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

IN RE: IN RE: PUERTO RICO ELECTRIC POWER AUTHORITY PERMANENT RATE	**CASE NO. NEPR-MI-2020-0001** **SUBJECT: Submission in Compliance with Bench Orders issued during Technical Conference of September 22, 2021, Request for Brief Extension of Time, Submission of Revised English-Language Presentation and Spanish-Language Version of LUMA's Revised Presentation, and Request for Confidential Treatment**

MOTION IN COMPLIANCE WITH BENCH ORDERS ISSUED DURING TECHNICAL CONFERENCE OF SEPTEMBER 22, 2021, REQUEST FOR BRIEF EXTENSION OF TIME, MOTION SUBMITTING REVISED ENGLISH-LANGUAGE PRESENTATION AND SPANISH-LANGUAGE VERSION OF LUMA'S REVISED PRESENTATION, AND REQUEST FOR CONFIDENTIAL TREATMENT

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:

I. Submission in Compliance with Bench Orders and Submitting Revised Presentation

Per a Resolution and Order issued by this Puerto Rico Energy Bureau ("Energy Bureau") on September 17, 2021, a technical conference was held in this proceeding on September 22, 2021, to discuss LUMA's *Motion Submitting of FCA and PPCA Quarterly Reconciliations and Proposed Factors and Request for Confidential Treatment* filed on September 16, 2021, involving proposed Fuel Charge Adjustment ("FCA") and Purchased Power Charge Adjustment ("PPCA") reconciliations for the months of June, July, and August, 2021, and the proposed factors for the

FCA, PPCA and FOS riders to be applied from October 1, 2021 until December 31, 2021 ("September 16th Submission").

During the technical conference, the Energy Bureau issued several bench orders directing LUMA to file by September 27, 2021 at noon: (1) an explanation of LUMA's plan to accurately bill those customers who were not billed during the quarter of June through August 2021 and how LUMA will avoid double counting and ensure that customers are billed under the rates applicable for the June through August quarter, as well as measures to ensure that billing issues are corrected in the future; (2) whether LUMA's insurance program may include coverage for use of the peaker units due to outages during the June through August 2021 quarter; (3) add the formulas in the *incremental cost analysis Jun, Jul and Aug 2021_v2_Formulas* spreadsheet filed on September 17, 2021, July tab, to align to the consumption columns in the Quarterly reconciliation; and (4) revise the *comportamiento de generación* spreadsheet, *eficiencia tab*, to incorporate the prior methodology which is a rolling average of four months for the years 2020 and 2021.

In compliance with the bench orders issued by the Energy Bureau during the technical conference of September 22, 2021, LUMA submits as Exhibit 1, its responses to order 1 on non-billed sales.

Also in compliance with the bench orders issued by the Energy Bureau during the technical conference of September 22, 2021, LUMA submits with this Motion, the file entitled FCA &PPCA Revisions 21.09.27_Confidential that includes the revised incremental cost analysis with formulae, in the spreadsheet entitled Incremental Cost Analysis Jun, Jul and Aug 2021_v2_Formulas; the QUARTER RECONCILIATION FILE JUN-JUL-AUG 2021; the revised *comportamiento de generación* spreadsheet with formulae, and the revised OCTOBER-DECEMBER 2021

Factors_v2. LUMA requests that the Energy Bureau keep and maintain the file entitled FCA &PPCA Revisions 21.09.27_Confidential, under seal of confidentiality.

In the file entitled FCA &PPCA_Revisions 21.09.27 _ values, LUMA is filing public versions of the revised incremental cost analysis spreadsheet; the revised *comportamiento de generación* spreadsheet; and the revised OCTOBER-DECEMBER 2021 Factors_v2 spreadsheet. It bears noting that the QUARTER RECONCILIATION FILE JUN-JUL-AUG 2021 submitted publicly on September 16, 2021, is not resubmitted in public form today as it has not changed. Said spreadsheet is included in the confidential filing today, as the links in the formulas between this spreadsheet and the incremental costs spreadsheet were updated.

II. Revisions to Consumption Forecast and Proposed Factors

As shown in the spreadsheet entitled *comportamiento de generación* spreadsheet, *eficiencia tab*, the forecasted consumption was amended using the formula for the efficiencies that was previously used. The efficiencies were determined using a four-month rolling average from the years 2020 and 2021. In LUMA's filing of September 16, 2021, the formula was used for October through December with a rolling average in which the average was wrongly locked to July 2021. The consumption for Q2 FY2022 increased from 4,204.3 GWh to 4,213.30 GWh, an increase of 9.0 GWh or 0.21%.

Secondly, the revisions to the *comportamiento de generación* spreadsheet, *eficiencia tab*, to incorporate the prior methodology which is a rolling average of four months for the years 2020 and 2021, resulted in an adjustment to the proposed FCA, PPCA and FOS rider factors. The FCA factor for October to December was revised and is lower than the initial filing of September 16, 2021. It decreased from 13.6342¢ to 13.6050¢; decrease of 0.0262¢. Similarly, the PPCA factor

was revised and decreased from 2.8847¢ to 2.8785¢; a decrease of 0.0062¢. The net impact compared with the factors from Q1FY2022 is an increase to 2.46¢, compared to the 2.49¢ increase that was reported in the filing of September 16, 2021.

The revised excel spreadsheet entitled "OCTOBER-DECEMBER 2021 Factors_v2" that is submitted today, includes the calculations for the proposed FCA, PPCA and FOS factors.

LUMA respectfully requests that the Energy Bureau approve the following factors to apply for the next quarter from October 1, 2021 until December 31, 2021:

FCA- $0.136050

PPCA- $0.028785

FOS- $0.022320

III. Request for Brief Extension of Time to Comply with Bench Order on insurance coverage

It is informed that LUMA requires a brief extension of time to comply with the bench order to inform whether insurance coverage could be available to cover some of the costs of use of the peaker units in connection with load shed events and outages during the quarter of June through August 2021. LUMA's personnel in charge of the insurance program understand that to provide a response on potential insurance coverage for recent outages, consideration should be given to the circumstances of the outages. That analysis, in turn, requires additional conversations with personnel from the Puerto Rico Electric Power Authority (PREPA) in charge of generation. During the past days, particularly, throughout the past weekend, PREPA personnel have been handling pressing issues regarding generation plants. *See* Motion filed on September 27, 2021 by PREPA entitled Solicitud Urgente de Breve Extensión de Término para Cumplir con Orden Notificada el 24 de septiembre de 2021, paragraph 2. Consequently, collaborative efforts to gather

relevant information to answer the Energy Bureau's bench order on insurance coverage have been delayed.

LUMA respectfully requests a brief extension until September 28, 2021 at 5:00 pm, to provide its response to the Energy Bureau's bench order on insurance coverage. This request is filed in good faith. LUMA understands that the requested extension to provide information on insurance coverage should not delay the process of reconciliations nor setting the FCA, PPCA and FOS rider factors that will be applied from October 1, 2021 through December 31, 2021.

IV. Submission of Revised English-Language Presentation and Spanish-Language version.

On September 22, 2022, prior to the technical conference, LUMA submitted via motion, a pdf version of the Power Point™ presentation that it proposed to offer during the September 22nd technical conference ("September 22nd Submission of English-Language Presentation"). The presentation was submitted in the English Language and was developed to aid analysis and discussions on the aforementioned September 16th Submission.

Both in the September 22nd Submission of the English-Language Presentation and during the technical conference, LUMA, through the undersigned counsel, informed that it was preparing a Spanish-Language version of the presentation and that it was employing best efforts to file said version with the Energy Bureau to complete the record.

As Exhibit2 to this Motion, LUMA submits a revised version of the English-Language presentation that was offered during the technical conference of September 22, 2021 that includes the following revisions: (1) Slide 4, changed June 2020 to June 2021 which is the correct year when the Energy Bureau approved the annual reconciliation riders for the period between July 2021 and June 2022; (2) moved slide 23 to behind slide 18 as it was related to FCA costs, not

overall costs and deleted title slide 22; (3) in the prior slide 33, now slide 32, added the letter "d" to word "Propose" in the title; (4) in the prior slide 38, now slide 37, changed tornado charges so that orange is "increase" and blue is "decrease"; and (4) in the prior slide 38, now slide 37, corrected the sensitivity for planned outage duration to 25%; not 10% as originally indicated. Finally, the presentation was updated to incorporate revisions included in the spreadsheets *comportamiento de generación* and OCTOBER-DECEMBER 2021 Factors_v2 that are submitted today.

As Exhibit 3 to this Motion, LUMA submits the Spanish-Language version of the revised presentation for the September 22nd technical conference.

V. Request for Confidential Treatment of the File Exhibit A-Confidential

A. Applicable Laws and Regulation to submit information confidentially before the Bureau.

The bedrock provision on management of confidential information that is filed before this Bureau, is Section 6.15 of Act 57-2014, known as the "Puerto Rico Energy Transformation and Relief Act." It provides, in pertinent part, that: "[i]f any person who is required to submit information to the Energy Commission believes that the information to be submitted has any confidentiality privilege, such person may request the Commission to treat such information as such . . . . " 22 LPRA §1054n. If the Bureau determines, after appropriate evaluation, that the information should be protected, "it shall grant such protection in a manner that least affects the public interest, transparency, and the rights of the parties involved in the administrative procedure in which the allegedly confidential document is submitted." *Id.*, Section 6.15 (a).

Relatedly, in connection with the duties of electric power service companies, Section 1.10 (i) of Act 17-2019 provides that electric power service company shall provide information

requested by customers, except for confidential information in accordance with the Rules of Evidence of Puerto Rico."

Access to the confidential information shall be provided "only to the lawyers and external consultants involved in the administrative process after the execution of a confidentiality agreement." *Id.* Section 6.15(b). Finally, Act 57-2014 provides that this Energy Bureau "shall keep the documents submitted for its consideration out of public reach only in exceptional cases. In these cases, the information shall be duly safeguarded and delivered exclusively to the personnel of the [Bureau] who needs to know such information under nondisclosure agreements. However, the [Bureau] shall direct that a non-confidential copy be furnished for public review". *Id.* Section 6.15 (c).

The Bureau's Policy on Confidential Information details the procedures that a party should follow to request that a document or portion thereof, be afforded confidential treatment. In essence, the referenced Policy requires identification of the confidential information and the . . . filing of a memorandum of law explaining the legal basis and support for a request to file information confidentially. *See* CEPR-MI-2016-0009, Section A, as amended by the Resolution of September 16, 2016, CEPR-MI-2016-0009. The memorandum should also include a table that identifies the confidential information, a summary of the legal basis for the confidential designation and a summary of the reasons why each claim or designation conforms to the applicable legal basis of confidentiality. *Id.* paragraph 3. The party who seeks confidential treatment of information filed with the Bureau must also file both "redacted" or "public version" and an "unredacted" or "confidential" version of the document that contains confidential information. *Id.* paragraph 6.

The aforementioned Bureau policy on management of confidential information in procedures states the following with regards to access to validated Trade Secret Information:

> 1. Trade Secret Information
> Any document designated by the [Energy Bureau] as Validated Confidential Information because it is a trade secret under Act 80-2011 may only be accessed by the Producing Party and the [Bureau], unless otherwise set forth by the [Bureau] or any competent court.

Id. Section D (on Access to Validated Confidential Information).

Relatedly, Bureau Regulation No. 8543, *Regulation on Adjudicative, Notice of Noncompliance, Rate Review, and Investigation Proceedings*, includes a provision for filing confidential information in adjudicatory proceedings before this honorable Bureau. To wit, Section 1.15 provides that, "a person has the duty to disclose information to the [Bureau] considered to be privileged pursuant to the Rules of Evidence, said person shall identify the allegedly privileged information, request the [Bureau] the protection of said information, and provide supportive arguments, in writing, for a claim of information of privileged nature. The [Bureau] shall evaluate the petition and, if it understands [that] the material merits protection, proceed accordingly to . . . Article 6.15 of Act No. 57-2015, as amended." *See also* Bureau Regulation No. 9137 on *Performance Incentive Mechanisms,* Section 1.13 (addressing disclosure before the Bureau of Confidential Information and directing compliance with Resolution CEPR-MI-2016-0009).

B. Grounds for Confidentiality

Under the Industrial and Trade Secret Protection Act of Puerto Rico, Act 80-2011, 10 LPRA §§ 4131-4144, industrial or trade secrets are deemed to be any information:

> (a) That has a present or a potential independent financial value or that provides a business advantage, insofar as such information is not common knowledge or readily accessible through proper means by persons who could make a monetary profit from the use or disclosure of such information, and
> (b) for which reasonable security measures have been taken, as circumstances dictate, to maintain its confidentiality.

Id. §4131, Section 3 Act. 80-2011.[1] Trade secrets include, but are not limited to, processes, methods and mechanisms, manufacturing processes, formulas, projects or patterns to develop machinery and lists of specialized clients that may afford an advantage to a competitor. *See* Statement of Motives, Act 80-2011. As explained in the Statement of Motives of Act 80-2011, protected trade secrets include any information bearing commercial or industrial value that the owner reasonably protects from disclosure. *Id. See also* Article 4 of Puerto Rico's Open Data Law, Act 122-2019 (exempting the following from public disclosure: (1) commercial or financial information whose disclosure will cause competitive harm; (2) trade secrets protected by a contract, statute or judicial decision (3) private information of third parties). *See* Act 122-2019, Articles 4 (ix) and (x) and (xi)).

The Puerto Rico Supreme Court has explained that the trade secrets privilege protects free enterprise and extends to commercial information that is confidential in nature. *Ponce Adv. Med. v. Santiago Gonzalez,* 197 DPR 891, 901-02 (2017) (citation omitted).

The excel spreadsheets that have been submitted today in native form and with formulae intact in the file entitled FCA &PPCA Revisions 21.09.27_Confidential are protected as trade

[1] Relatedly, Rule 513 of the Rules of Evidence of Puerto Rico provides that the owner of a trade secret may invoke the privilege to refuse to disclose, and to prevent another person, from disclosing trade secrets, provided that these actions do not tend to conceal fraudulent actions or lead to an injustice. 32 P.R. Laws Annot. Ap. VI, R. 513. If a court of law mandates disclosure of a trade secret, precautionary measures should be adopted to protect the interests of the owner of the trade secret. *Id.*

secrets. They have commercial value to LUMA and PREPA as they reveal confidential processes and analysis to produce calculations in support of the public filings of the proposed FCA, PPCA and FOS factors. LUMA and PREPA keep and maintain these native files confidentially and do not disclose them to the public nor to unauthorized third parties.

LUMA appreciates the importance of placing the Energy Bureau in the position of reviewing the reconciliations and fixing the annual factors. However, to avoid future competitive harms that could ensue if original format spreadsheets with formulae and calculations are publicly disclosed, LUMA respectfully requests that the excel files submitted today in the file entitled FCA &PPCA Revisions 21.09.27_Confidential, be received, kept and maintained confidentially by this Energy Bureau.

The confidential spreadsheets included in the file entitled FCA &PPCA Revisions 21.09.27_Confidential are: (1) documents with commercial and financial value, and (2) involve data that **is not common knowledge or readily accessible** by third parties who may seek to profit from the data or gain commercial advantages. The spreadsheets are business documents showing processes, methods and mechanisms, that garner protection under Act 80-2011. They are original documents that have not been disclosed to the third parties and whose disclosure would reveal sensitive and private commercial processes employed by LUMA and PREPA. The disclosure of this sensitive commercial information would place LUMA and PREPA in vulnerable and disadvantageous commercial positions that could affect LUMA customers and impact rates. Reasonable measures have been taken to protect the files from disclosure and avoid unauthorized access by third parties that could seek to gain commercial advantages. It is respectfully submitted that the spreadsheets included in the file entitled FCA &PPCA Revisions 21.09.27_Confidential

are sensitive commercial information and trade secrets protected from public disclosure by Act 80-2011.

WHEREFORE, LUMA respectfully requests that the Energy Bureau **accept** the revised English-Language presentation for the technical conference of September 22, 2021 and the Spanish-Language of the presentation that are filed in pdf format as Exhibit 1to this Motion; **accept** the responses to the bench orders that were issued on September 22, 2021, **keep confidential** the file FCA &PPCA Revisions 21.09.27_Confidential, that is submitted with this Motion; **grant** LUMA a brief extension of time until September 28, 2021 at 5:00 pm to submit its response to the Energy Bureau's bench order on insurance coverage for use of peaker units due to outages; and **deem** that LUMA complied with the bench orders issued during the technical conference of September 22, 2021.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 27th day of September 2021.

DLA Piper (Puerto Rico) LLC
500 Calle de la Tanca, Suite 401
San Juan, PR 00901-1969
Tel. 787-945-9107
Fax 939-697-6147

/s/ Margarita Mercado Echegaray
Margarita Mercado Echegaray
RUA NÚM. 16,266
margarita.mercado@us.dlapiper.com

Exhibit 1

Response on Net Billed Sales pdf attached and excel spreadsheet to be submitted separately

Billing

RECONCILIATION IN DECEMBER 2021

LUMA proposes that the reconciliation of unbilled amounts be done only in December 2021 to reconcile above average, unbilled amounts in June, July and August. LUMA does not recommend continuing this calculation beyond December 2021. Please find attached the proposed draft template for reconciling the unbilled sales estimated for this quarter (*FCA and PPCA Not Billed_Reconciliation_Example.xls*). Note: the proposed draft template only contains illustrative values as LUMA does not currently have actual billed sales for September, October, or November.

LUMA proposes comparing estimated unbilled amounts with billed sales for each month and each unique account not billed in June through August. The following reconciliation steps will be followed.

1) The actual total billed sales for FCA and PPCA in September-November for consumption in the months of June-August will be removed from the Billed Sales for September-November.

2) The difference between the estimated non-billed sales for June-August and the billed sales for June-August (billed in September – November) will be used to adjust the quarterly reconciliation as follows: if the estimated billed sales are greater than the actual billed sales, this will result in a recovery and if the estimated billed sales are less than actual billed sales, this will result in a return.

FCA AND PPCA BILLED SALES IN SEPTEMBER – NOVEMBER

The billing system is programmed to bill a customer for the rates that are in place at the time the energy was consumed. LUMA employees are trained to make corrections to customer accounts if they are manually estimating consumption into separate months. A comprehensive effort, including Quality Assurance/Quality Control review was made in September to bill the consumption in the correct month. This process will continue, and the correction will manually adjust consumption into separate months. Therefore, the billing system will apply the rates applicable to the period when the consumption occurred.

