

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

NEPR Received: Dec 11, 2024 3:45 PM
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IN RE:
IN RE: PUERTO RICO ELECTRIC POWER
AUTHORITY PERMANENT RATE

CASE NO. NEPR-MI-2020-0001

**SUBJECT: Motion in Compliance with the
December 6th Order**

MOTION IN COMPLIANCE WITH THE DECEMBER 6TH ORDER

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

COME NOW LUMA Energy, LLC (“ManagementCo”), and LUMA Energy Servco, LLC (“ServCo”) (jointly referred to as the “Operator” or “LUMA”), through the undersigned counsel, and respectfully state and request the following:

1. On September 16, 2024, LUMA filed before the Puerto Rico Energy Bureau (“Energy Bureau”) a *Motion Submitting Quarterly Reconciliations and FCA, PPCA, and FOS Calculated Factors and Request for Confidential Treatment* (“September 16th Submission”). LUMA submitted the quarterly reconciliations for the Fuel Charge Adjustment (“FCA”) and Purchased Power Charge Adjustment (“PPCA”) riders for June through August 2024, and the calculated proposed factors for the FCA, PPCA, and Fuel Oil Subsidy (“FOS”) riders for the period from October 1 until December 31, 2024. As part of the filing, LUMA included Excel spreadsheets filed publicly and confidential Excel spreadsheets with formulae intact.

2. On September 24, 2024, the Energy Bureau entered a Resolution and Order in which it requested LUMA to provide or clarify certain information (“September 24th Order”). The

Energy Bureau issued a second request for information directed to Genera PR, LLC (“Genera”) to be fulfilled by the same deadline¹.

3. On September 26, 2024, LUMA filed a *Motion in Partial Compliance with Resolution and Order of September 24, 2024*. LUMA submitted its responses to the requests for information posed by the Energy Bureau in Attachment A of the September 24th Order, together with supporting materials.

4. On September 26, 2024, Genera provided the information pertaining to the requests for information concerning the Puerto Rico Electric Power Authority (“PREPA”)’s Thermal Generation Facilities.

5. On September 26, 2024, LUMA filed a *Motion in Further Compliance with Resolution and Order of September 24, 2024*. Therein, LUMA submitted the outstanding responses provided by Genera to the requests for information posed by the Energy Bureau in Attachment A of the September 24th Order.

6. Thereafter, on September 27, 2024, LUMA filed a *Second Motion in Further Compliance with Resolution and Order of September 24, 2024*, whereby LUMA submitted its responses to the requests for information in Attachment B of the September 24th Order and supporting materials.

7. On that same day, September 27, 2024, Genera filed a *Motion to Submit Amended Responses to Request for Information Issued on September 24 2024*.

¹ On September 25, 2024, LUMA filed an *Urgent Informative Motion on Resolution and Order of September 24, 2024, and Partial Request for Extension to Submit Responses to Attachment B*. Therein, LUMA requested a brief extension until noon on September 27, 2024, to file its responses to the Energy Bureau’s requests for information in Attachment B. On that same day, September 25, 2024, the Energy Bureau issued a Resolution and Order granting LUMA until noon on September 27, 2024, to submit its responses to the requests for information included in Attachment B of the September 24th Order (“September 25th Order”).

8. On September 30, 2024, this Energy Bureau entered a Resolution and Order maintaining the previous quarter's FCA, PPCA, and FOS factors to the period from October 1, 2024, until December 31, 2024, or until this Energy Bureau modifies them ("September 30th Order").

9. On October 1, 2024 ("October 1st Order"), this Energy Bureau requested LUMA to provide or clarify certain information and included several requests in Attachments A and B of said Order. The Energy Bureau granted LUMA until October 8, 2024, at 2 p.m., to file the requested information.

10. On October 8, 2024, LUMA filed a *Motion in Compliance with Resolution and Order of October 1, 2024*. Therein, LUMA submitted its responses to the requests for information posed by the Energy Bureau Attachments A and B of the October 1st Order and supporting materials in form of two (2) pdf files titled "*Annex A_System Status Daily Update (June 2024-August 2024).pdf*" and "*Annex C_Jun-Aug 2024 Fuel Purchased Power Drivers.pdf*" and in the form of an Excel spreadsheet titled "*Annex D_Estimated Incremental Fuel Costs Analysis for June-August 2024.xlsx*". In addition, LUMA included Genera's responses to certain requests for information, as reflected in Annex B, which was included with the submission.

