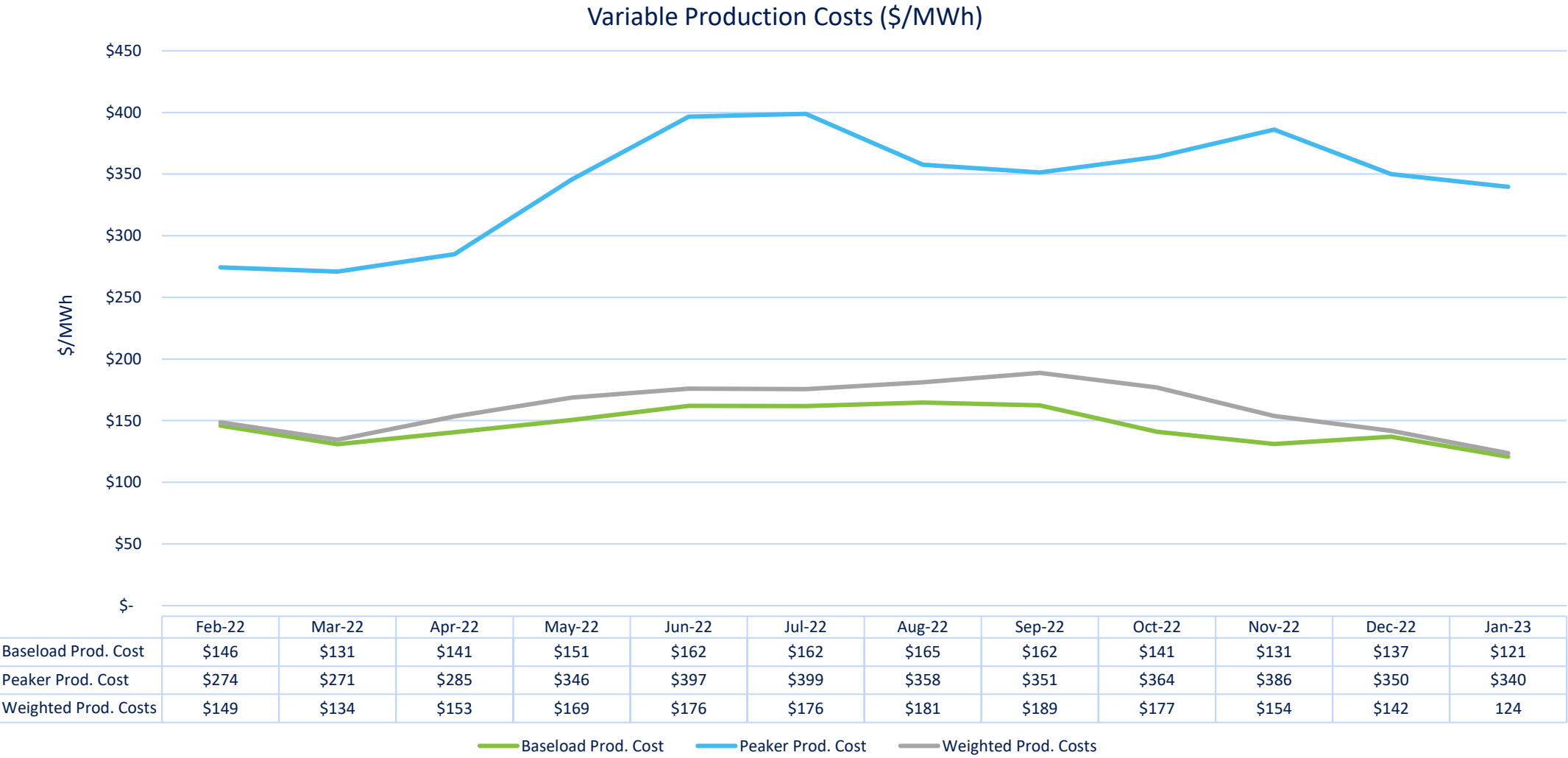


\$/MMBtu	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
Diesel	20.68	21.69	21.41	26.17	29.37	28.30	28.83	28.03	30.23	31.20	26.95	26.77
Residual	16.89	18.93	18.03	20.78	21.64	21.27	20.25	18.84	18.41	17.26	16.75	15.98
Natural Gas	12.57	11.32	12.38	14.54	16.35	14.02	16.10	16.90	14.94	12.35	13.32	11.36
Coal	5.20	5.20	4.70	4.63	4.63	4.62	4.62	4.63	4.63	4.63	4.62	4.68
\$/BOE	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
Diesel	119.33	124.91	123.56	150.39	169.30	163.78	167.00	162.18	174.68	180.89	154.70	156.31
Residual	106.20	118.78	126.14	129.91	135.01	132.64	125.96	117.24	114.41	107.37	104.42	99.14
Natural Gas	76.05	67.71	73.28	93.17	97.47	83.18	95.16	100.24	86.67	72.11	78.82	67.47
Coal	30.14	30.15	27.28	26.83	26.83	26.83	26.81	26.83	26.83	26.83	26.83	27.14

*Refer to Glossary of Terms on page 21 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.