CAUSE OF UNBILLED CUSTOMERS

Historically, billing of customers relied on a manual, undocumented batch process to complete and close out billing cycles. In July and June, there were some delays due to configuration of the customer care and billing system. In August, a manual step was missed causing one of these batch processes to not close for four cycles. LUMA has identified these system configuration issues and is resolving them. LUMA reviewed the manual process and created an automated process to replace these steps that were dependent on individual intervention and susceptible to errors. LUMA will continue to validate the batch process completion to ensure the automated process is functioning as expected.

Exhibit 2
Revised English-Language Presentation
Technical Conference, September 22, 2021

LUMA

Technical Conference

October to December 2021 – Proposed Factors
NEPR-MI-2020-0001

September 22, 2021

LUMAPUERTORICO.COM

LUMA Proposed Factors

Agenda

1. Fuel Charge Adjustment and Purchase Power Charge Adjustment in relation to Customer Rates
2. Summary of Calculation for FCA and PPCA Factors
   a. Q2 FY2022 Fuel and Purchased Power Forecast
   b. Reconciliation from Jun-Aug FY2022
   c. Jun-Aug Not Billed Adjustment
   d. Retail Sales (kWh) Forecast
3. Proposed Factors and Bill Impact
4. Analysis of Risks in the Forecast

Fuel Charge Adjustment and Purchase Power Charge Adjustment in relation to Customer Rates

Permanent Rate Composition

Base Rate

- Cost by kWh does not change, until PREB approves a new Rate Order
  - Customer Fix Charge
  - Energy Charge
  - Demand Charge

Annual Reconciliation Riders

- Approved by PREB in June 2021 for the period between July 2021 to June 2022
  - CILT and Subsidies

Quarterly Reconciliation Adjustments

- Adjusted and approved quarterly
  - Fuel Charge Adjustment (FCA)
  - Purchased Power Charge Adjustment (PPCA)

Fuel and Purchased Power Charges Definition and Formula

- The Fuel Charge Adjustment (FCA) is a reconciling rider mechanism which recovers the cost of fuel consumed in PREPA's generating units[1] on a quarterly basis.

$$FCA = \frac{Total\ Cost\ of\ Fuel \pm Prior\ Period\ Reconciliation}{Aplicable\ Retail\ kWh\ Sales}$$

- The Purchased Power Charge Adjustment (PPCA) is a reconciling rider mechanism which recovers the cost of power purchased from Independent Power Producers on a quarterly basis.

$$PPCA = \frac{Total\ Purchased\ Power \pm Prior\ Period\ Reconciliation}{Aplicable\ Retail\ kWh\ Sales}$$

Notes: **Total Cost of Fuel** = Forecast cost of fuel purchased for all PREPA's generating facilities for the three months (October, November and December) in the quarterly time period. **Total Purchased Power** = Forecast of the cost of purchased sources of energy and capacity for the three months (October, November and December) in the quarterly time period. **Prior Period Reconciliation** = Revenues over or under recovered from the first two month from the actual quarter (July and August) and the last from the prior quarter (June). **Applicable Retail kWh Sales** = Forecast energy sales to all classes of customers, including to all net metering customers.

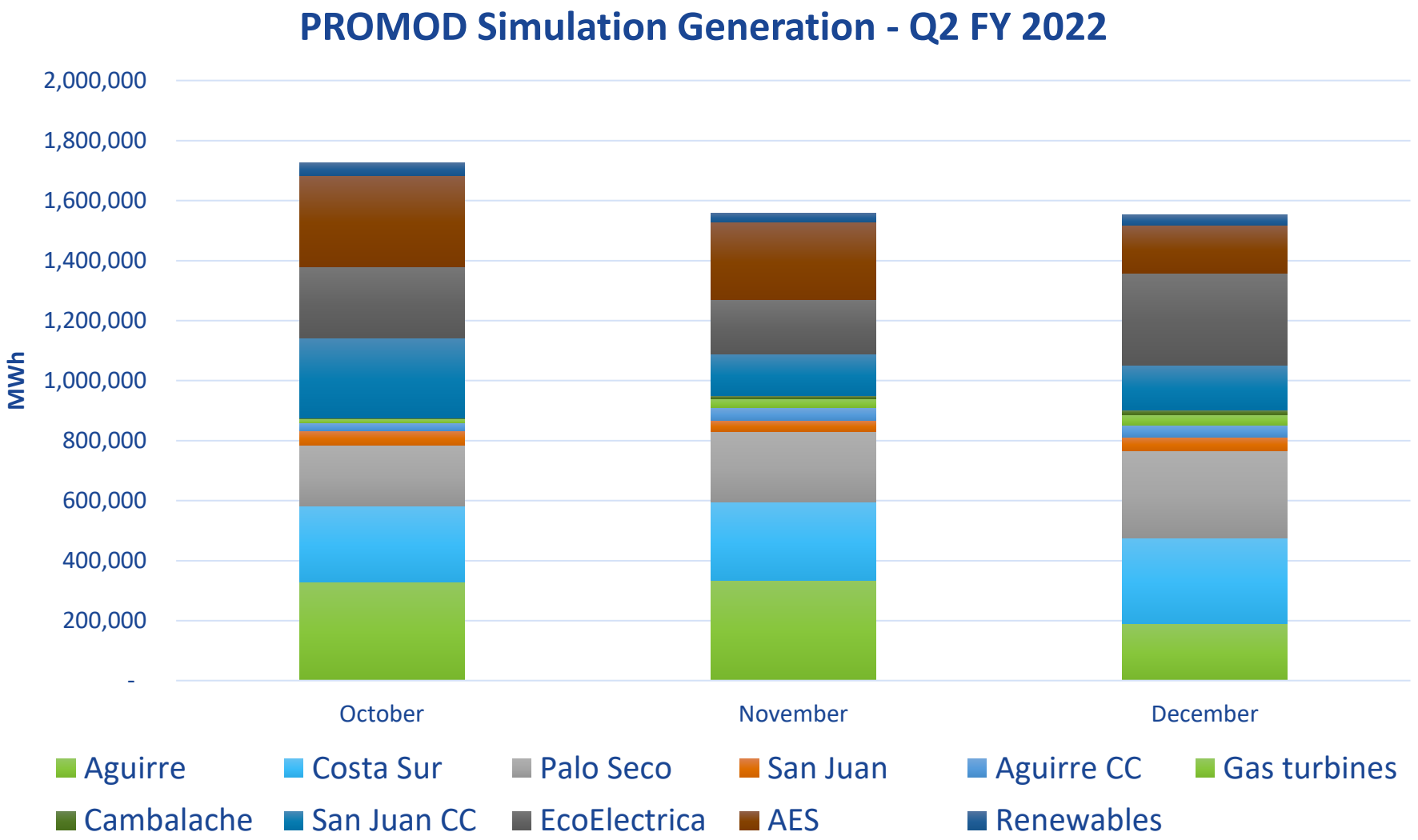
[1] Also includes fuel for EcoElectrica.

Summary of Calculation for FCA and PPCA Factors

Summary of Calculation for FCA and PPCA Factors

Q2 FY2022 Fuel and Purchased Power Forecast

PROMOD Overview



- Forecast generation dispatch based on least cost security constrained optimization of Generation units and dispatch to supply electric demand.

Summary of Calculation for FCA and PPCA Factors

Reconciliation from Jun-Aug FY2022

Reconciliation Results – Fuel Charge Adjustment (FCA) – June, July and August 2021

- Actual fuel costs for quarter were $81.7 million higher than the forecasted amounts, increasing from $420.8 to $502.6 million, or 19.4%[1]
- Billed sales for quarter related to the FCA were less than projected by $20.2 million, decreasing from $453.9 to $433.7 million, or 4.4%.
- Prior period adjustments, as determined in previous quarter (Mar-May) reconciliations, are $35.9 million.

Adjustment Clause	June 2021	July 2021	August 2021
Fuel Charge Adjustment (FCA)			
Forecasted Sales	$134,742,030.01	$156,933,972.11	$162,171,606.34
Forecast Fuel Cost	$139,426,069.35	$131,191,382.29	$150,210,900.41
Actual Billed Sales	$127,847,129.85	$149,666,218.26	$156,181,373.63
Actual Fuel Costs	$150,881,201.79	$164,804,147.65	$186,864,936.34
Prior Period Adjustment	$2,711,091.47	$16,328,363.91	$16,873,087.68
Difference	**$25,745,163.41**	**$31,466,293.30**	**$47,556,650.39**

[1] Includes Authority's use.

Reconciliation Results – Purchased Power Charge Adjustment (PPCA) – June, July and August 2021

- Actual purchased power expense for quarter was less than projected by $9.1 millones, decreasing from $141.4 to $132.3 million, or 6.4%.
- Billed sales for quarter related to the PPCA were less than projected by $6.4 million, decreasing from $144.0 to $137.6 million, or 4.4%.
- Prior period adjustments, as determined in previous quarter (Mar-May) reconciliations, are ($3.2) million.

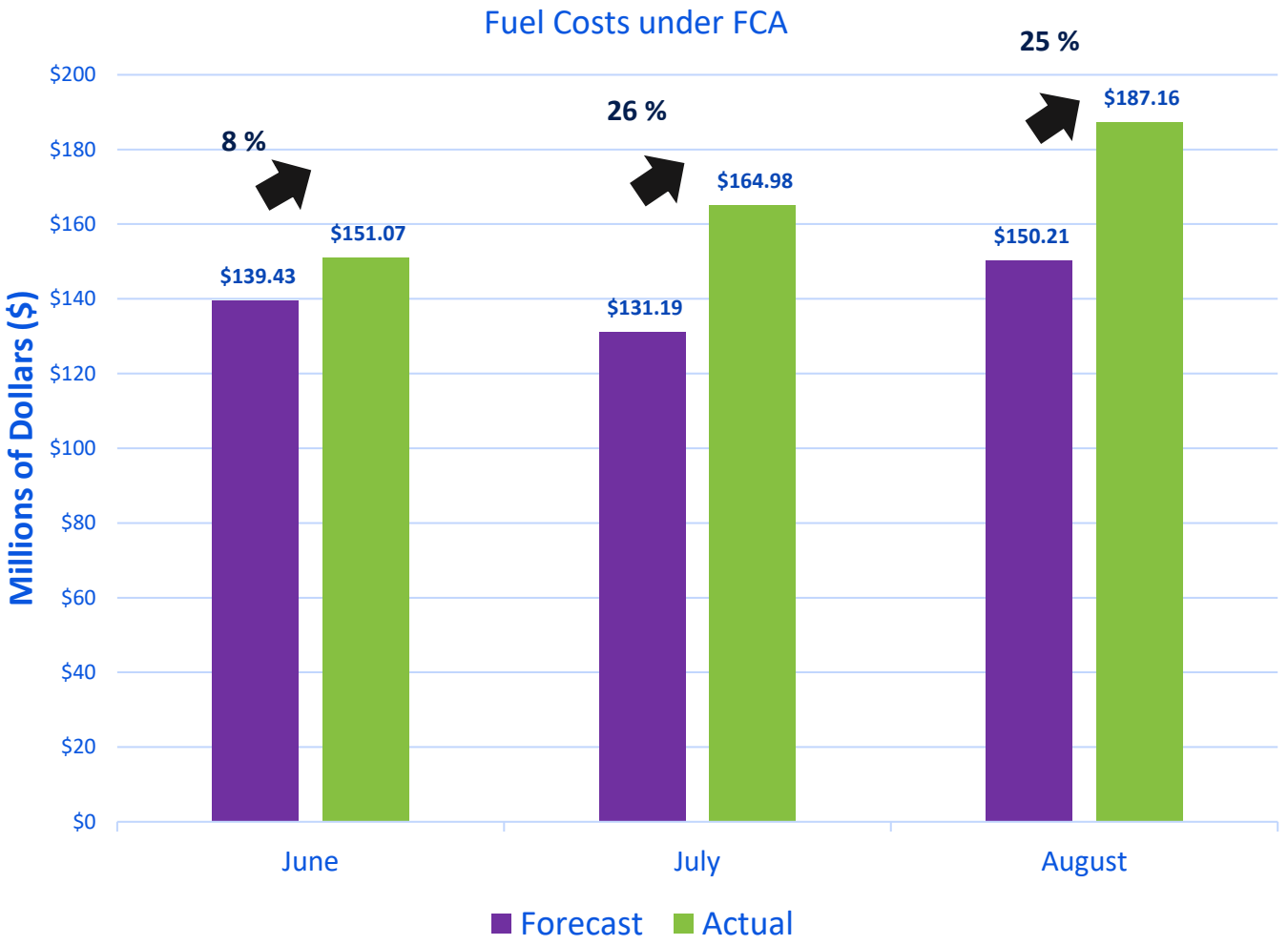
Adjustment Clause	June 2021	July 2021	August 2021
Purchased Power (PPCA)			
Forecasted Sales	$41,792,106.13	$50,267,855.24	$51,945,533.03
Forecast Purchased Power Expense	$41,328,481.59	$50,366,266.00	$49,709,380.68
Actual Billed Sales	$39,633,322.90	$47,962,549.11	$49,962,081.47
Actual Purchased Power Expense	$40,026,584.30	$46,628,412.06	$45,624,344.56
Prior Period Adjustment	($6,294,358.53)	$1,510,975.61	$1,561,382.64
Difference	**($5,901,097.13)**	**$176,838.56**	**($2,776,354.27)**

Summary of Calculation for FCA and PPCA Factors

Reconciliation from Jun-Aug FY2022

Fuel Cost Variance

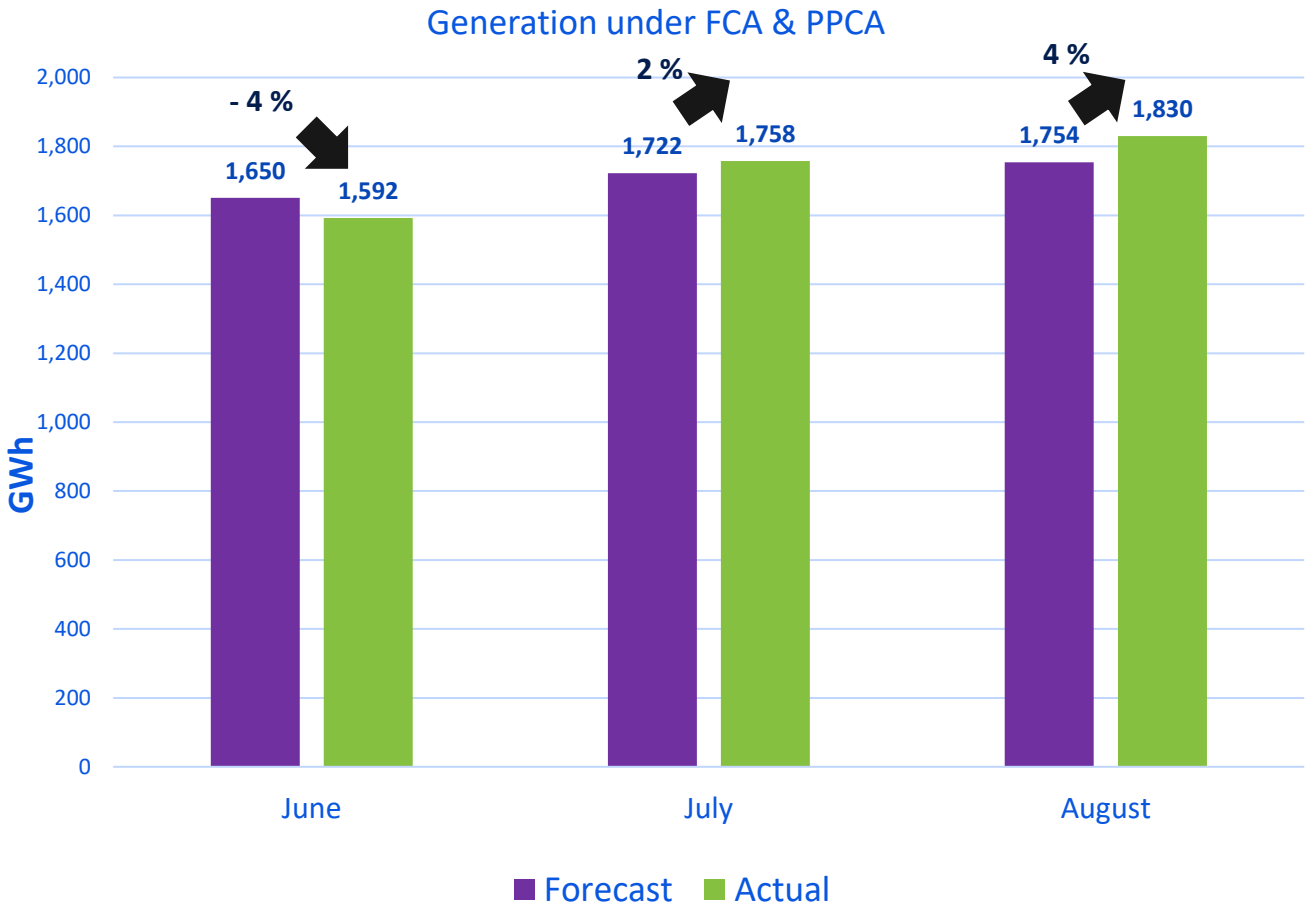
Actual fuel expenditures in Q1 FY22 were almost 20% higher than projected



3-month Total Fuel Cost Comparison:

- Forecasted: $ 420.83 Million
- Actual: $ 503.21 Million
- Variance: $82.38 Million (19.6%)

Actual electric generation provided to all customers in Q1 FY22 was 1% higher than projected