11. On October 16, 2024, the Energy Bureau entered a Resolution and Order ("October 16th Order"), indicating that LUMA should provide more precise information in connection with the request for information of Attachment B of the October 1st Order regarding dispatch, including a precise and reasonable estimate of when the information would be available.

12. On October 21, 2024, LUMA filed a *Motion in Compliance with the Resolution and Order of October 16, 2024*. LUMA submitted its estimate of when the supplemental information

requested in Attachment B of the October 1st Order would be available and offered to file the information by November 15, 2024.

13. On November 18, 2024, after submitting a request for a brief extension of time, *see Urgent Request for Extension to Submit LUMA's Supplemental Responses to Attachment B of the October 1st Order*, LUMA filed a *Motion Submitting LUMA's Supplemental Responses to Attachment B of the October 1st Order* ("November 18th Motion"), through which it submitted its supplemental responses to the requests for information of Attachment B of the October 1st Order.

14. During the evening hours of Friday, November 22, 2024, this Energy Bureau served notice of a Resolution and Order ("November 22nd Order"), whereby it ordered LUMA to:

(i) Provide a detailed description of the generation dispatch sequence that was implemented during the June 2, 2024 and June 12, 2024 blackouts, specifying the activated generating units and the operating time of each unit.

(ii) Submit a breakdown of the fuel costs incurred due to the use of the generating units during the massive of June 2, 2024 and June 12, 2024 blackouts, versus the costs of the dispatch sequence if such events had not occurred.

See November 22nd Order, p. 2 (translation ours).

15. LUMA was granted up until Monday, December 2nd, 2024, at noon (12:00 p.m.), to file its responses to the requests for information issued by this Energy Bureau in the November 22nd Order.

16. On November 26, 2024, LUMA filed an *Urgent Request for Extension of Time to Comply with the November 22nd Order* ("November 26th Request"). Therein, LUMA informed this honorable Energy Bureau that, despite its best efforts, it required a brief extension of forty-eight (48) hours, up until Wednesday, December 4th, 2024 to file its response in compliance with the November 22nd Order.

17. On December 2, 2024, this Energy Bureau granted LUMA's November 26th Request and, consequently, extended the deadline for LUMA's filing in response to the November 22nd Order up to, and including, December 4, 2024 at noon. *See* Resolution and Order of December 2, 2024 ("December 2nd Order").

18. Accordingly, on December 4, 2024, LUMA filed *its Motion in Compliance with the November 22nd Order* ("December 4th Motion"), whereby it submitted information in compliance with the November 22nd Order.

19. Thereafter, on December 6, 2024, this Energy Bureau issued a new Resolution and Order ("December 6th Order"). It stated that, upon evaluation of the responses submitted by way of LUMA's December 4th Motion, the Energy Bureau had additional follow-up questions, contained in Attachment A of the December 6th Order. The Energy Bureau ordered LUMA to respond to the referenced requests of information on or before December 11, 2024 at noon.

20. On December 11, 2024, LUMA filed an *Urgent Request for Extension of Time to Comply with the December 6th*, through which it informed this Energy Bureau that, despite its best efforts, it required a brief extension of five (5) hours, up until today, December 11th, 2024, at 5 p.m., to finalize its responses in compliance with the December 6th Order.

21. In compliance with the December 6th Order, LUMA hereby submits as *Exhibit 1* to this Motion its responses to the additional requests of information posed by the Energy Bureau in Attachment A of the December 6th Order.

WHEREFORE, LUMA respectfully requests that the Energy Bureau **take notice** of the above; and **deem** that LUMA complied with this Energy Bureau's December 6th Order.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, on this 11th day of December 2024.