*Refer to Glossary of Terms on page 21 for a list of definitions and formulas.

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

Plant and Unit List – Baseload and Peaker Units

BASELOAD UNITS

Plant	Units	System Reserves	System Availability	System Heat Rate	All Metrics for Baseload Units	All Metrics for Peaker Units	Renewables Capacity Factor
San Juan	CT 5	X	X	X	X		
	STM 5	X	X	X	X		
	CT 6	X	X	X	X		
	STM 6	X	X	X	X		
	7	X	X	X	X		
	8	X	X	X	X		
	9	X	X	X	X		
	10	X	X	X	X		
Costa Sur	5	X	X	X	X		
	6	X	X	X	X		
Aguirre	1	X	X	X	X		
	2	X	X	X	X		
Palo Seco	1	X	X	X	X		
	2	X	X	X	X		
	3	X	X	X	X		
	4	X	X	X	X		
AES	AES 1	X	X	X	X		
	AES 2	X	X	X	X		
EcoEléctrica	ECO 1	X	X	X	X		
	ECO 2	X	X	X	X		
	STM 1	X	X	X	X		

PEAKER UNITS

Plant	Units	System Reserves	System Availability	System Heat Rate	All Metrics for Baseload Units	All Metrics for Peaker Units	Renewables Capacity Factor
Cambalache	1	X	X	X		X	
	2	X	X	X		X	
	3	X	X	X		X	
Mayaguez	1A	X	X	X		X	
	1B	X	X	X		X	
	2A	X	X	X		X	
	2B	X	X	X		X	
	3A	X	X	X		X	
	3B	X	X	X		X	
	4A	X	X	X		X	
	4B	X	X	X		X	
	1-1	X	X	X		X	
	1-2	X	X	X		X	
Palo Seco (Inc. Mobile-Pack)	2-1	X	X	X		X	
	2-2	X	X	X		X	
	3-1	X	X	X		X	
	3-2	X	X	X		X	
	MP 1	X	X	X		X	
	MP 2	X	X	X		X	
	MP 3	X	X	X		X	
	I-1	X	X	X		X	
	I-2	X	X	X		X	
Aguirre CC	I-3	X	X	X		X	
	I-4	X	X	X		X	
	ST-1	X	X	X		X	
	II-1	X	X	X		X	
	II-2	X	X	X		X	
	II-3	X	X	X		X	
	II-4	X	X	X		X	
	ST-2	X	X	X		X	

PEAKER UNITS

Plant	Units	System Reserves	System Availability	System Heat Rate	All Metrics for Baseload Units	All Metrics for Peaker Units	Renewables Capacity Factor
Other Peakers	Daguao 1-1	X	X	X		X	
	Daguao 1-2	X	X	X		X	
	Aguirre 2-1	X	X	X		X	
	Aguirre 2-2	X	X	X		X	
	Costa Sur 1-1	X	X	X		X	
	Costa Sur 1-2	X	X	X		X	
	Jobos 1-1	X	X	X		X	
	Jobos 1-2	X	X	X		X	
	Yabucoa 1-1	X	X	X		X	
	Yabucoa 1-2	X	X	X		X	
	Vega Baja 1-1	X	X	X		X	
	Vega Baja 1-2	X	X	X		X	
	Vieques 1	X	X	X		X	
	Vieques 2	X	X	X		X	
	Culebra 1	X	X	X		X	
	Culebra 2	X	X	X		X	
	Culebra 3	X	X	X		X	

Plant and Unit List – Renewable Projects

SOLAR PROJECTS

Projects	System Reserves	System Availability	System Heat Rate	All Metrics for Baseload Units	All Metrics for Peaker Units	Renewables Capacity Factor
AES Ilumina						X
Cantera Martinó						X
San Fermín						X
Horizon Energy						X
Oriana Energy						X
Coto Laurel						X
Humacao						X

WIND AND LANDFILL PROJECTS

Projects	System Reserves	System Availability	System Heat Rate	All Metrics for Baseload Units	All Metrics for Peaker Units	Renewables Capacity Factor
Pattern Santa Isabel						X
Landfill Gas Fajardo						X
Landfill Gas Toa Baja						X

HYDRO PLANTS

Projects	System Reserves	System Availability	System Heat Rate	All Metrics for Baseload Units	All Metrics for Peaker Units	Renewables Capacity Factor
Caonillas 1-1						
Caonillas 1-2						
Caonillas 2-1						
Dos Bocas 1						
Dos Bocas 2						
Dos Bocas 3						
Garzas 1-1						
Garzas 1-2						
Garzas 2-1						
Patillas 1-1						
Patillas 1-2						
Rio Blanco 1-1						
Rio Blanco 1-2						
Toro Negro 1-1						
Toro Negro 1-2						
Toro Negro 1-3						
Toro Negro 1-4						
Toro Negro 2-1						
Yauco 1-1						
Yauco 2-1						
Yauco 2-2						