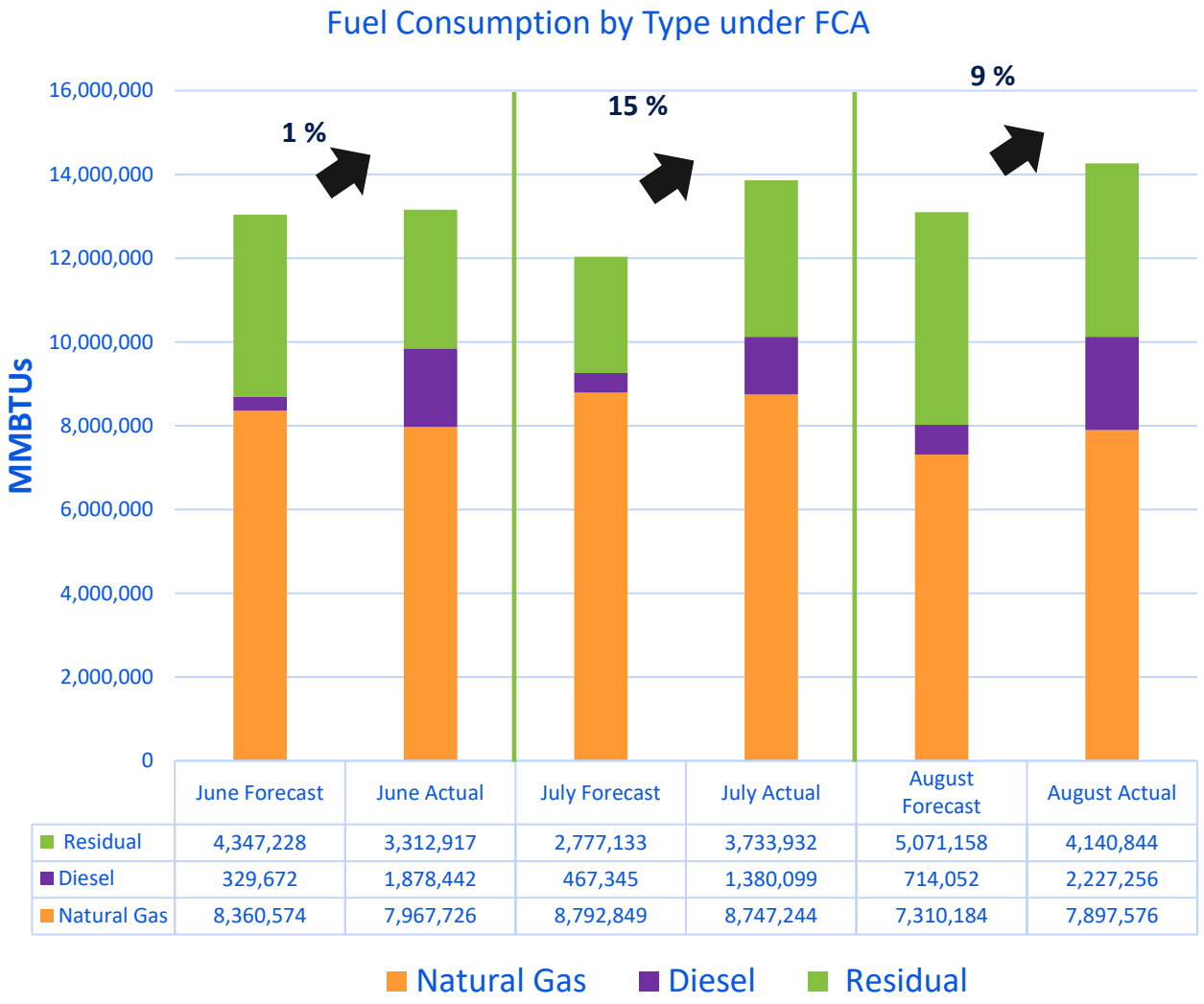


3-month Total Generation Comparison:

- Forecasted: 5,126.9 GWh
- Actual: 5,179.3 GWh
- Variance: 52.4 GWh (1%)

Forecast values represent output from June 1st PROMOD run used to estimate individual plant dispatch. Actual values in load forecast could sometimes vary slightly due to unit availability assumptions used by PROMOD

Actual fuel procured in Q1 FY22 was 8% higher than forecasted, driven by a larger consumption of diesel fuel than projected



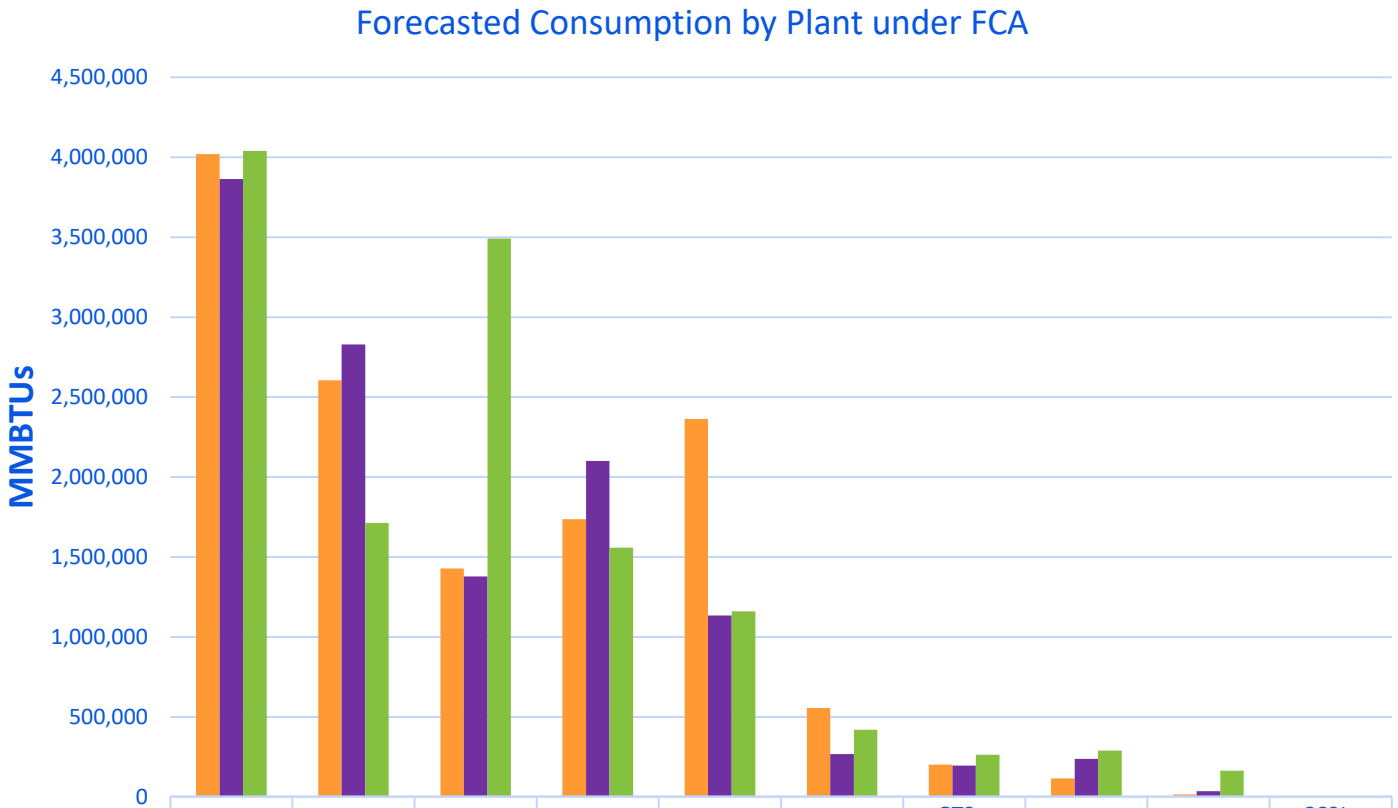
	June Forecast	June Actual	July Forecast	July Actual	August Forecast	August Actual
Residual	4,347,228	3,312,917	2,777,133	3,733,932	5,071,158	4,140,844
Diesel	329,672	1,878,442	467,345	1,380,099	714,052	2,227,256
Natural Gas	8,360,574	7,967,726	8,792,849	8,747,244	7,310,184	7,897,576

3-month Total Consumption Comparison:

- Forecasted: 38,170,192 MMbtu
- Actual: 41,286,035 MMbtu
- Variance: 3,115,842 MMbtu (8%)

Fuel Type	Forecast	Actual	% Variance
Residual	12,195,518	11,187,692	-8%
Diesel	1,511,068	5,485,797	263%
Natural Gas	24,463,605	24,612,546	1%
Total	**38,170,192**	**41,286,035**	**8%**

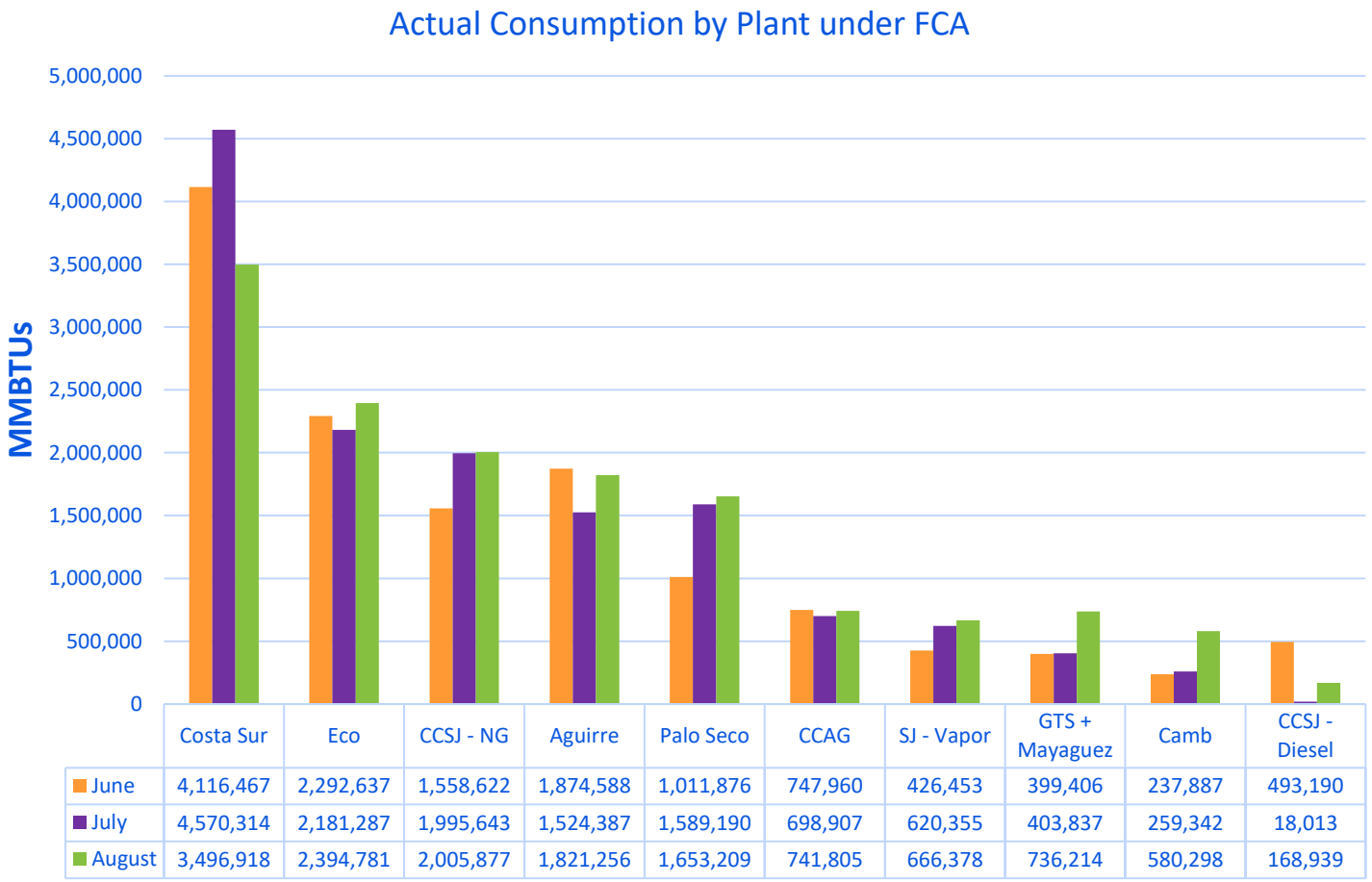
Fuel procurement forecast assumed high utilization of more efficient, base load generation sites



	Costa Sur	Eco	Aguirre	CCSJ - NG	Palo Seco	SJ - Vapor	GTS + Mayaguez	CCAG	Camb	CCSJ - Diesel
June	4,019,845	2,605,278	1,428,216	1,735,451	2,363,585	555,426	200,146	114,718	14,808	-
July	3,863,654	2,829,085	1,377,946	2,100,110	1,132,799	266,388	195,386	236,615	35,344	-
August	4,039,783	1,712,180	3,491,696	1,558,221	1,160,617	418,845	263,802	288,053	162,196	-

- PROMOD forecast optimizes expected plant utilization to determine least cost dispatch
- PROMOD maximizes production from lowest cost units first, then relies on less efficient units as needed to meet demand
- Forecasted production determined primarily by plant availability due to outage schedules
- Peaker units forecast to be used only on occasional hours as needed (high heat rate, high cost)

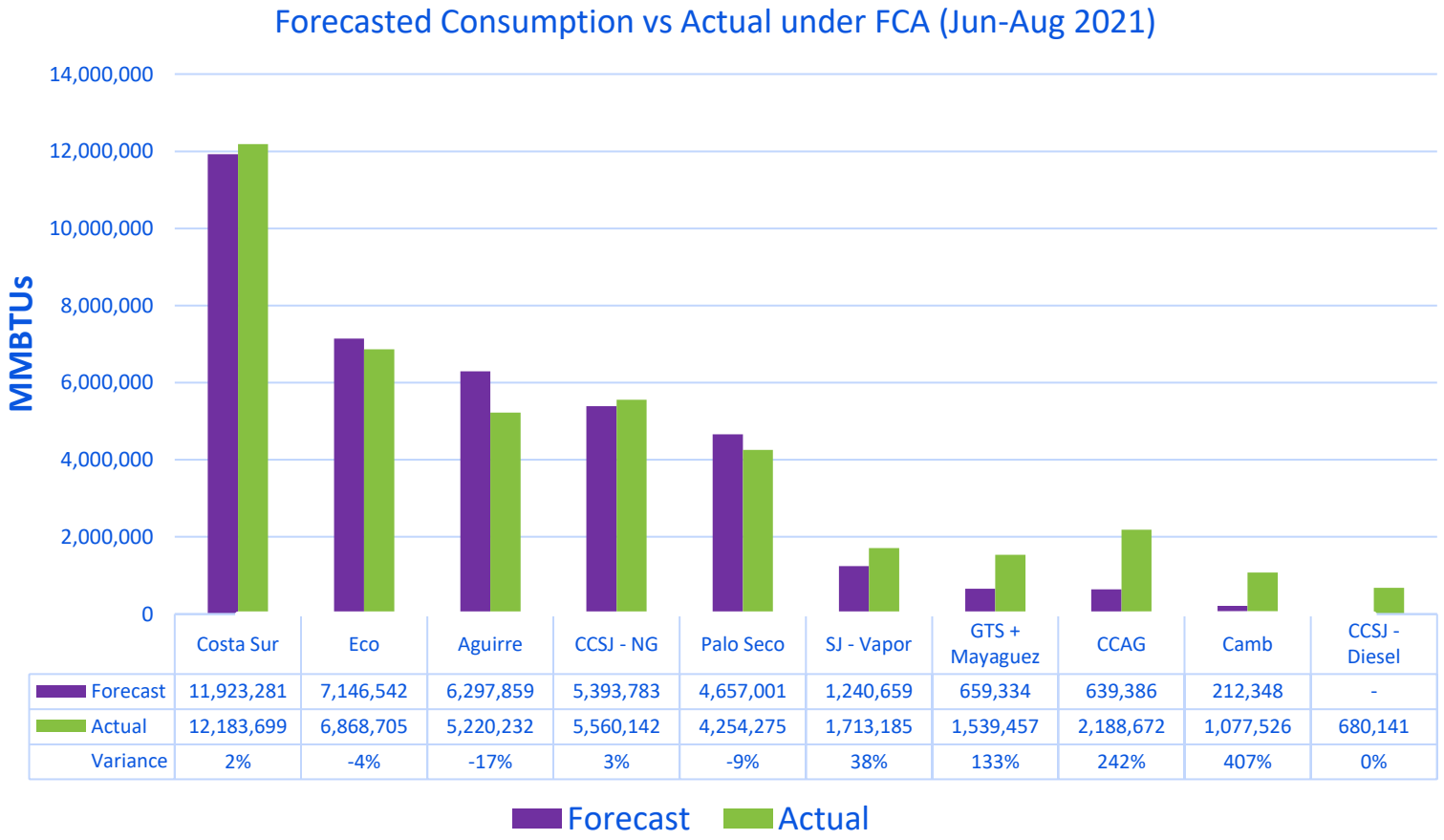
Diesel fueled-peaker plants were utilized to meet customer demand and to minimize load shedding



	Costa Sur	Eco	CCSJ - NG	Aguirre	Palo Seco	CCAG	SJ - Vapor	GTS + Mayaguez	Camb	CCSJ - Diesel
June	4,116,467	2,292,637	1,558,622	1,874,588	1,011,876	747,960	426,453	399,406	237,887	493,190
July	4,570,314	2,181,287	1,995,643	1,524,387	1,589,190	698,907	620,355	403,837	259,342	18,013
August	3,496,918	2,394,781	2,005,877	1,821,256	1,653,209	741,805	666,378	736,214	580,298	168,939