I hereby certify that this Motion was filed using the electronic filing system of this Energy Bureau and that I will send an electronic copy of this Motion to the Puerto Rico Electric Power Authority, through: Alexis Rivera, arivera@gmlex.net; Juan M. Martínez Nevárez, jmartinez@gmlex.net; and Juan R. González Galarza, jgonzalez@gmlex.net; to Genera PR, LLC through: Luis Roman Negrón, lrn@roman-negron.com; legal@genera-pr.com; and regulatory@genera-pr.com; and to the Independent Consumer Protection Office, through Director Hannia Rivera, hrivera@jrsp.pr.gov.



500 Calle de la Tanca, Suite 401
San Juan, PR 00901-1969
Tel. 787-945-9122
Fax 939-697-6092

/s/ Margarita Mercado Echegaray
Margarita Mercado Echegaray
PR Bar No. 16,266
margarita.mercado@us.dlapiper.com

Exhibit 1

Permanent Rate

Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#1

REQUEST

Concerning the Generation Dispatch Sequence Information Provided in Annex A and Annex B of the December 4 Motion:

Do the positive amounts in the "Capacity" column on Annex A and B indicate the level of generation at the listed units at that time? If not, explain.

RESPONSE

Yes. The "Capacity" column reflects the unit's available capacity at the indicated time. Available capacity are numbers provided by the generators. For example, in Table B-2¹ of the December 4 Motion, at 9:00 p.m., all units that tripped show a capacity of 0 MW until LUMA receives an update from the generators regarding their status and return availability.

¹ See Motion in Compliance with the November 22nd Order, Exhibit 1, Annex B: Generation Dispatch Sequence - June 12 Event, p.

Permanent Rate

Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#2

REQUEST

Do zero amounts in the "Capacity" column indicate that the listed unit was totally shut down? If not, explain.

RESPONSE

Please refer to the response provided in RFI-LUMA-MI-2020-0001-20241206-PREB-#1.

Permanent Rate

Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#3

REQUEST

Refer to Annex A. At the time of the start of the June 2 outage event, around 2pm on that date, provide a list of all of the units generating at that time and how much capacity (MW) and energy (MWH) was being produced by each unit.

RESPONSE

System Overview at 2:00 p.m. on June 2:

- Actual System Load: 2325 MW
- Available Capacity: 3320 MW
- Total Reserve: 995 MW

Table 3-1 June 2 System Overview – 2:00 p.m.

UNIT	ACTUAL ENERGY (MW)	AVAILABLE CAPACITY (MW)
San Juan CT 5	149	150
San Juan STM 5	53	52
San Juan CT 6	0	0
San Juan STM 6	0	0
San Juan 7	0	0
San Juan 9	81	90
Costa Sur 5	159	162
Costa Sur 6	333	357
Aguirre 1	218	240
Aguirre 2	269	325
EcoElectrica	336	566
AES 1	0	0
AES 2	248	249
BASE TOTAL	1846	2191
Peakers	392	1042
Renewables	87	87
TOTAL	2325	3320

Permanent Rate

Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#4

REQUEST

Refer to Annex B. At the time of the start of the first June 12 outage event, around 3pm, provide a list of all of units generating at that time and how much capacity (MW) and energy (MWH) was being produced by each unit.

RESPONSE

System Overview at 3:00 p.m. on June 12:

- Actual System Load: 2626 MW
- Available Capacity: 3526 MW
- Total Reserve: 900 MW

Table 4-1 June 12 System Overview – 3:00 p.m.

UNIT	ACTUAL ENERGY (MW)	AVAILABLE CAPACITY (MW)
San Juan CT 5	149	153
San Juan STM 5	53	54
San Juan CT 6	146	150
San Juan STM 6	52	52
San Juan 7	0	0
San Juan 9	83	91
Costa Sur 5	262	260
Costa Sur 6	263	376
Aguirre 1	233	330
Aguirre 2	174	169
EcoElectrica	464	566
AES 1	0	0
AES 2	240	240
BASE TOTAL	2119	2441
Peakers	376	954
Renewables	131	131
TOTAL	2626	3526

Permanent Rate

Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#5

REQUEST

Refer to Annex B. At the time of the second June 12 outage event, around 9pm, provide a list of the units generating at that time and how much capacity (MW) and energy (MWH) was being produced by each unit.