- Increased reliance on peaker plants in August

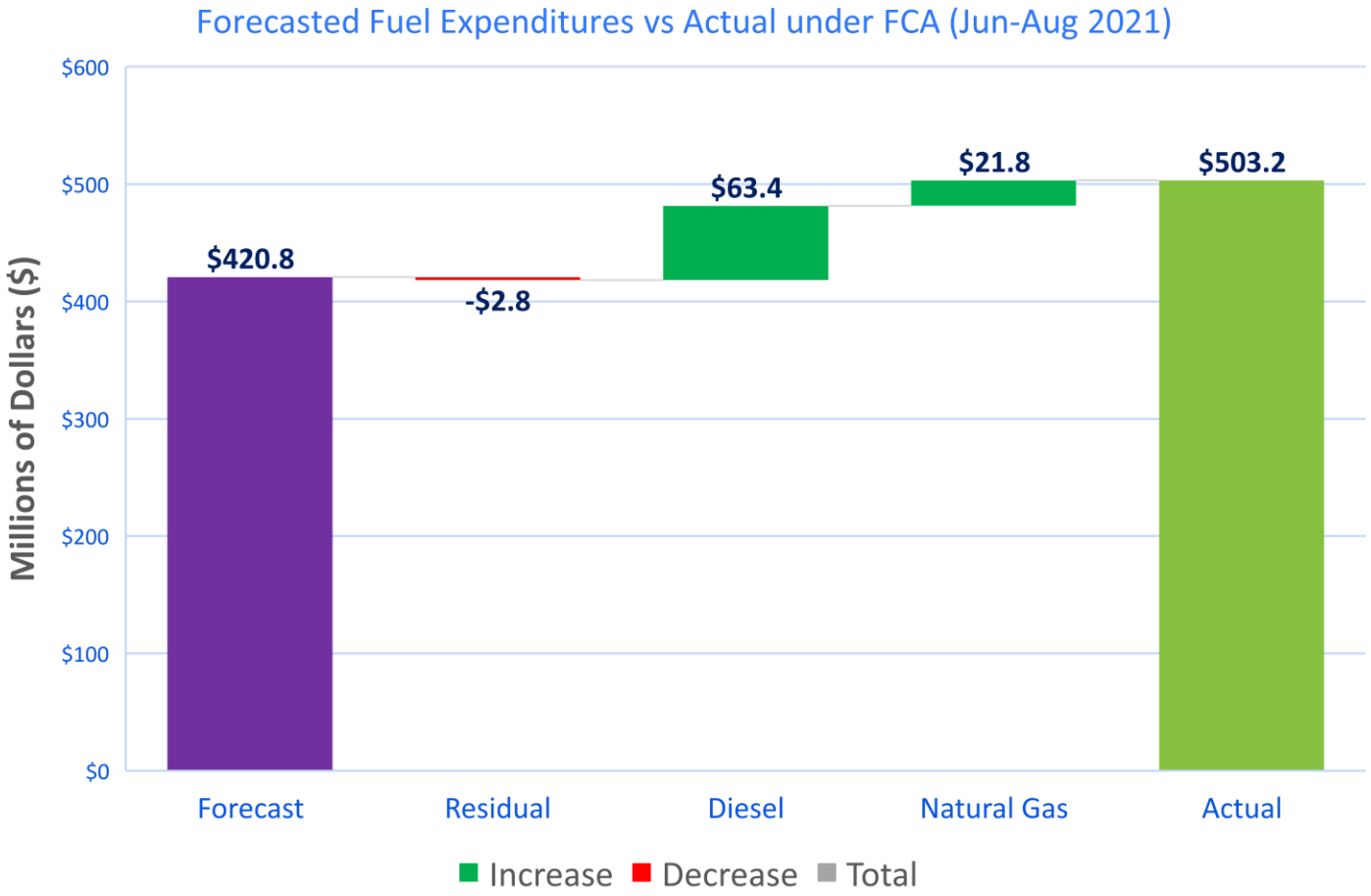
Greater than expected use of diesel-fueled peaker plants was the largest variance driver in the quarter



	Costa Sur	Eco	Aguirre	CCSJ - NG	Palo Seco	SJ - Vapor	GTS + Mayaguez	CCAG	Camb	CCSJ - Diesel
Forecast	11,923,281	7,146,542	6,297,859	5,393,783	4,657,001	1,240,659	659,334	639,386	212,348	-
Actual	12,183,699	6,868,705	5,220,232	5,560,142	4,254,275	1,713,185	1,539,457	2,188,672	1,077,526	680,141
Variance	2%	-4%	-17%	3%	-9%	38%	133%	242%	407%	0%

- Moderately higher utilization than forecast at Costa Sur, Ecoelectrica, and CCSJ
- Considerably less utilization than forecast at Aguirre and Palo Seco
- Significantly greater utilization than forecast at peaker plants

The greatest source of variance was a reduction in lower cost residual fuel plants, which were replaced by diesel and some natural gas fuel plants



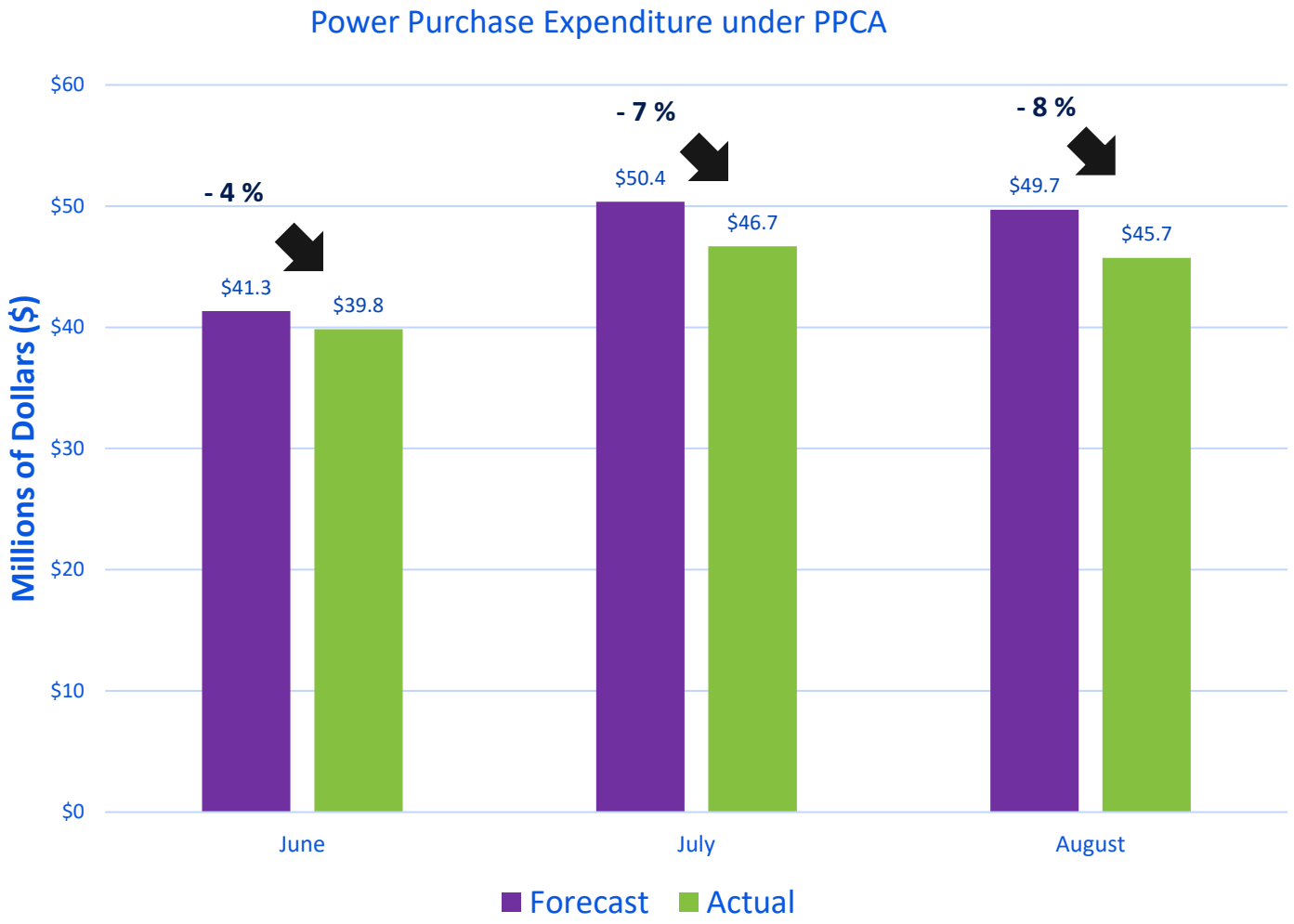
- Due to lack of resource adequacy, higher cost diesel-fueled peaker plants were relied upon to reduce load shed events
- Even with reliance on peakers, there was not enough capacity to meet customer demand for several periods and load shedding did occur

Summary of Calculation for FCA and PPCA Factors

Reconciliation from Jun-Aug FY2022

Purchase Power Cost Variance

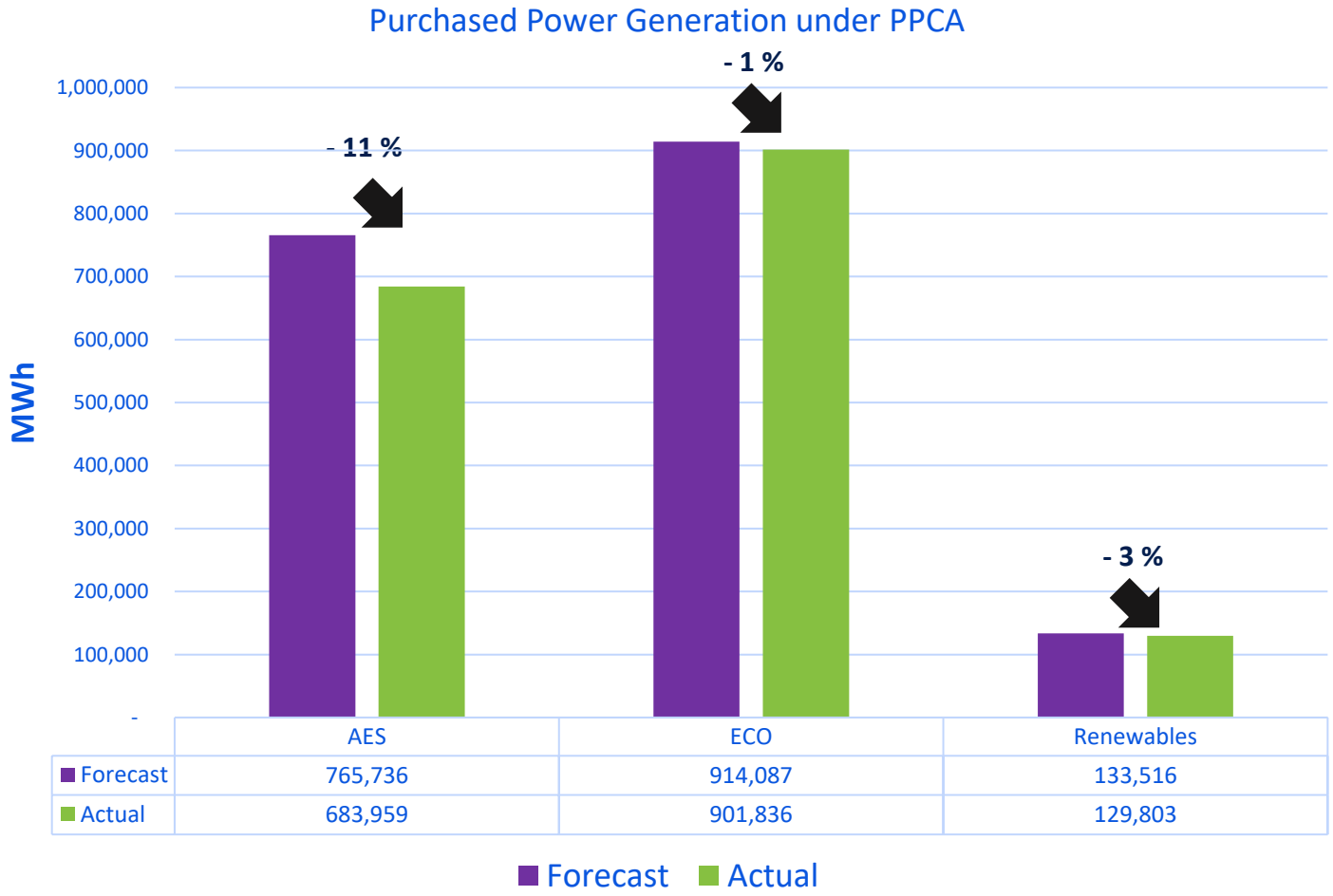
Actual purchased power costs in Q1 FY22 were just ~7% lower than projected



3-month Power Purchase Cost Comparison:

- Forecasted: $ 141.4 Million
- Actual: $ 132.2 Million
- Variance: -$9.2 Million (-6.5%)

Actual purchased power production in Q1 FY22 was just over 5% lower than projected



3-month Total Generation Comparison:

- Forecasted: 1,813,338 MWh
- Actual: 1,715,598 MWh
- Variance: -97,740 MWh (-5.4%)

Summary of Calculation for FCA and PPCA Factors

Inventory Discussion

Inventory Review and Fuel Cost

May 17, 2021

- Inventory levels were measured and certified by external entities and provided to PREPA

June 30, 2021

- PREPA adjusted inventory levels measured on May 17, 2021 to develop estimated inventory levels as of June 30, 2021 (PRECIO PONDERADO DIRECTORADO DE GENERACION @ junio 30 2021)

July 2021

- The beginning balances for July were adjusted based on the inventory levels within the PRECIO PONDERADO DIRECTORADO DE GENERACION @ junio 30 2021 file
- Costs in the fuel report used the adjusted barrels multiplied by the weighted price as of June 30, 2021

Inventory adjustment as of June 30, 2021

No. 2 Fuel Oil

Plant	Diff BBls	Diff $
AGUIRRE Diesel /CC	(11,530.62)	(1,068,836.87)
Aguirre Gas		
SAN JUAN CC	10,682.34	1,012,210.54
CAMBALACHE	4,498.95	389,513.98
MAYAGÜEZ	2,824.68	247,178.64
PALO SECO	(256.71)	(23,400.23)
DAGUAO	(5,093.88)	(479,683.32)
JOBOS	5,031.49	484,918.42
VEGA BAJA	(973.46)	(90,632.49)
YABUCOA	1,030.13	64,953.81
COSTA SUR	97.92	8,004.57
TOTAL	**6,310.83**	**544,227.05**

No. 6 Fuel Oil - June 30 2021

Plant	Diff BBls	Diff $
AGUIRRE	(6,314.78)	(523,226.80)
COSTA SUR	(361.82)	(24,131.55)
CORCO		
PALO SECO	7,446.50	596,501.14
SAN JUAN	(5,371.19)	(381,511.08)
TOTAL	**(4,601.29)**	**(332,368.29)**

	Diff BBls	Diff $
Total Adjustment	**1,710**	**211,859**

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Summary of Calculation for FCA and PPCA Factors

Jun – Aug Not Billed Adjustment

Customers Not Billed

- Due to issues with the billing process during the months of June, July and August, LUMA has not been able to provide bills to a portion of customers
- In order to avoid double counting, LUMA proposes removing these unbilled amounts as LUMA anticipates billing these in the upcoming quarter

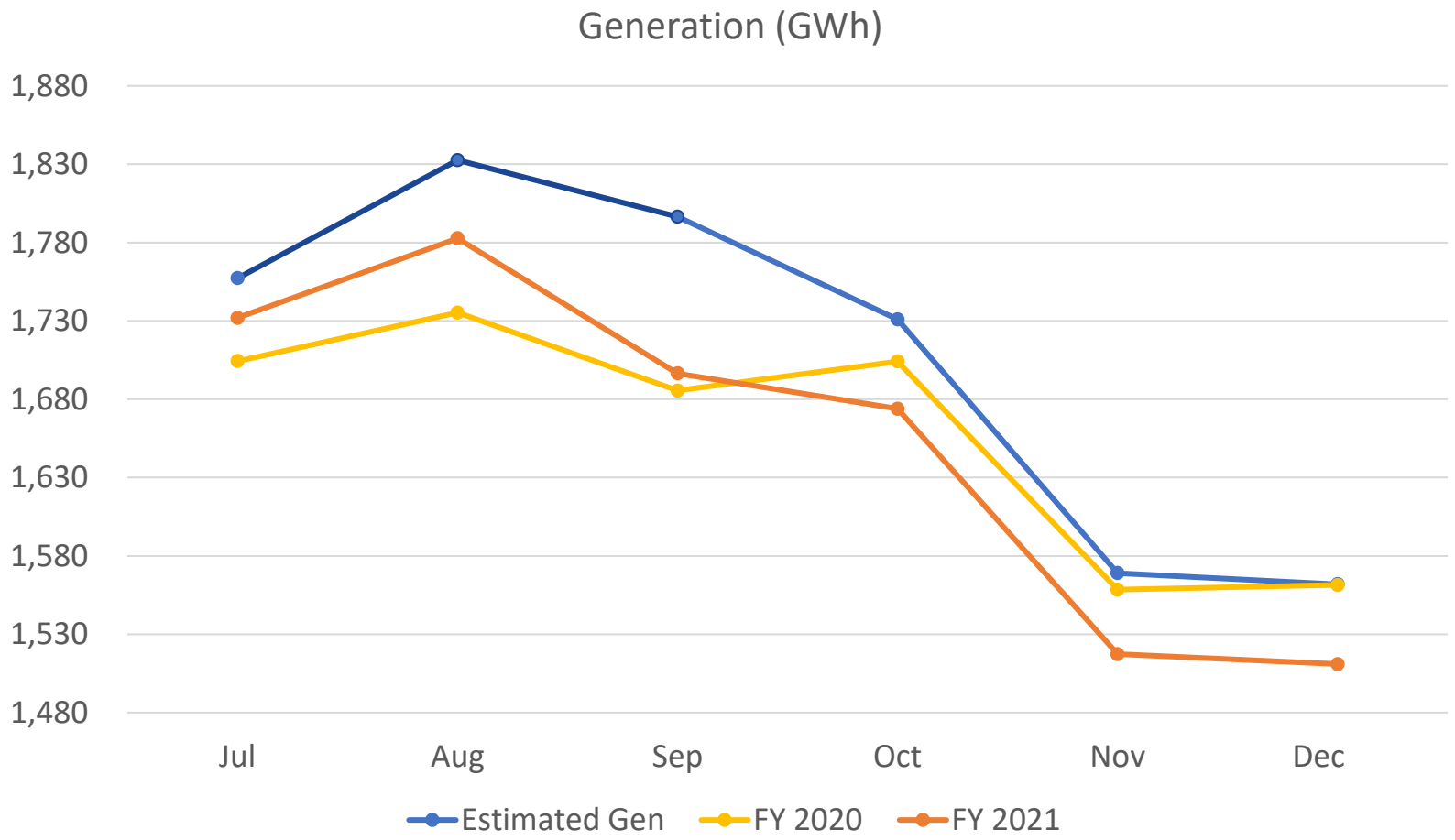
Month	Consumption (kWh)	FCA ($)	PPCA ($)
June	5,345,096	510,221	158,252
July	9,224,762	980,011	313,909
August	63,649,333	6,761,914	2,165,923
Total	**78,219,191**	**8,252,146**	**2,638,085**

Summary of Calculation for FCA and PPCA Factors

Retail Sales (kWh) Forecast

Retail Forecast Methodology and Assumptions

- The sales were estimated based on the actual daily generation



Proposed FCA and PPCA Factors

Fuel and Purchased Power Charge Adjustment Formula

$$FCA = \frac{Total\ Cost\ of\ Fuel \pm Prior\ Period\ Reconciliation}{Aplicable\ Retail\ kWh\ Sales}$$

$$PPCA = \frac{Total\ Purchased\ Power \pm Prior\ Period\ Reconciliation}{Aplicable\ Retail\ kWh\ Sales}$$

$$FCA = \frac{\$476{,}702{,}706.42 + \$113{,}020{,}253.81}{4{,}213{,}303{,}687.26}$$

$$PPCA = \frac{\$132{,}417{,}847.96 - \$5{,}862{,}527.99}{4{,}213{,}303{,}687.26}$$

Proposed Factors For Q2 FY2022

Riders	July 2021 - September 2021 (Approved by PREB Resolution and Order June 29,2021)	Proposed October-December 2021	Difference
FCA	$0.1062	$0.1361	$0.0298
PPCA	$0.0340	$0.0288	($0.0052)
		Total	**$0.024569**

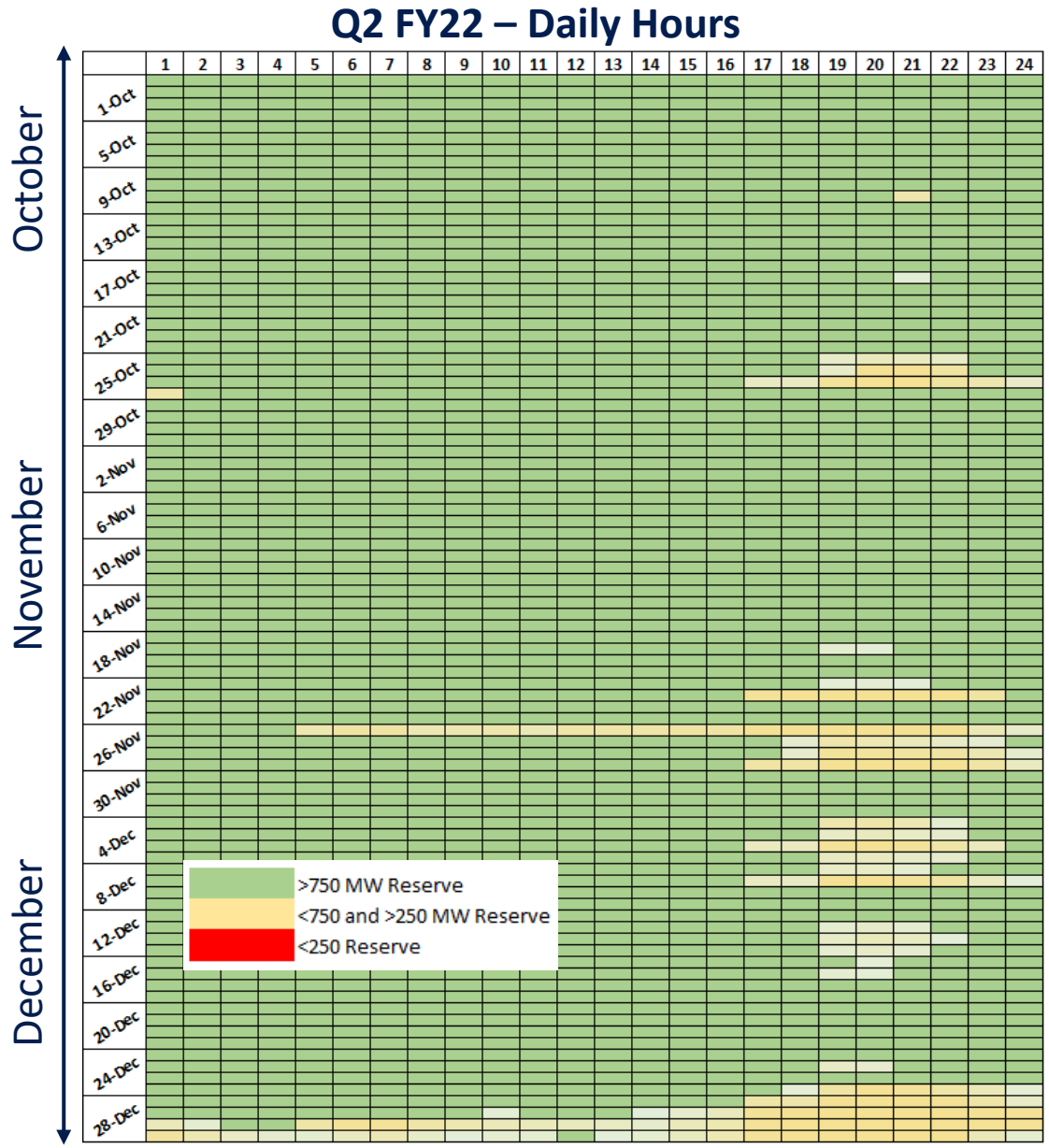
Analysis of Risks in the Forecast

Hourly Forecast Illustrates Risks and Opportunities

Hour	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2,108	2,115	2,154	2,149	2,125	2,148	2,165
2	2,034	2,020	2,062	2,049	2,028	2,060	2,087
3	1,980	1,970	1,996	1,998	1,976	1,995	2,008
4	1,940	1,936	1,957	1,960	1,940	1,962	1,965
5	1,906	1,940	1,958	1,963	1,945	1,966	1,948
6	1,883	2,025	2,045	2,049	2,029	2,037	1,947
7	1,832	2,116	2,132	2,127	2,100	2,108	1,923
8	1,797	2,112	2,113	2,115	2,081	2,100	1,920
9	1,833	2,199	2,194	2,187	2,156	2,171	1,994
10	1,886	2,268	2,258	2,253	2,228	2,240	2,051
11	1,909	2,288	2,280	2,263	2,227	2,253	2,058
12	1,953	2,299	2,313	2,295	2,267	2,265	2,060
13	1,955	2,300	2,290	2,289	2,269	2,269	2,071
14	1,949	2,304	2,290	2,290	2,264	2,276	2,061
15	1,964	2,326	2,335	2,313	2,283	2,290	2,085
16	1,998	2,351	2,359	2,339	2,302	2,317	2,121
17	2,075	2,407	2,420	2,388	2,349	2,347	2,205
18	2,119	2,381	2,398	2,368	2,327	2,329	2,238
19	2,323	2,528	2,529	2,502	2,463	2,437	2,407
20	2,381	2,557	2,553	2,526	2,488	2,449	2,420
21	2,391	2,540	2,536	2,508	2,475	2,424	2,382
22	2,385	2,490	2,485	2,458	2,431	2,377	2,322
23	2,334	2,411	2,404	2,378	2,358	2,360	2,269
24	2,232	2,289	2,276	2,265	2,252	2,262	2,190

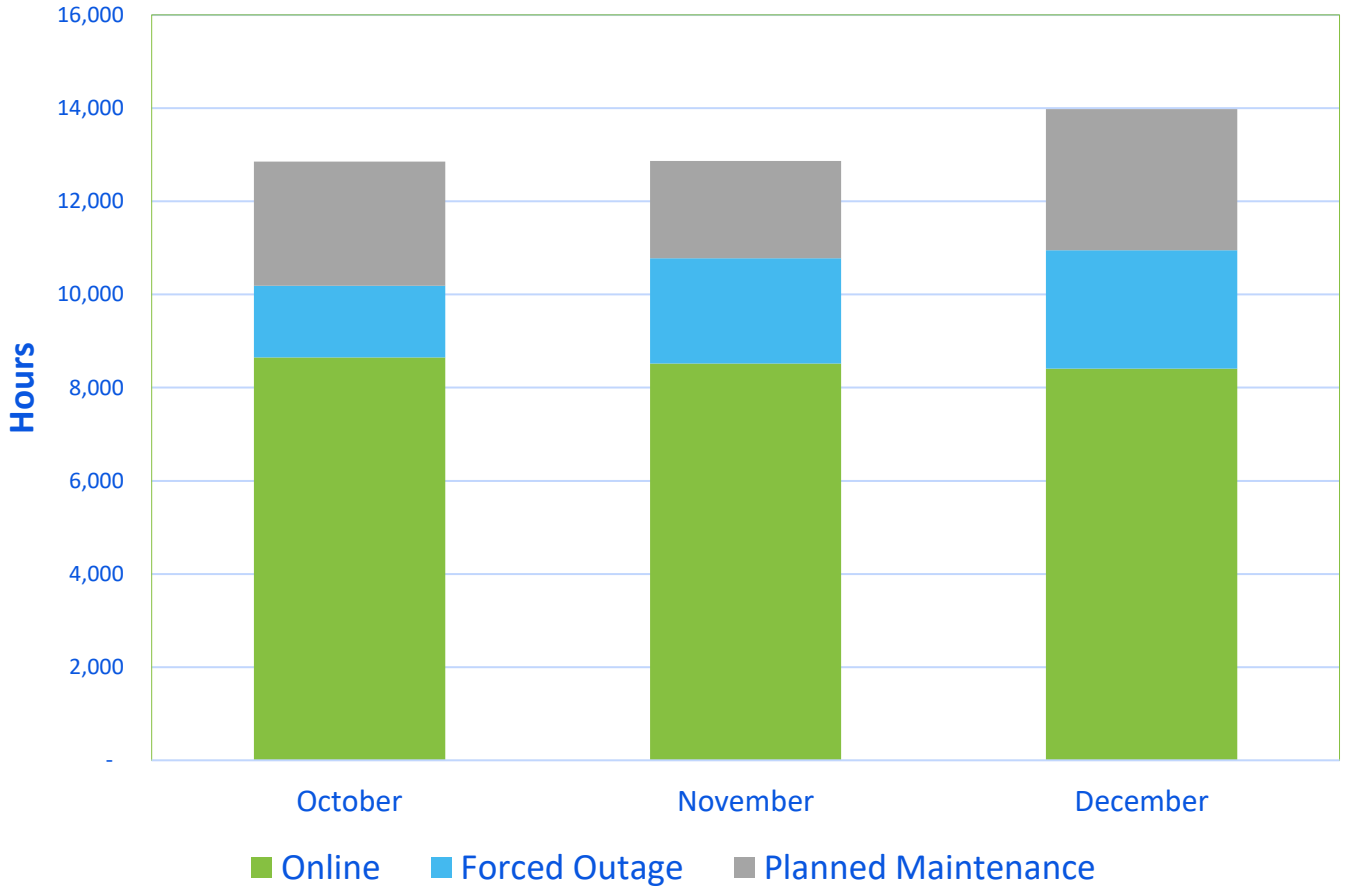
- Peak consumption between 6-10 pm is always the period of greatest concern and risk exposure
- High demand generally extends past midnight which highlights near-term and long-term issues:
  - A targeted demand-side program could reduce residential peak demand
  - If energy storage is a building block of resource strategy, longer duration is required

An Hourly Perspective Highlights Periods of Concern in Q2 2022



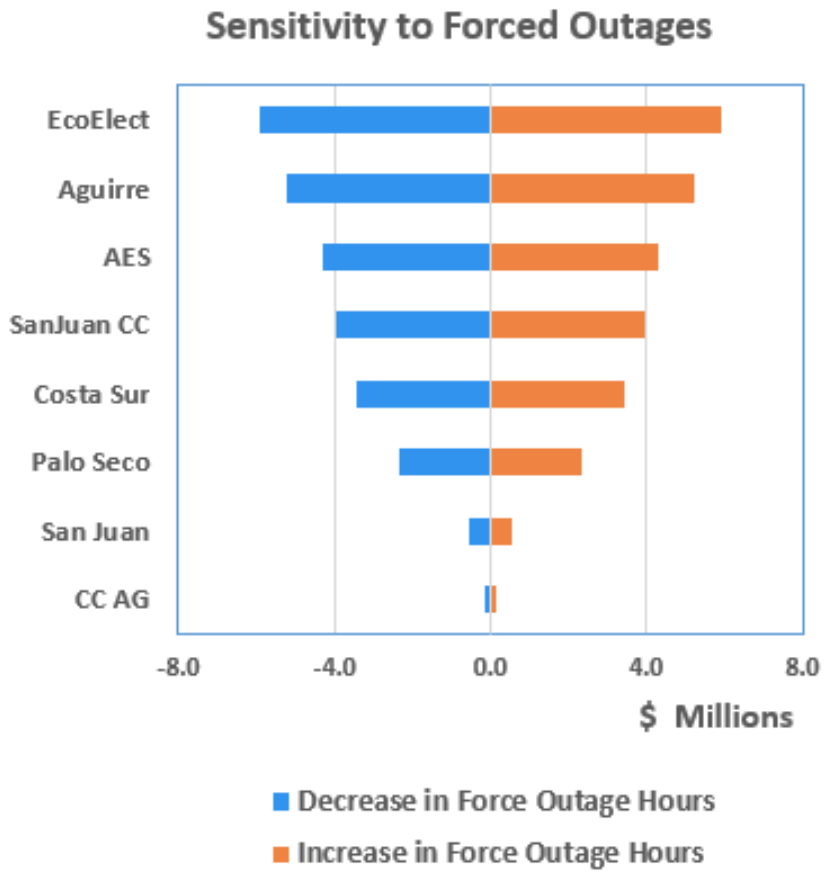
- Yellow-shaded sections illustrate periods where available reserves are forecasted to be below 750 MW
- Familiar patterns of hours of greatest concern:
  - Between 6-10 pm
  - Last week of December is also a noticeable concern

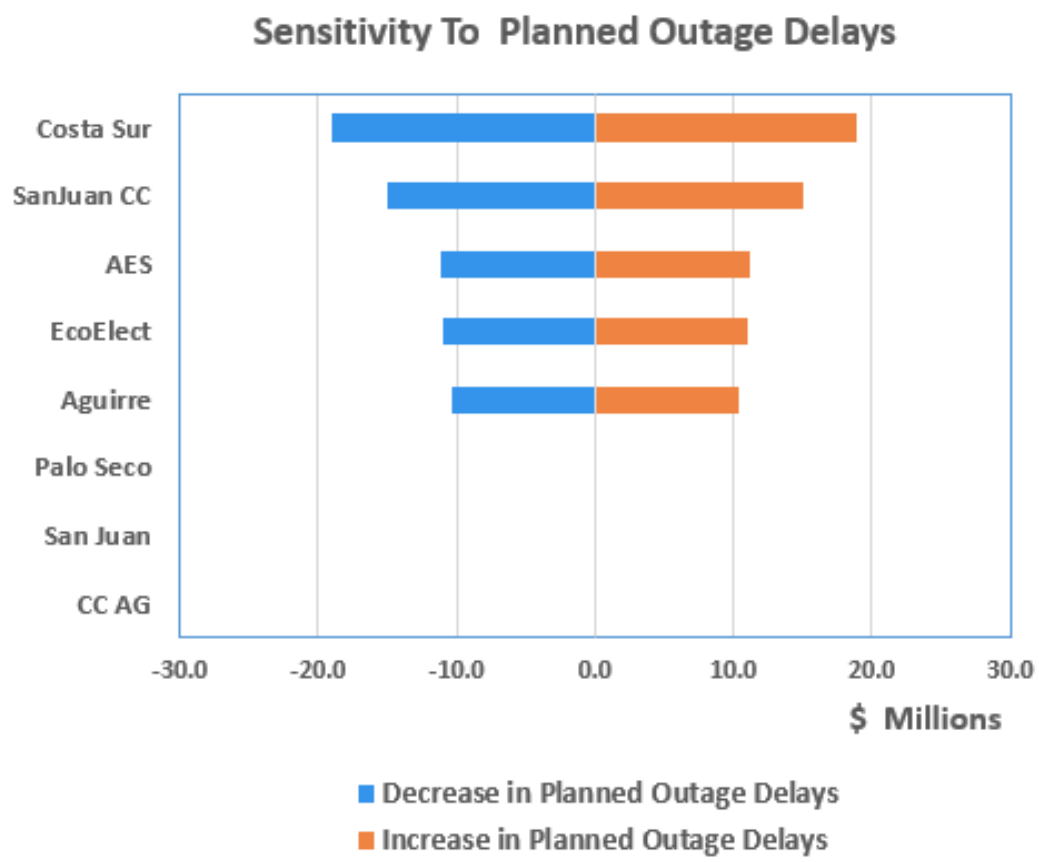
Generator Availability is Modeled Based on Planned Outage and Forced Outage Assumptions



- Each generator produces their projected availabilities that drive the FCA forecast
- Outage schedules for Q2 FY22 have very little flexibility
  - Many units have been deferring outages since spring
- Forced outage hours are based upon historical averages by unit

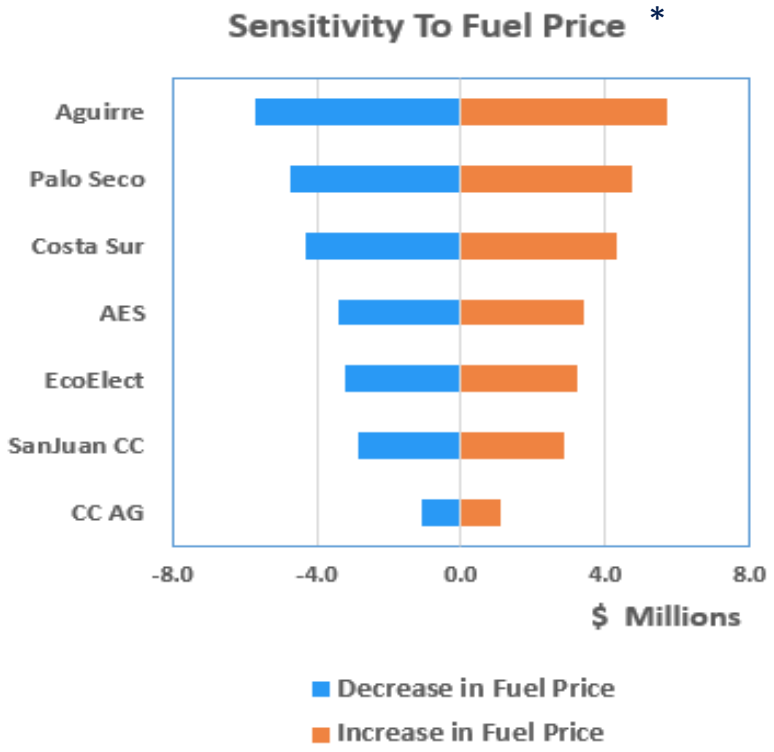
Significant Risk Exposure to Forced Outage Rates and Planned Outage Schedule Delays





Forced outage rate sensitivity tests the impact of an increase or decrease of 100 hours availabilities lost to forced outages
Planned Outage Delay sensitivity tests the impact of an increase or decrease of 25% of the outage duration of currently planned outages

Fuel Prices Have Increased



- Significant increases in fuel prices over the past 12-months
  - ~75% increase in WTI prices
  - >150% increase in Henry Hub
- Direct impact to Fuel Charge Adjustment

*FCA sensitivities for Q2 FY2022 to increases or decrease in fuel prices by 5%.