RESPONSE

System Overview at 9:00 p.m. on June 12:

- Actual System Load: 3007 MW
- Available Capacity: 3117 MW
- Total Reserve: 110 MW

Table 5-1 June 12 System Overview – 9:00 p.m.

UNIT	ACTUAL ENERGY (MW)	AVAILABLE CAPACITY (MW)
San Juan CT 5	19	19
San Juan STM 5	0	0
San Juan CT 6	0	0
San Juan STM 6	0	0
San Juan 7	0	0
San Juan 9	0	0
Costa Sur 5	271	260
Costa Sur 6	377	376
Aguirre 1	300	330
Aguirre 2	304	325
EcoElectrica	570	566
AES 1	0	0
AES 2	244	246
BASE TOTAL	2085	2122
Peakers	921	994
Renewables	1	1
TOTAL	3007	3117

Permanent Rate

Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#6

REQUEST

As for the order of economic dispatch, what cost-per-MW (or cost per MWH) was used by LUMA to determine the economic dispatch order on June 2 for each generating unit that was available for generation on that date?

RESPONSE

The Energy Management System (EMS) conducts Unit Commitment/Merit Order for both real-time operation and day ahead planning.² This process generates an hour-by-hour dispatch order to meet forecasted system load and comply with Reserve Policy Criteria.³ However, LUMA does not store or maintain records of the raw data used daily by the EMS since such information is intended only for immediate forecasting purposes and is replaced with an updated dataset the next time the data is generated.

The table below depicts the average actual cost-per-MWh for June 2024, derived from the Supervisory Control and Data Acquisition System (SCADA). These figures were not the values used for forecasting dispatch.

Table 6-1. Average Actual Cost-per-MWH by Unit for June 2024

Unit Commitment	Unit	Cost (\$/MWH)
b-AES PP	AES	166.808
b-AGUIRRE 1	AGUIRRE1	186.760
b-AGUIRRE 2	AGUIRRE2	186.760
b-COSTA SUR 5	SOUCO 5	152.183
b-COSTA SUR 6	SOUCO 6	152.183
b-ECOELEC PP	EcoElectrica	126.420
b-SAN JUAN 9	S JUAN 9	194.097
b-SAN JUAN-5 CC	SJ-5 GAS	135.518

² Motion in Compliance with Resolution and Order of October 1, 2024, Exhibit 1, Responses to October 1, 2024, R&O Requests, Introduction & RFI-LUMA-MI-2020-0001-20241001-PREB-#(B)2

³ See Motion in Compliance with the November 22nd Order, Exhibit 1, Section 3.0 Breakdown of Incurred Fuel Costs, p. 7

Permanent Rate

Unit Commitment	Unit	Cost (\$/MWH)
b-SAN JUAN-6 CC	SJ-6 GAS	135.518
f-PSECO TM-GT1	PSFEMAGT1	151.741
f-PSECO TM-GT2	PSFEMAGT2	151.741
f-PSECO TM-GT3	PSFEMAGT3	151.741
f-PSECO TM-GT4	PSFEMAGT4	151.741
f-SJUAN TM-G10	SJFEMAGT10	151.741
f-SJUAN TM-GT1	SJFEMAGT1	151.74
f-SJUAN TM-GT2	SJFEMAGT2	151.74
f-SJUAN TM-GT4	SJFEMAGT4	151.74
f-SJUAN TM-GT5	SJFEMAGT5	151.74
f-SJUAN TM-GT6	SJFEMAGT6	151.74
f-SJUAN TM-GT7	SJFEMAGT7	151.74
f-SJUAN TM-GT8	SJFEMAGT8	151.74
f-SJUAN TM-GT9	SJFEMAGT9	151.74
p-AGCC G11	CCGAS1-1	277.84
p-AGCC G12	CCGAS1-2	277.84
p-AGCC G24	CCGAS2-4	277.84
p-CAMBLICHE G2	CAMB 2	276.06
p-CAMBLICHE G3	CAMB 3	276.06
p-DAGUAO G11	DAGUA1-1	409.67
p-JOBOS G12	JOBOS1-2	409.38
p-MAYAG G2	MAYAG G2	244.29
p-MAYAG G3	MAYAG G3	244.29
p-MAYAG G4	MAYAG G4	244.29
p-PALO SECO G11	PSECO1-1	0
p-PALO SECO G12	PSECO1-2	0
p-PALO SECO G21	PSECO2-1	0
p-YABUCOA G12	YABUC1-2	351.17
RENEWABLES	RENEWABLES	173.57
f-SJUAN TM-GT3	SJFEMAGT3	151.74
p-DAGUAO G12	DAGUA1-2	409.67
p-MAYAG G1	MAYAG G1	244.29

Permanent Rate

Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#7

REQUEST

As for the order of economic dispatch, what cost-per-MW (or cost per MWH) was used by LUMA to determine the economic dispatch order on June 12 and 13 for each generating unit that was available for generation on those dates?

RESPONSE

Please refer to the response provided in RFI-LUMA-MI-2020-0001-20241206-PREB-#6.

Permanent Rate

Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#8

REQUEST

As for cost of power related to the June 2, 2024, Event.

LUMA states on page 4 that LUMA deployed mobile generators, and expenses for those mobile generators were not included in the FCA or PPCA costs for the June through August 2024 time frame. LUMA states that the costs for those mobile generators were paid out of LUMA's O&M budget.

- a. What type of fuel is used for those mobile generators?
- b. What was the cost of fuel consumed by the mobile generators on June 2?
- c. Why was that fuel cost paid out of LUMA O&M account rather than accounted for as fuel costs that would be includable in the FCA?
- d. Are those mobile generators the same units as the truck mounted mobile generating units originally provided by FEMA for emergency generating and which were acquired from FEMA? If different, explain.
- e. Is it LUMA's intention to request recovery of the fuel used for the mobile generation through the FCA and/or PPCA rates? If not, explain why not. If so, for what period does LUMA expect that the fuel cost for that mobile generation would be expected?

RESPONSE

- a. Diesel fuel.
- b. The mobile generators incurred no fuel costs on June 2, as the initial fuel delivery did not occur until June 10.
- c. The fuel used for the rental generators in Santa Isabel is classified as an operational expense as it was a cost incurred for the day-to-day operation of the rental generators.
- d. No. The mobile generators were temporarily rented from third parties and deployed to various substations to reinforce service to the Santa Isabel service area.
- e. No. Please refer to part c above.

Permanent Rate

Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#9

REQUEST

LUMA figure 1-1 shows AES capacity on June 2 and 3, but Annex A does not show capacity on June 2 for AES 2. On Annex A, the first appearance of AES 2 is at 6:10am at 199MW on June 3, 2024.

- a. Was AES 2 running on June 2?
- b. Was AES 2 running on June 3 before 6am?
- c. At what capacity was AES 2 running on June 2 and 3 before 6am on June 3?
- d. Was the AES 2 capacity amount listed on Annex A at 6:10am on June 3, a dropoff from a prior higher amount earlier that day for AES 2 capacity? Explain.

RESPONSE

Typically, AES units run at maximum available capacity during day and peak hours (morning to dark). From 12:00 a.m. to 6:00 a.m. as system load ramps down these base units are also ramped down to maintain system balance. AES units are the last units to ramp down after the evening peak and the first to start ramping up during the morning-light hours.

- a-b. Yes, AES 2 was running on June 2, and also on June 3 before 6:00 a.m.
- c. On June 2 at 2:00 p.m., AES 2 was online and limited to 249 MW (gross) due to emission control & auxiliary equipment supply, as informed by the power plant. On June 3 at 6:00 a.m., AES 2 was online at 197 MW.
- d. On June 3 at 6:10 a.m., AES informed LUMA that AES 2 was limited to 199 MW due to additional problems with emission control & auxiliary equipment supply. On June 3 at 7:00 a.m., AES informed LUMA that AES 2 was limited to 70 MW due to coal feed control board problems.