Several Process Improvements Underway to Mitigate Risks

- Outage schedules are reviewed several times per week
  - Alternate outage windows evaluated with PROMOD
- Implementing new processes to collect data and analyze alternatives
  - To support data driven decision making
  - Systems Operations maintaining historical records on more structured basis
- Increased forced outages rates or extended planned outage delays affects resource adequacy and drives higher costs

Thank You

Exhibit 3
Spanish Language Presentation
Technical Conference, September 22, 2021

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Conferencia Técnica

octubre a diciembre 2021 – Factores Propuestos

NEPR-MI-2020-0001

22 de septiembre de 2021

Factores Propuestos por LUMA

Agenda

1. Ajuste de Cargo por Compra de Combustible y Ajuste de Cargo por Compra de Energía en relación con las tarifas de los clientes
2. Resumen del Cálculo de los Factores FCA y PPCA
   a. Proyección de Combustible y Energía Comprada para el segundo trimestre del Año Fiscal 2022
   b. Reconciliación de junio – agosto del año fiscal 2022
   c. Ajuste por facturación junio – agosto
   d. Proyección de Ventas (kWh)
3. Factores Propuestos e Impacto en la Factura
4. Análisis de Riesgos en la Proyección

Ajuste de Cargo por Compra de Combustible y Ajuste de Cargo por Compra de Energía en relación con las tarifas de los clientes

Composición de la Tarifa Permanente

Tarifa Básica

- El costo por kWh no cambia hasta que el Negociado de Energía apruebe una nueva Orden Tarifaria
  - Cargo fijo por cliente
  - Cargo por Energía
  - Cargo por Demanda

Riders de Reconciliación Anual

- Aprobado por el PREB en junio de 2021 para el periodo comprendido entre julio de 2021 a junio de 2022
  - CELI y Subsidios

Ajustes de la Reconciliación Trimestral

- Ajustado y aprobado trimestralmente
  - Cláusula de Ajuste del Cargo por Compra de Combustible (FCA)
  - Cláusula de Ajuste del Cargo por Compra de Energía (PPCA)

Cargos por Compra de Combustible y Energía Comprada – Definición y Fórmula

- El Ajuste del Cargo por Compra de Combustible (FCA) es un mecanismo de reconciliación que recupera el costo del combustible consumido en las unidades generatrices[1] de la AEE en forma trimestral.

$$FCA = \frac{Total\ del\ Costo\ de\ Combustible \pm Reconciliación\ Periodo\ Anterior}{Ventas\ Aplicables\ kWh}$$

- El Ajuste del Cargo por Energía Comprada (PPCA) es un mecanismo de reconciliación que recupera trimestralmente el costo de la energía comprada a los Productores Independientes de Energía.

$$PPCA = \frac{Total\ de\ Energía\ Comprada \pm Reconciliación\ Periodo\ Anterior}{Ventas\ Aplicables\ kWh}$$

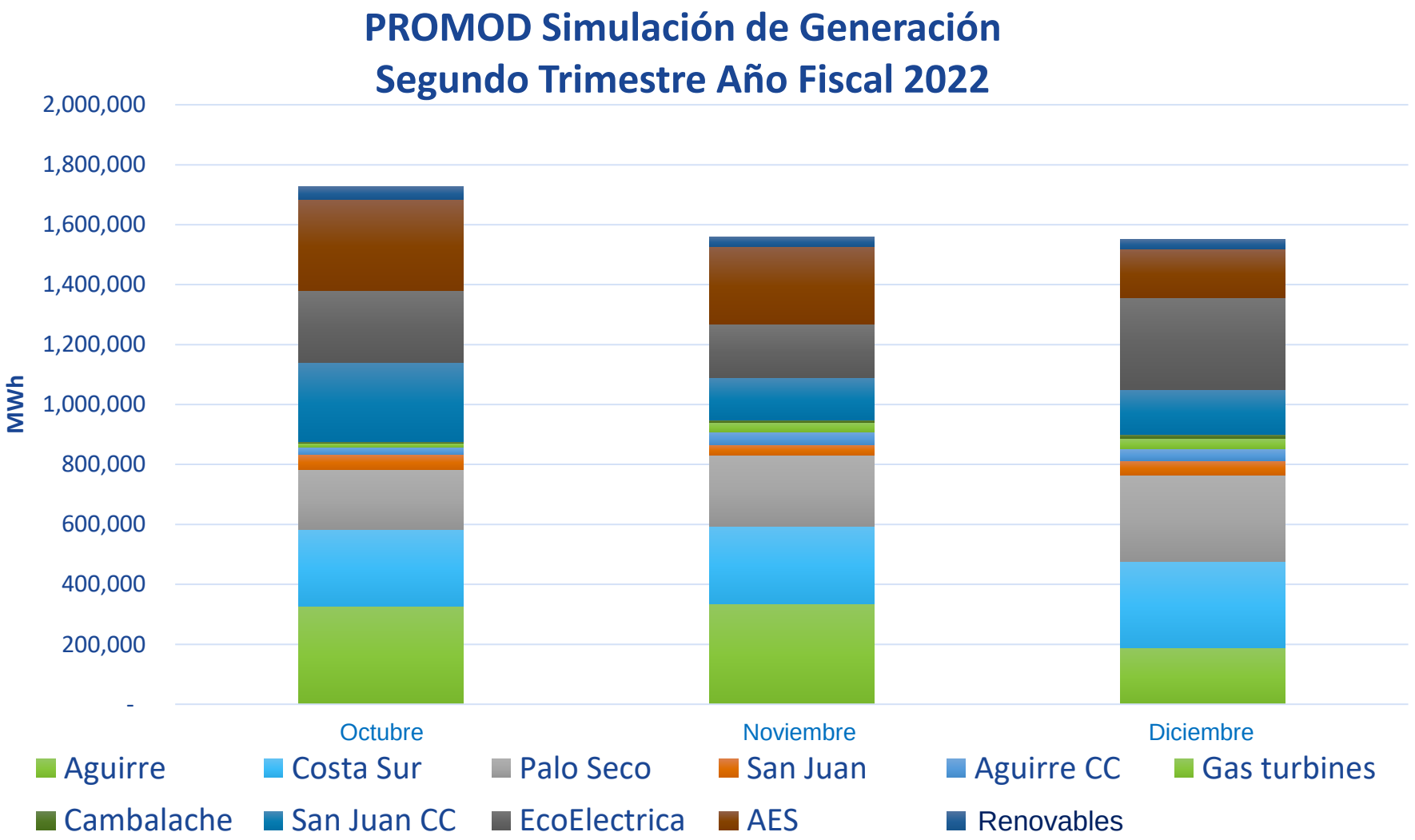
Notas: **Costo Total de Combustible** = Proyección del costo de combustible comprado para todas las instalaciones generadoras de la AEE para los tres meses (octubre, noviembre y diciembre) en el periodo de tiempo trimestral. **Total de energía comprada** = Proyección del costo de las fuentes de energía y capacidad compradas para los tres meses (octubre, noviembre y diciembre) del periodo trimestral. **Reconciliación del periodo anterior** = Fondos recuperados en exceso o que no fueron recuperados de los dos primeros meses del trimestre actual (julio y agosto) y el último del trimestre anterior (junio). **Ventas aplicables kWh** = Proyección de Ventas de energía a todas las clases de clientes, incluidos todos los clientes de medición neta. [1] También incluye el combustible para EcoEléctrica.

Resumen del Cálculo de los factores FCA y PPCA

Resumen del Cálculo de los factores FCA y PPCA

Proyección de Combustible y Energía Comprada para el segundo trimestre de 2022

Resumen de PROMOD



- La proyección de despacho de generación se basó en la optimización del costo más económico de las unidades generatrices y su despacho para suplir la demanda de energía.

Resumen del Cálculo de los factores FCA y PPCA

Reconciliación de junio – agosto del año fiscal 2022

Resultados de la reconciliación - Ajuste del Cargo por Compra de Combustible (FCA) - junio, julio y agosto de 2021

- Los costos reales del combustible utilizado en el trimestre sobrepasaron el costo proyectado por $81.7 millones, aumentaron de $420.8 millones a $502.6 millones o 19.4%.
- Las ventas facturadas durante el trimestre fueron menores a la proyección por $20.2 millones, se redujeron de $453.9 a $433.7 millones o 4.4%.
- El ajuste de períodos anteriores, según determinado en reconciliaciones previas, fue de $35.9 millones.

Cláusula de Ajuste	junio 2021	julio 2021	agosto 2021
Compra de Combustible (FCA)			
Ventas Proyectadas	$134,742,030.01	$156,933,972.11	$162,171,606.34
Costo de Combustible Proyectado	$139,426,069.35	$131,191,382.29	$150,210,900.41
Ventas Facturadas	$127,847,129.85	$149,666,218.26	$156,181,373.63
Costo Real de Combustible	$150,881,201.79	$164,804,147.65	$186,864,936.34
Ajuste Periodo Anterior	$2,711,091.47	$16,328,363.91	$16,873,087.68
Diferencia	**$25,745,163.41**	**$31,466,293.30**	**$47,556,650.39**

[1] Incluye el Uso de la Autoridad de Energía Eléctrica.

Resultados de la Reconciliación– Cargo por Ajuste de Compra de Energía (PPCA) – junio, julio y agosto 2021

- Los costos reales de la energía comprada durante el trimestre fueron menores al costo proyectado por $9.1 millones, disminuyeron de $141.4 millones a $132.3 millones, o 6.4%.
- Las ventas facturadas durante el trimestre fueron menores a la proyección por $6.4 millones, disminuyeron de $144.0 a $137.6 millones, o 4.4%.
- El ajuste de períodos anteriores, según determinado en reconciliaciones previas, fue ($3.2) millones.

Cláusula de Ajuste	junio 2021	julio 2021	agosto 2021
Compra de Energía (PPCA)			
Ventas Proyectadas	$41,792,106.13	$50,267,855.24	$51,945,533.03
Proyección de Gasto de Compra de Energía	$41,328,481.59	$50,366,266.00	$49,709,380.68
Ventas Facturadas	$39,633,322.90	$47,962,549.11	$49,962,081.47
Gastos Reales de Compra de Energía	$40,026,584.30	$46,628,412.06	$45,624,344.56
Ajuste Periodo Anterior	($6,294,358.53)	$1,510,975.61	$1,561,382.64
Diferencia	**($5,901,097.13)**	**$176,838.56**	**($2,776,354.27)**

Resumen del Cálculo de los Factores FCA y PPCA

Reconciliación de junio – agosto del año fiscal 2022

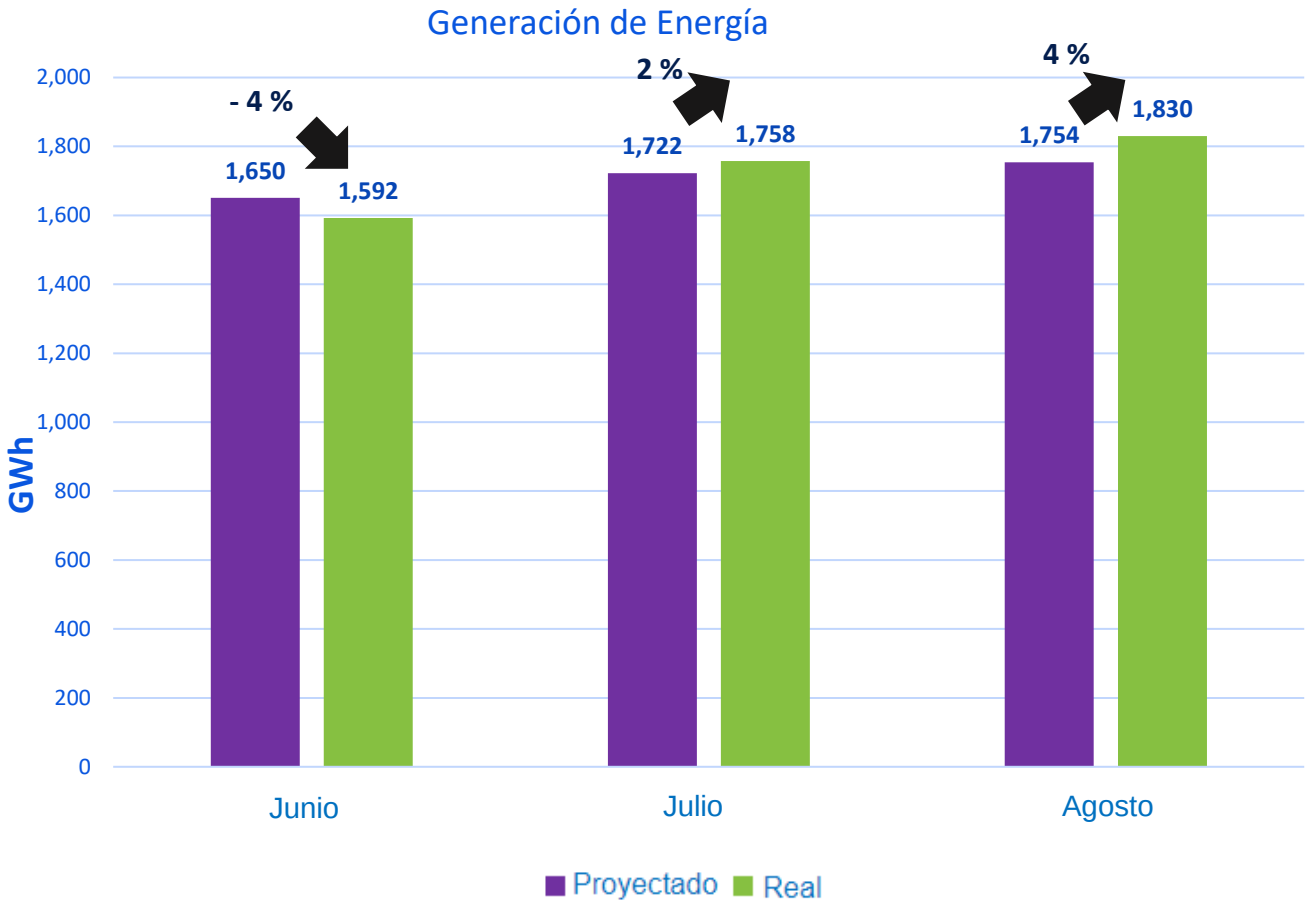
Varianza del Costo de Combustible

Costo real del combustible en el primer trimestre del año fiscal 2022 fue aproximadamente 20% más alto de lo proyectado

Comparación del costo total de combustible para los 3 meses:

- Proyectado: $ 420.83 millones
- Real: $ 503.21 millones
- Varianza: $82.38 millones (19.6%)

La generación de energía provista a todos los clientes en el primer trimestre del año fiscal 2022 fue 1% mayor de lo proyectado.

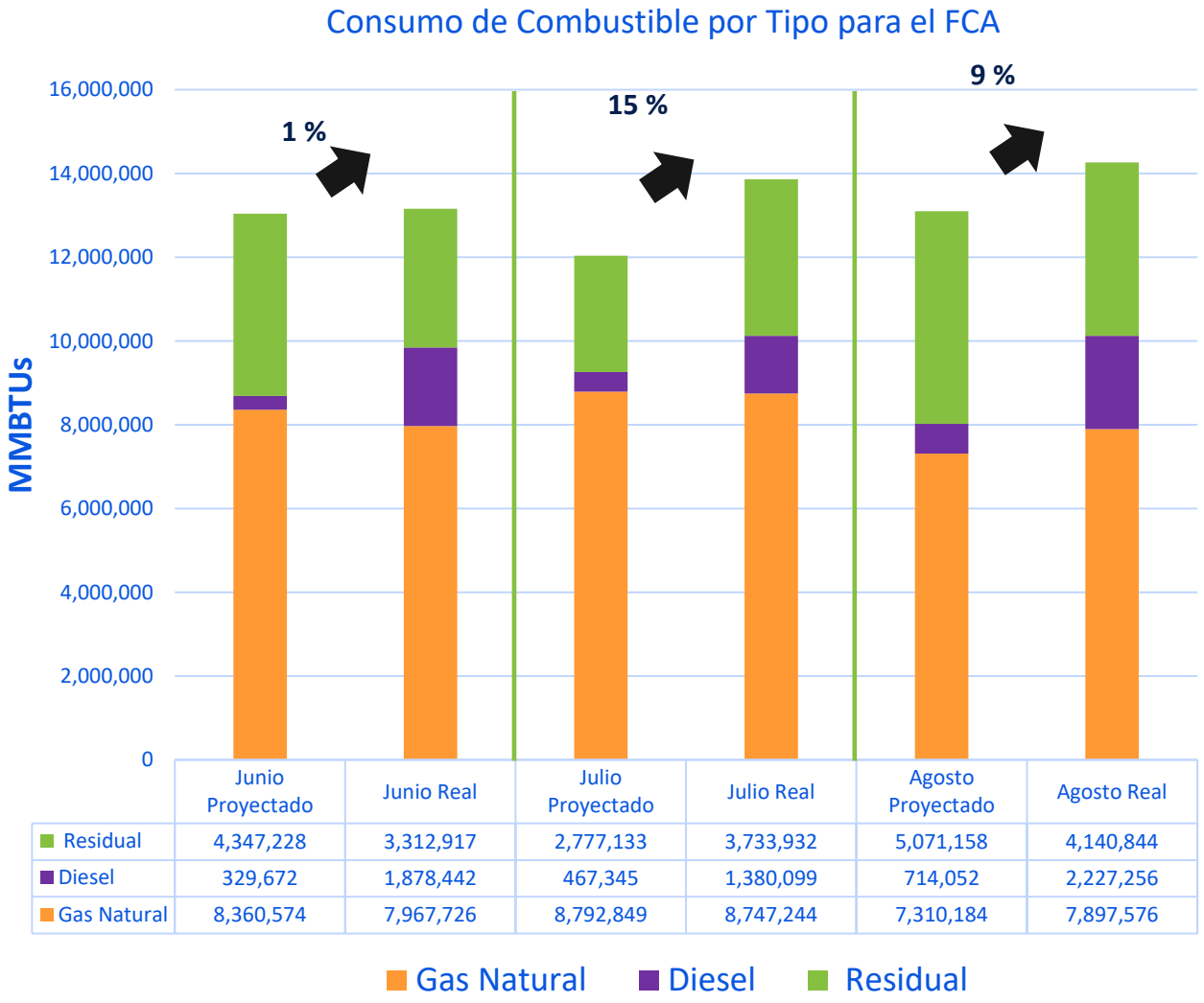


Comparación de la generación total para los 3 meses:

- Proyectado: 5,126.9 GWh
- Real: 5,179.3 GWh
- Varianza: 52.4 GWh (1%)

Los valores proyectados representan la producción de la corrida de PROMOD del 1 de junio que se utilizó para estimar el despacho de cada planta indicidual. Los valores reales values en la proyección de carga a veces pueden variar ligeramente debido a los supuestos en la disponibilidad de las unidades utilizados por PROMOD.