Permanent Rate

Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#10

REQUEST

LUMA figure 1-1 and Annex A show that AES 2 dropped from capacity of 199 MW to 70 MW at 7am on June 3, for a decline in AES 2 generation of about 129MW per hour. LUMA Annex A indicates that the AES 2 generation at 6am on June 2 was limited due to emission control and auxiliary equipment supply.

- a. At what capacity was AES 2 running at before 6am on June 3?
- b. LUMA Annex 2 indicates further that the drop from 199 MW to 70 MW at 7am on June 3 for AES 2 was "limited due to coal feed control board problems." LUMA figure 1-1 shows that peaker usage correspondingly increased at that time (around 7am on June 3). Where is the peaker capacity usage on the June 3 dispatch listing in Annex A?

RESPONSE

- a. On June 3, 2024, at 6:00 a.m., AES 2 was at 197 MW.
- b. On June 3, 2024, at 7:20 a.m., AES 2 ramped down to 16 MW. At that moment, the peakers dispatch was as follows:

Table 10-1. June 3 Peaker Capacity Usage

UNIT	ACTUAL	AVCAP
Aguirre CC 1-1		50
Aguirre CC 1-2		48
Aguirre CC 1-3		0
Aguirre CC 1-4		0
Aguirre CC STM 1		40
Aguirre CC 2-4		50
Cambalache 2		77
Cambalache 3		75
Mayaguez 1	23	50
Mayaguez 2	50	50
Mayaguez 3	20	20
Mayaguez 4		42
Palo Seco 1-1		17
Palo Seco 1-2		18
Palo Seco 2-1		18
Palo Seco MP 1		25

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UNIT	ACTUAL	AVCAP
Palo Seco MP 2		25
Palo Seco MP 3		25
Daguao 1-1		18
Daguao 1-2		18
Yabucoa 1-2		16
Jobos 1-2		20
Palo Seco TM 1	25	25
Palo Seco TM 2	24	25
Palo Seco TM 3	21	20
Palo Seco TM 4	19	20
San Juan TM 1	24	25
San Juan TM 2	26	25
San Juan TM 3		25
San Juan TM 4	26	25
San Juan TM 5	17	25
San Juan TM 6	26	25
San Juan TM 7	26	25
San Juan TM 8	25	25
San Juan TM 9	25	25
San Juan TM 10	25	25
TOTAL	402	1042

The actual load for the peakers highlighted in yellow is the usage at that moment to compensate for the power loss of AES 2, which is associated with the generation dispatch sequence for June 3, 2024, from 7:04 a.m. to 7:15 a.m.

Permanent Rate

Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#11

REQUEST

During June 2022⁴ was the AES 2 one of the lowest cost per MWh units available for dispatch when it was available? If not, explain.

RESPONSE

Yes, AES 2 is consistently one of the lowest cost per MWh units to dispatch and, when available, LUMA maximizes its use.

⁴ LUMA's response assumes the request meant to state June 2024 (not "June 2022").

Permanent Rate

Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#12

REQUEST

During June 2022⁵, were the peakers some of the highest cost per MWh units available for dispatch? If not, explain.

RESPONSE

Yes. In June 2024, the peakers were some of the highest cost per MWh units available for dispatch.

⁵ LUMA's response assumes the request meant to state June 2024 (not "June 2022").

Permanent Rate

Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#13

REQUEST

About what was the increase in fuel costs on June 3 from the decline in AES 2 generation starting at 7am which coincided with the increased use of the peakers and other higher cost generation? Provide LUMA's best estimate and show how it was calculated.

RESPONSE

LUMA notes the decrease in AES 2 output is unrelated to the June 2 outage event. At 7:00 a.m., AES 2's output dropped significantly from 225 to 75 MW within a 15-minute window. In accordance with LUMA's Reserve Policy Criteria⁶, peaker units were synchronized. LUMA's actions were consistent with the approved System Operating Principles and were prudent because generation was necessary to maintain system frequency and to accommodate demand (i.e., the morning ramp). These units continued to produce electricity as a result of the reduced generation from renewables experienced that day. In other words, dispatching these units was necessary to maintain service and system stability.