El consumo real de combustible en el primer trimestre del año fiscal 2022 fue 8% más de lo proyectado, mayormente ocasionado por un consumo mayor de diesel a lo proyectado.

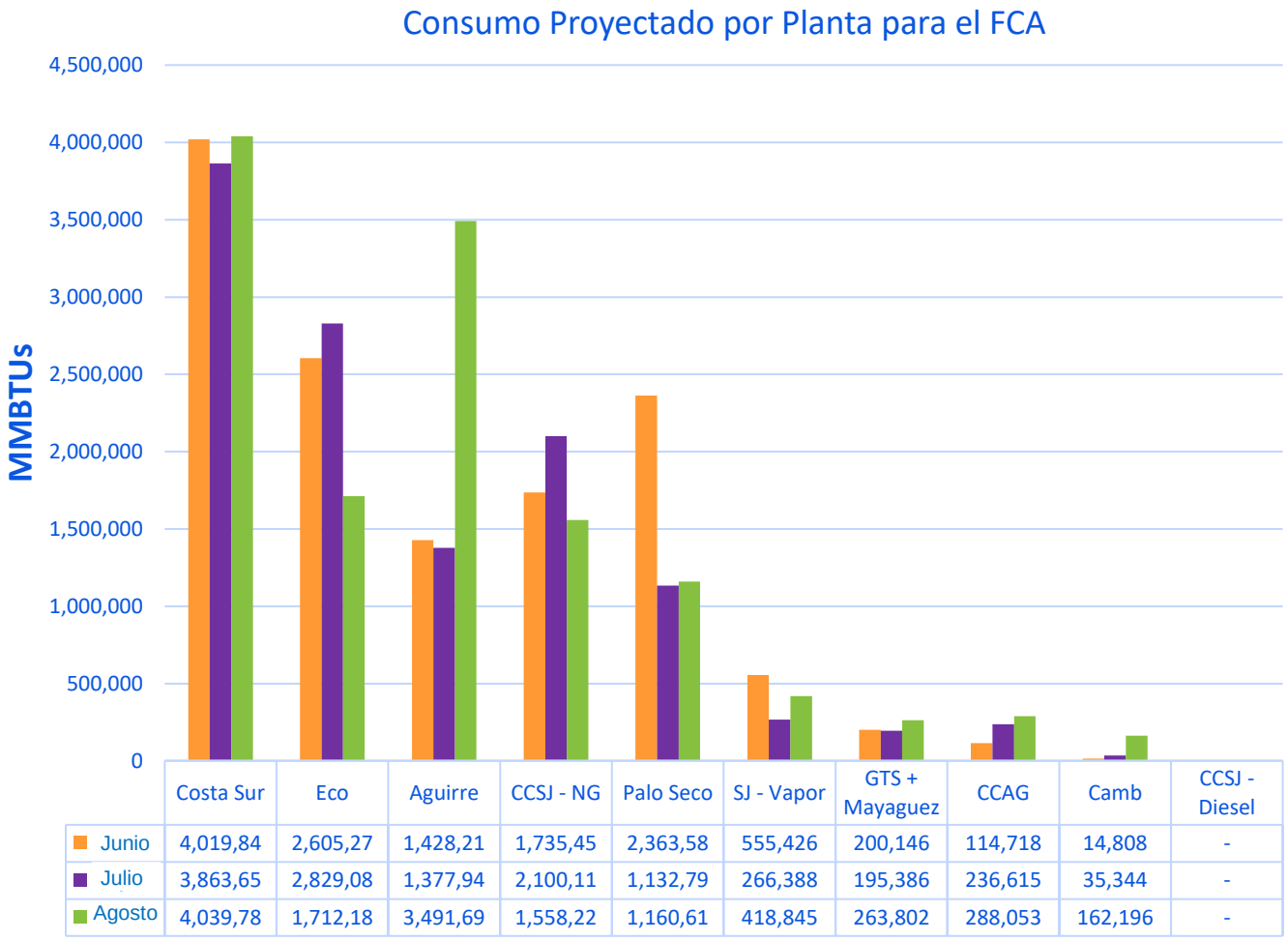


Comparación de consumo total para los 3 meses:

- Proyectado: 38,170,192 MMbtu
- Real: 41,286,035 MMbtu
- Varianza: 3,115,842 MMbtu (8%)

Tipo Combustible	Proyectado	Real	% Varianza
Residual	12,195,518	11,187,692	-8%
Diesel	1,511,068	5,485,797	263%
Gas Natural	24,463,605	24,612,546	1%
Total	**38,170,192**	**41,286,035**	**8%**

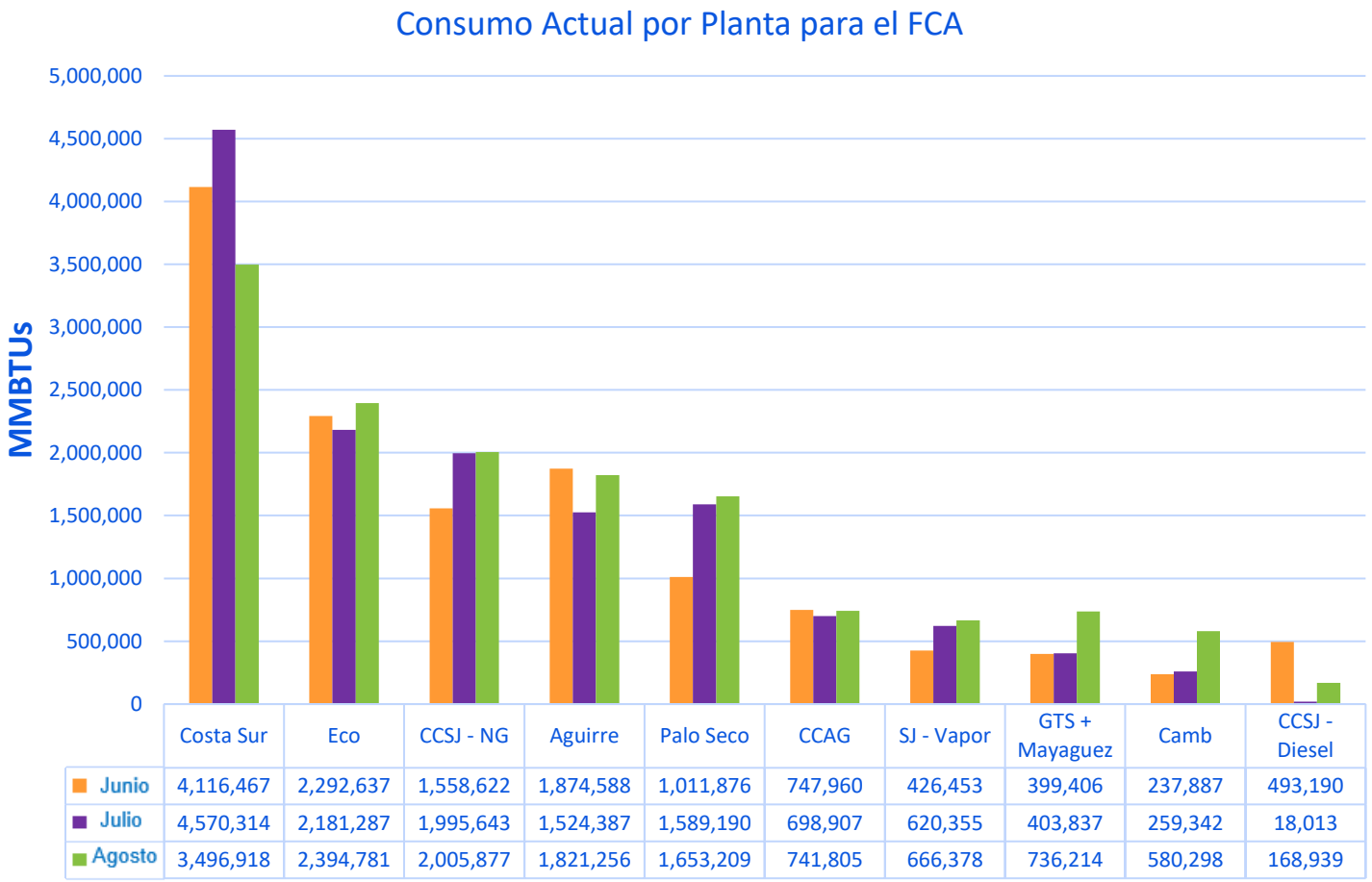
Las proyecciones de consumo de combustible consideraron una utilización mayor de los generadores (base) que son más eficientes



	Costa Sur	Eco	Aguirre	CCSJ - NG	Palo Seco	SJ - Vapor	GTS + Mayaguez	CCAG	Camb	CCSJ - Diesel
Junio	4,019,84	2,605,27	1,428,21	1,735,45	2,363,58	555,426	200,146	114,718	14,808	-
Julio	3,863,65	2,829,08	1,377,94	2,100,11	1,132,79	266,388	195,386	236,615	35,344	-
Agosto	4,039,78	1,712,18	3,491,69	1,558,22	1,160,61	418,845	263,802	288,053	162,196	-

- La proyección de PROMOD optimiza la utilización de las plantas para obtener el despacho más económico.
- PROMOD maximiza primero la producción de las unidades con menor costo, y luego utiliza otras unidades menos eficientes para poder cumplir con la demanda, de ser necesario.
- La producción proyectada se determina mayormente por la disponibilidad de plantas debido a las salidas programadas.
- Las proyecciones de las unidades “Peaker” solo se deben utilizar en horas ocasionales de ser necesario (alto costo, alto rendimiento térmico).

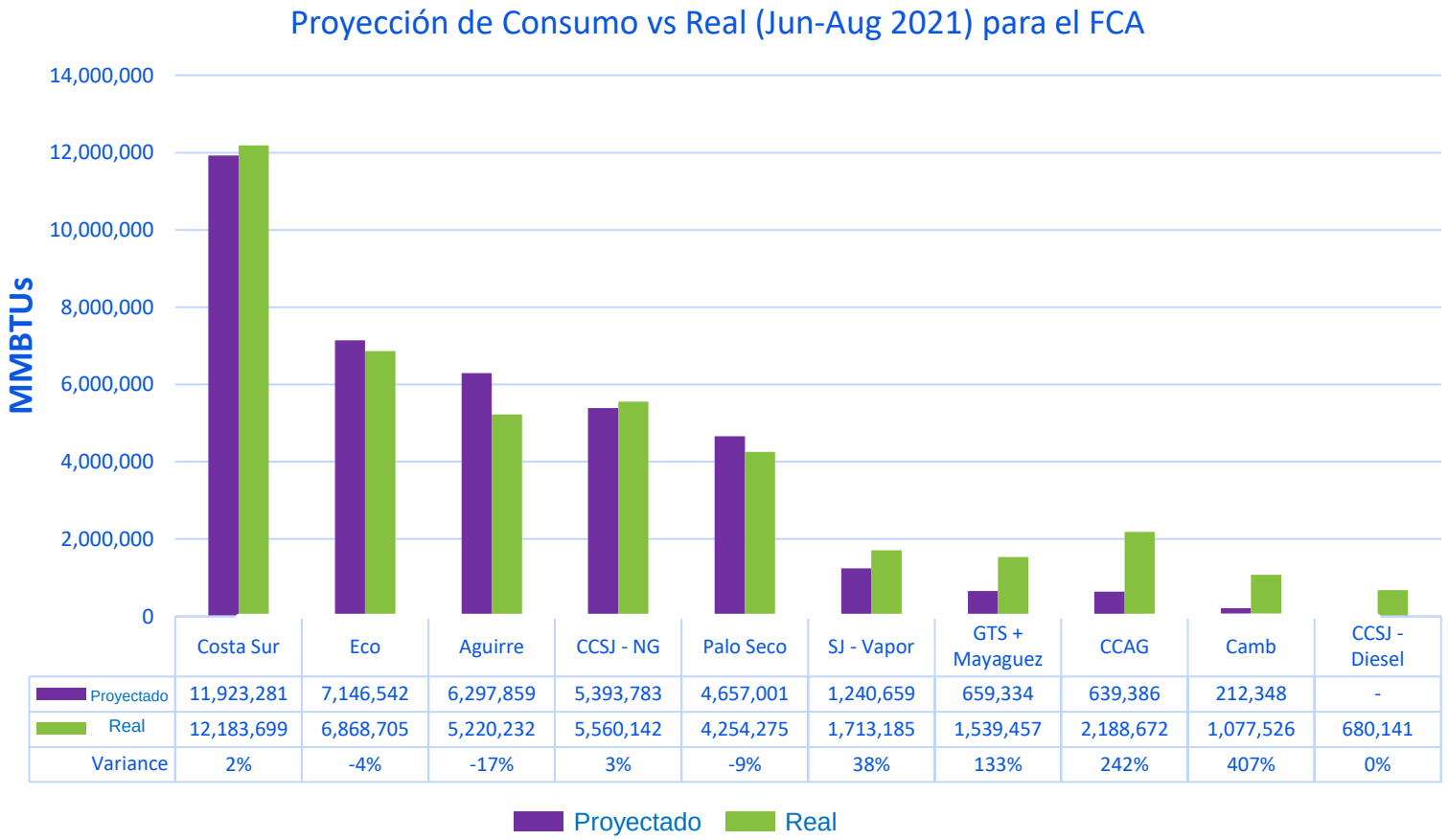
Las plantas diesel “Peakers” se utilizaron para poder cumplir con la demanda y para minimizar los relevos de carga



	Costa Sur	Eco	CCSJ - NG	Aguirre	Palo Seco	CCAG	SJ - Vapor	GTS + Mayaguez	Camb	CCSJ - Diesel
Junio	4,116,467	2,292,637	1,558,622	1,874,588	1,011,876	747,960	426,453	399,406	237,887	493,190
Julio	4,570,314	2,181,287	1,995,643	1,524,387	1,589,190	698,907	620,355	403,837	259,342	18,013
Agosto	3,496,918	2,394,781	2,005,877	1,821,256	1,653,209	741,805	666,378	736,214	580,298	168,939

- Mayor utilización de las plantas “Peakers” en agosto.

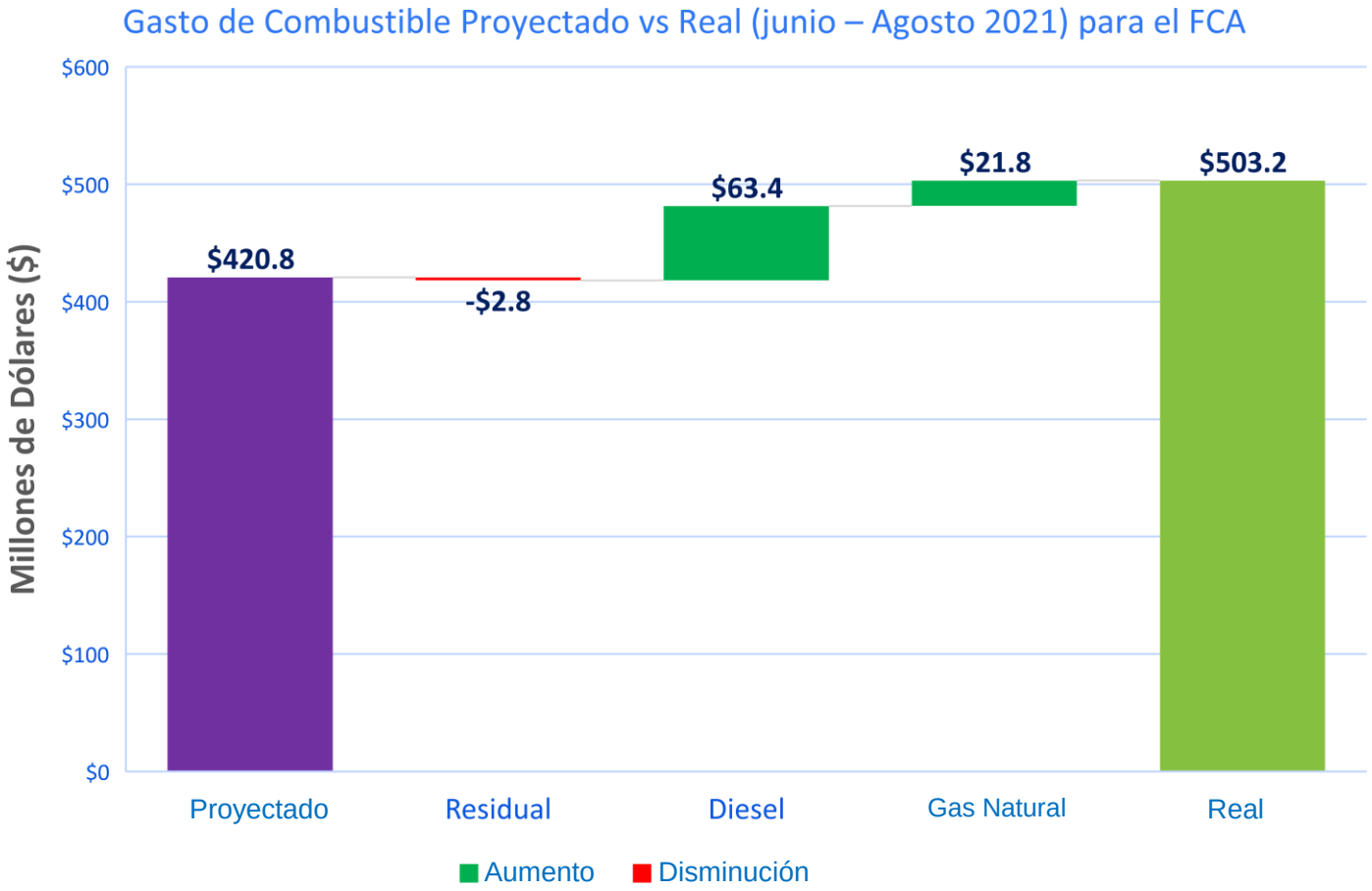
El uso de las plantas diesel “Peakers” mayor a lo esperado, fue el factor de mayor impacto en la varianza del trimestre