Please refer to the table below showing a summary of the generators on June 2 timestamped at 7:00 a.m. (before the decline in AES 2), 7:30 a.m. (when the peaker units were synced), and 4:30 p.m. (when AES 2 came back to normal expected output. LUMA notes the "buckets" of generators are the same as those in Figure 1-1 of the December 4 Motion.⁷

Table 13-1. Fuel Cost Differential on June 3rd before, during, and after AES 2 Decline

Timestamp	Variable	AES	Peakers	Aguirre	Aguirre Combined Cycle	Costa Sur	EcoElectrica	Palo Seco	Renewables	San Juan
June 3, 2024, at 7:00 a.m.	MWm	225	289	461	0	476	445	0	37	290
June 3, 2024, at 7:00 a.m.	Expenditure per MWm	\$626	\$766	\$1,434	\$0	\$1,207	\$938	\$0	\$100	\$733
June 3, 2024, at 7:00 a.m.	Cost per MWm	\$2.78	\$2.65	\$3.11		\$2.54	\$2.11		\$2.70	\$2.53

⁶ See Procedure 14 "Policy on Reserves" of LUMA's Submittal and Request for Approval of System Operational Principles of February 25, 2021, Docket No. NEPR-MI-2021-0001.

⁷ See Motion in Compliance with the November 22nd Order, Exhibit 1, Section 1.2 24-Hour Timeline, p. 5.

Permanent Rate

Timestamp	Variable	AES	Peakers	Aguirre	Aguirre Combined Cycle	Costa Sur	EcoElectrica	Palo Seco	Renewables	San Juan
June 3, 2024, at 7:30 a.m.	MWm	16	474	474	0	488	380	0	48	291
June 3, 2024, at 7:30 a.m.	Expenditure per MWm	\$44	\$1,410	\$1,475	\$0	\$1,238	\$800	\$0	\$123	\$735
June 3, 2024, at 7:30 a.m.	Cost per MWm	\$2.78	\$2.97	\$3.11		\$2.54	\$2.11		\$2.59	\$2.53
June 3, 2024, at 4:00 p.m.	MWm	222	428	534	60	514	351	0	84	291
June 3, 2024, at 4:00 p.m.	Expenditure per MWm	\$616	\$1,258	\$1,663	\$279	\$1,304	\$740	\$0	\$193	\$736
June 3, 2024, at 4:00 p.m.	Cost per MWm	\$2.78	\$2.94	\$3.11	\$4.63	\$2.54	\$2.11		\$2.29	\$2.53

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Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#14

REQUEST

As for the Breakout of Scheduled and Actual Incurred Fuel Costs:

Refer to the information from LUMA on page 7. Do the dollar amounts in the "Preliminary Schedule" and "Actuals" columns include both fuel and purchased power costs for each of the listed dates? If not, provide amounts that include both fuel and purchased power costs for each of the listed dates.

RESPONSE

Yes, the dollar amounts in the preliminary schedule and the actual columns include full production costs, which consists of fuel plus variable O&M plus fixed O&M plus purchased power costs.

The unit commitment schedule dispatches plants according to their marginal costs, which is fuel plus variable O&M - but a retrospective review should include full production costs.

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Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#15

REQUEST

LUMA states that the June 2 and June 12 events did not lead to increased generating costs to customers. Please review the following table and confirm the amounts shown and the fact that power costs per MWh were higher on each date. If LUMA believes anything in the following table is not 100% correct, explain and provide a placement table:

Summary of Total and Per-MWH Power Costs from June 2 and June 12, 2024 Outages
Using Information Supplied by LUMA in LUMA's December 4, 2024 Motion on page 7

Event Date	Preliminary Schedule			Actual			Differences: Actual - Scheduled			
	Cost	MWh	Cost/MWh	Cost	MWh	Cost/MWh	Cost	MWh	Cost/MWh	% higher
6/2/2024	\$ 9,228,032	57,919	\$ 159.33	\$ 8,524,598	52,978	\$ 160.91	\$ (703,434)	(4,941)	\$ 1.58	1.0%
6/12/2024	\$ 10,560,691	66,881	\$ 157.90	\$ 8,969,979	55,416	\$ 161.87	\$(1,590,712)	(11,465)	\$ 3.96	2.5%
6/13/2024	\$ 10,631,413	66,480	\$ 159.92	\$ 9,670,015	57,980	\$ 166.78	\$ (961,398)	(8,500)	\$ 6.86	4.3%
3-Day Sums	\$ 30,420,136	191,280	\$ 159.03	\$ 27,164,592	166,374	\$ 163.27	\$(3,255,544)		\$ 4.24	2.7%
			Average			Average				

RESPONSE

The table is materially accurate. However, LUMA notes some minor differences from the table provided above. Those cells are highlighted in yellow. LUMA assumes the differences are likely due to rounding.

Summary of Total and Per-MWH Power Costs from June 2 and June 12, 2024 Outages
Using LUMA's own Source Data from LUMA's December 4, 2024 Motion on page 7

Event Date	Preliminary Schedule			Actual			Differences: Actual - Scheduled			
	Commit Cost	Commit MWh	Cost/MW	Actual Cost	Actual MWh	Cost/MWh	Cost	MWh	Cost/MWh	% higher
2-Jun-24	\$9,228,032	57,919	\$ 159.33	\$8,524,598	52,978	\$160.91	(\$703,434)	(4,941)	1.58	1.0%
12-Jun-24	\$10,560,691	66,881	\$ 157.90	\$8,969,979	55,416	\$161.87	\$(1,590,712)	(11,465)	3.96	2.5%
13-Jun-24	\$10,631,413	66,480	\$ 159.92	\$9,670,015	57,980	\$166.78	(\$961,398)	(8,500)	6.86	4.3%
3-day sums	\$30,420,136	\$191,280	\$ 159.05	\$27,164,592	\$166,374	\$163.19	(\$3,255,544)		\$4.14	2.6%
			Average			Average				

LUMA further reiterates that the outage on June 2 in Santa Isabel did not affect economic dispatch or the cost per MWh shown in either of the tables. Therefore, any difference between forecasted and actual MWh cost is attributable solely to external factors. Moreover, on an ordinary basis, forecast costs vary from actual costs as a result of multiple external factors, including but not limited to, temperature variations, rainfall, amount of rooftop solar generation, as well as the operational availability of individual

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plants on a daily or hourly basis.⁸ While comparing actual results to preliminary figures indicates changes, such changes cannot conclusively and exclusively be attributable to an outage.

⁸ See Motion in Compliance with the November 22nd Order, Exhibit 1, Section 3.0 Breakdown of Incurred Fuel Costs, p. 7.

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Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#16

REQUEST

What is the line loss factor that LUMA used in June 2024 to convert from generation MWH to sales MWH? Conversely, what was the relationship in June 2024 between electric utility sales MWHs and electric generation MWHs?

RESPONSE

Due to Puerto Rico's size and the length of transmission segments, LUMA does not consider line losses in any conclusions presented in this RFI. LUMA seeks additional clarification from the Energy Bureau as to the nature and scope of information being sought. Any line losses that would be assumed in one scenario would generally be equal and proportional to any line losses assumed in a different scenario.

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Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#17

REQUEST

What amounts of lower MWh electric sales to customers correspond to each of the lower amounts of MWh generation on each outage affected day, June 2, 12, and 13? Explain and show calculations.

RESPONSE

This type of assessment is feasible but will necessitate additional resources and time, as conducting such a detailed assessment demands significant resources from LUMA and cannot be accomplished within the current response timeframe. LUMA anticipates that an assessment of this scale would take, at a minimum, six to eight weeks to complete. LUMA reiterates that despite the higher costs per MWh on the days in question, the system did not incur fuel cost costs that were higher than projected.

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Responses in Compliance with December 6, 2024, Resolution and Order

NEPR-MI-2020-0001

Response: RFI-LUMA-MI-2020-0001-20241206-PREB-#18

REQUEST

What amounts of lost total revenue, lost base rate revenue and lost FCA and PPCA revenue are associated with the lower MWH generation and lower corresponding MWH electric sales to customers on each outage-impacted date, June 2, 12 and 13, 2024? Explain and show calculations.

RESPONSE

Please refer to the response provided in RFI-LUMA-MI-2020-0001-20241206-PREB-#17.