	Costa Sur	Eco	Aguirre	CCSJ - NG	Palo Seco	SJ - Vapor	GTS + Mayaguez	CCAG	Camb	CCSJ - Diesel
Proyectado	11,923,281	7,146,542	6,297,859	5,393,783	4,657,001	1,240,659	659,334	639,386	212,348	-
Real	12,183,699	6,868,705	5,220,232	5,560,142	4,254,275	1,713,185	1,539,457	2,188,672	1,077,526	680,141
Variance	2%	-4%	-17%	3%	-9%	38%	133%	242%	407%	0%

- La utilización de Costa Sur, Ecoeléctrica y CCSJ fue moderadamente superior a lo proyectado
- La utilización de Aguirre y Palo Seco fue considerablemente menor a lo proyectado
- El uso de las plantas “Peakers” fue significativamente mayor a lo proyectado

La mayor contribución a la varianza en costos fue la reducción del uso de plantas de residual, las cuales presentan costos menores y que fueron reemplazados por plantas diesel y algunas plantas de gas natural



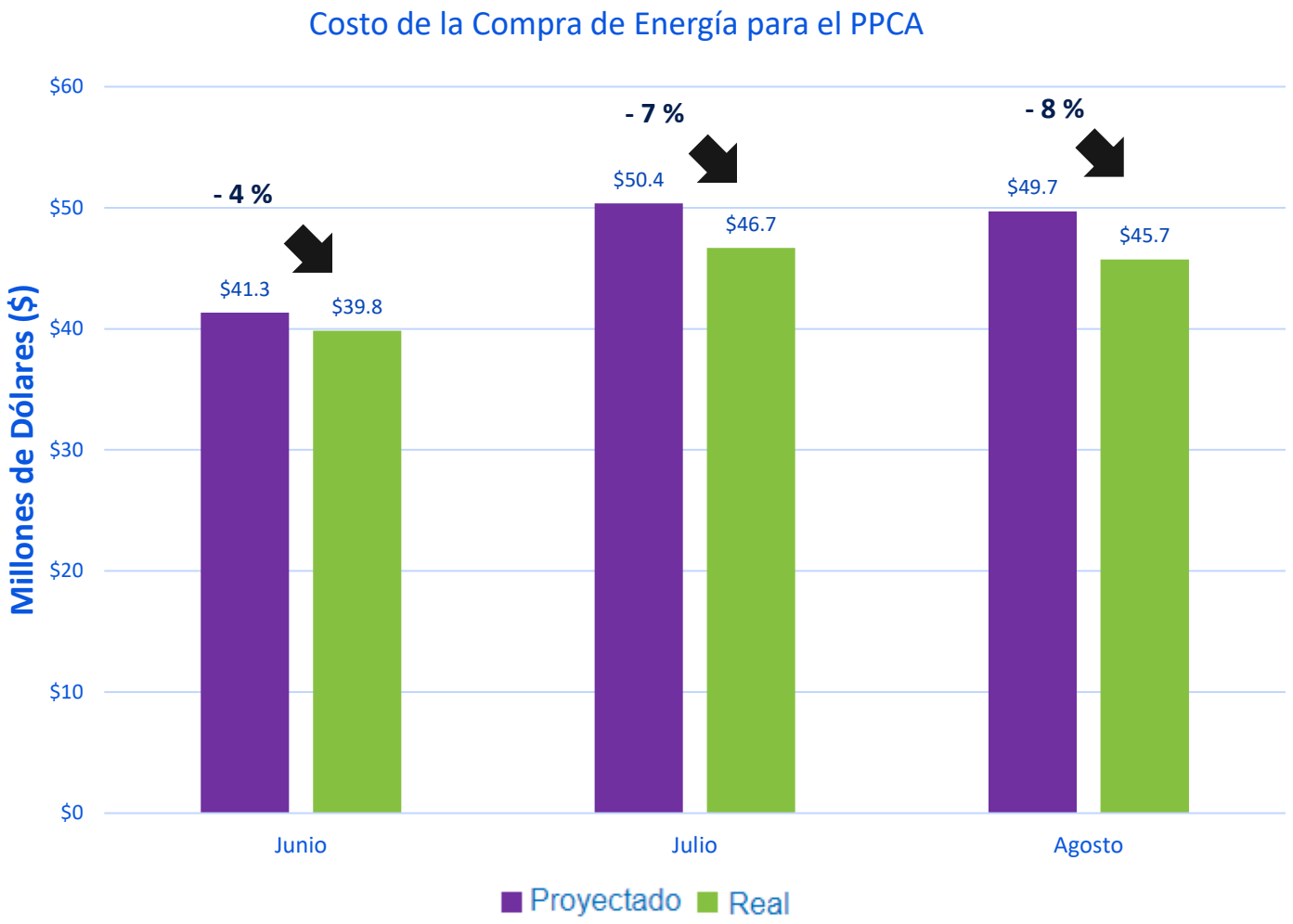
- Para reducir los relevos de carga y debido a la ausencia recursos adecuados, se ultilizaron las plantas diesel “Peakers” que tienen mayor costo.
- Incluso con el despacho de las unidades “Peakers”, no hubo suficiente capacidad para satisfacer la demanda de los clientes durante varios periodos y ocurrieron relevos de carga.

Resumen del Cálculo de los factores FCA y PPCA

Reconciliación de junio – agosto del año fiscal 2022

Varianza en el Costo de Compra de Energía

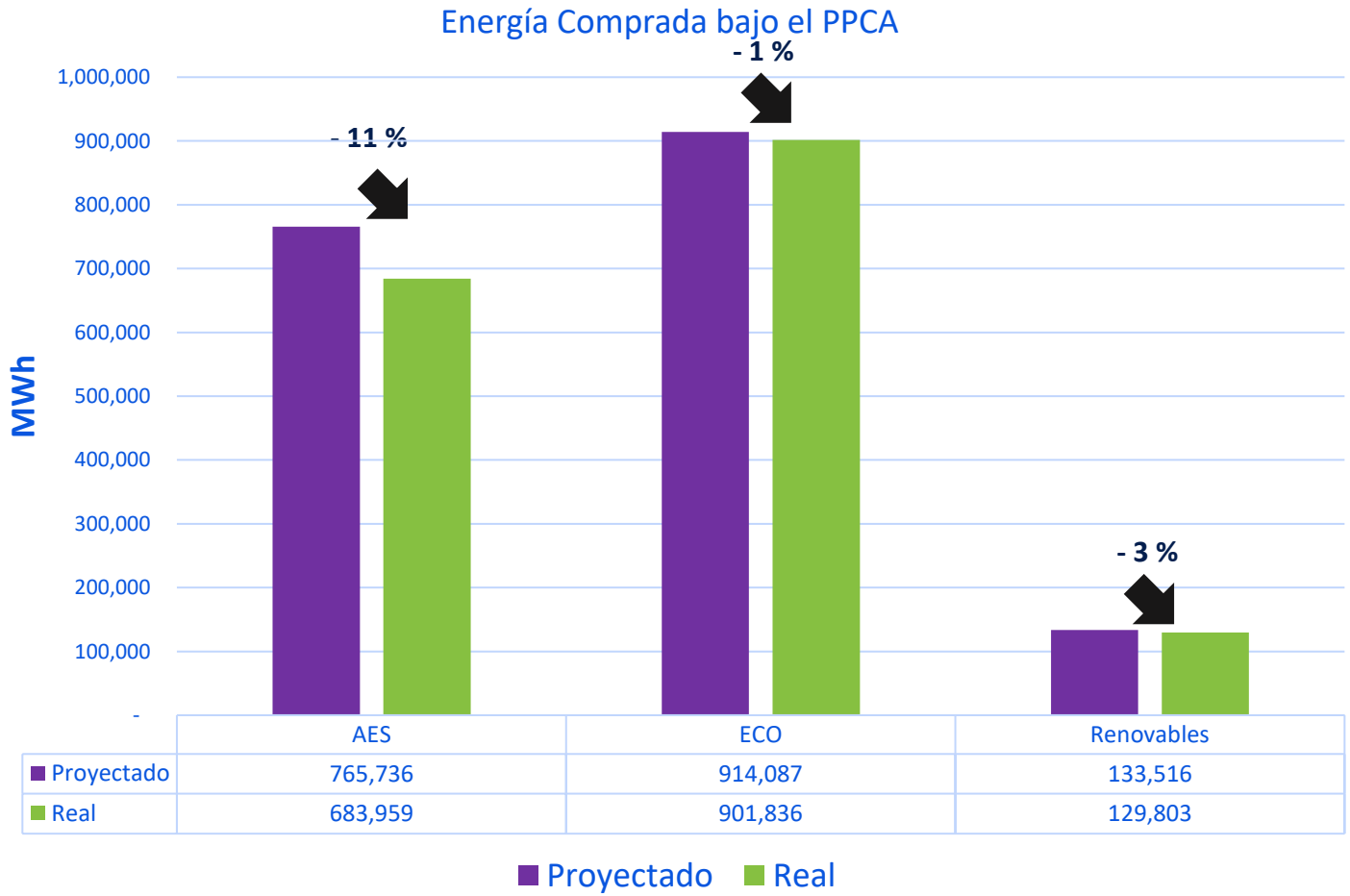
El costo actual de la Compra de Energía en el primer trimestre del año fiscal 2022 fue alrededor de 7% menor de lo proyectado



Comparación de costo de compra de energía para los 3 meses:

- Proyectado: $ 141.4 millones
- Real: $ 132.2 millones
- Varianza: -$9.2 millones (-6.5%)

La Energía Comprada en el primer trimestre del año fiscal 2022 fue 5% menor de lo proyectado



Comparación de la generación total para los 3 meses:

- Proyectado: 1,813,338 MWh
- Real: 1,715,598 MWh
- Varianza: -97,740 MWh (-5.4%)

Resumen del Cálculo de los Factores del FCA y PPCA

Discusión de Inventario

Revisión de Inventario y Costo de Combustible

17 de mayo 2021

- Los niveles de inventario fueron medidos y certificados por entidades externas y proporcionados a la AEE

30 de junio 2021

- La AEE ajustó el nivel de inventario medido el 17 de mayo de 2021 y ajustó el inventario al 30 de junio de 2021 (PRECIO PONDERADO DIRECTOR DE GENERACIÓN @ junio 30 2021)

julio 2021

- Los balances iniciales del mes de julio se ajustaron basado en los niveles de inventario dentro del archivo PRECIO PONDERADO DIRECTORADO DE GENERACION @ junio 30 2021
- Los costos se determinaron mediante la multiplicación de la diferencia de los barriles al 30 de junio por el precio ponderado al 30 de junio de 2021

Ajuste de inventario al 30 de junio de 2021

Combustible No. 2

Planta	Diff BBls	Diff $
AGUIRRE Diesel /CC	(11,530.62)	(1,068,836.87)
Aguirre Gas		
SAN JUAN CC	10,682.34	1,012,210.54
CAMBALACHE	4,498.95	389,513.98
MAYAGÜEZ	2,824.68	247,178.64
PALO SECO	(256.71)	(23,400.23)
DAGUAO	(5,093.88)	(479,683.32)
JOBOS	5,031.49	484,918.42
VEGA BAJA	(973.46)	(90,632.49)
YABUCOA	1,030.13	64,953.81
COSTA SUR	97.92	8,004.57
TOTAL	**6,310.83**	**544,227.05**

Combustible No. 6 - junio 30 2021

Planta	Diff BBls	Diff $
AGUIRRE	(6,314.78)	(523,226.80)
COSTA SUR	(361.82)	(24,131.55)
CORCO		
PALO SECO	7,446.50	596,501.14
SAN JUAN	(5,371.19)	(381,511.08)
TOTAL	**(4,601.29)**	**(332,368.29)**

	Diff BBls	Diff $
Ajuste Total	**1,710**	**211,859**

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Resumen del Cálculo de los factores FCA y PPCA

Ajuste no facturado junio – agosto

Clientes no facturados

- Debido a problemas con el proceso de facturación durante los meses de junio, julio y agosto, LUMA no ha podido proporcionar facturas a una parte de los clientes.
- Para evitar la doble contabilización, LUMA propone ajustar este estimado de clientes no facturados cuando los mismos sean facturados en el próximo trimestre.

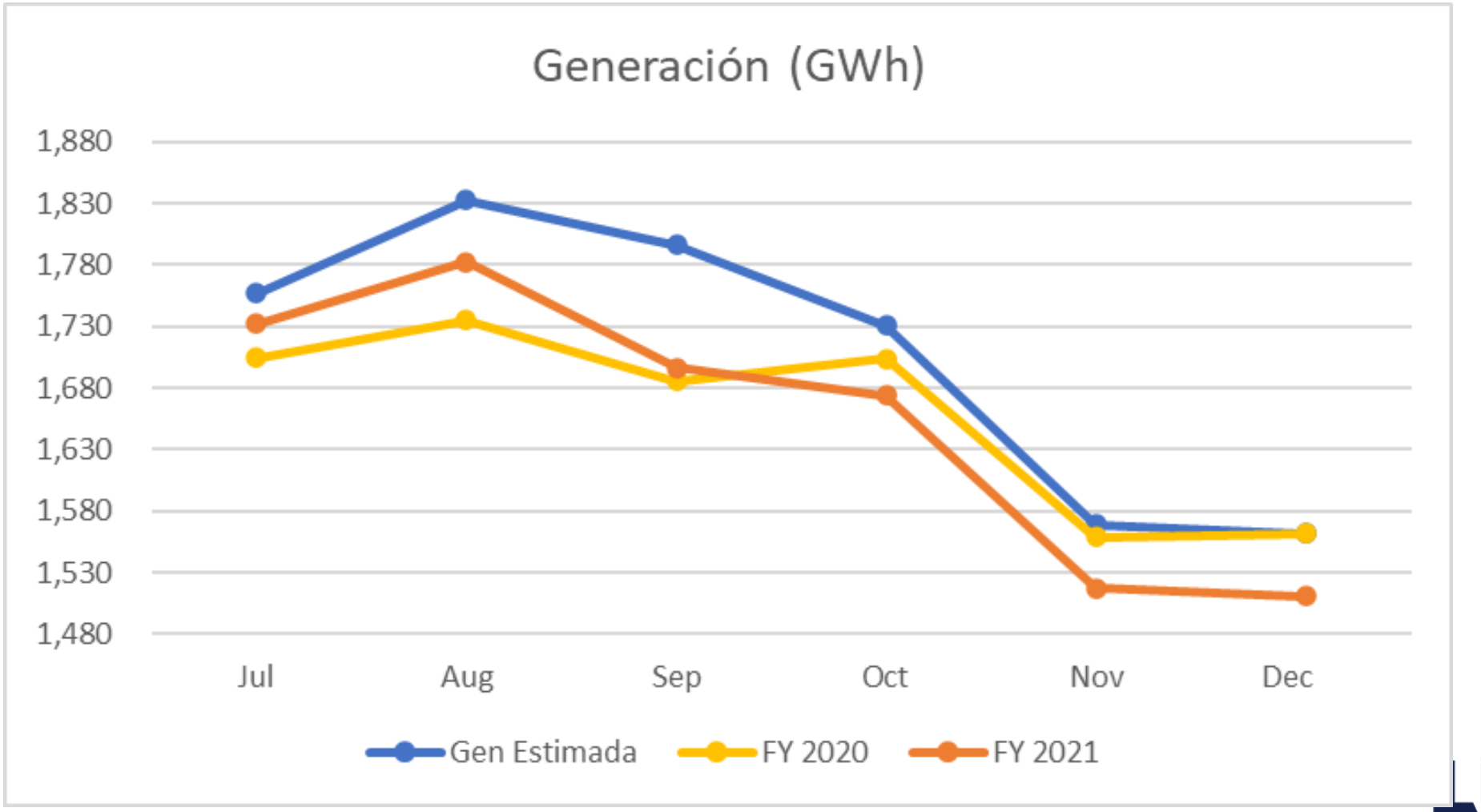
Mes	Consumo (kWh)	FCA ($)	PPCA ($)
junio	5,345,096	510,221	158,252
julio	9,224,762	980,011	313,909
agosto	63,649,333	6,761,914	2,165,923
Total	**78,219,191**	**8,252,146**	**2,638,085**

Resumen del Cálculo de los factores FCA y PPCA

Proyección de Ventas(kWh)

Metodología y Supuestos de Proyección de Ventas

- Las ventas se estimaron a partir de la generación diaria actual



Factores Propuestos para FCA y PPCA

Fórmula de Ajuste del Cargo por Combustible y Energía Comprada

$$FCA = \frac{Total\ de\ Costo\ de\ Combustible \pm Reconciliación\ Periodo\ Anterior}{Ventas\ Aplicables\ kWh}$$

$$PPCA = \frac{Total\ de\ Energía\ Comprada \pm Reconciliación\ Periodo\ Anterior}{Ventas\ Aplicables\ kWh}$$

$$FCA = \frac{\$476{,}702{,}706.42 + \$113{,}020{,}253.81}{4{,}213{,}303{,}687.26}$$

$$PPCA = \frac{\$132{,}417{,}847.96 - \$5{,}862{,}527.99}{4{,}213{,}303{,}687.26}$$

Factores Propuestos para el Segundo Trimestre del Año Fiscal 2022

Riders	julio 2021 – septiembre 2021 (Aprobado por el NEPR en la Resolución y Orden del 29 de junio de 2021)	Propuesta para octubre a diciembre de 2021	Diferencia
FCA	$0.1062	$0.1361	$0.0298
PPCA	$0.0340	$0.0288	($0.0052)
		Total	**$0.024569**

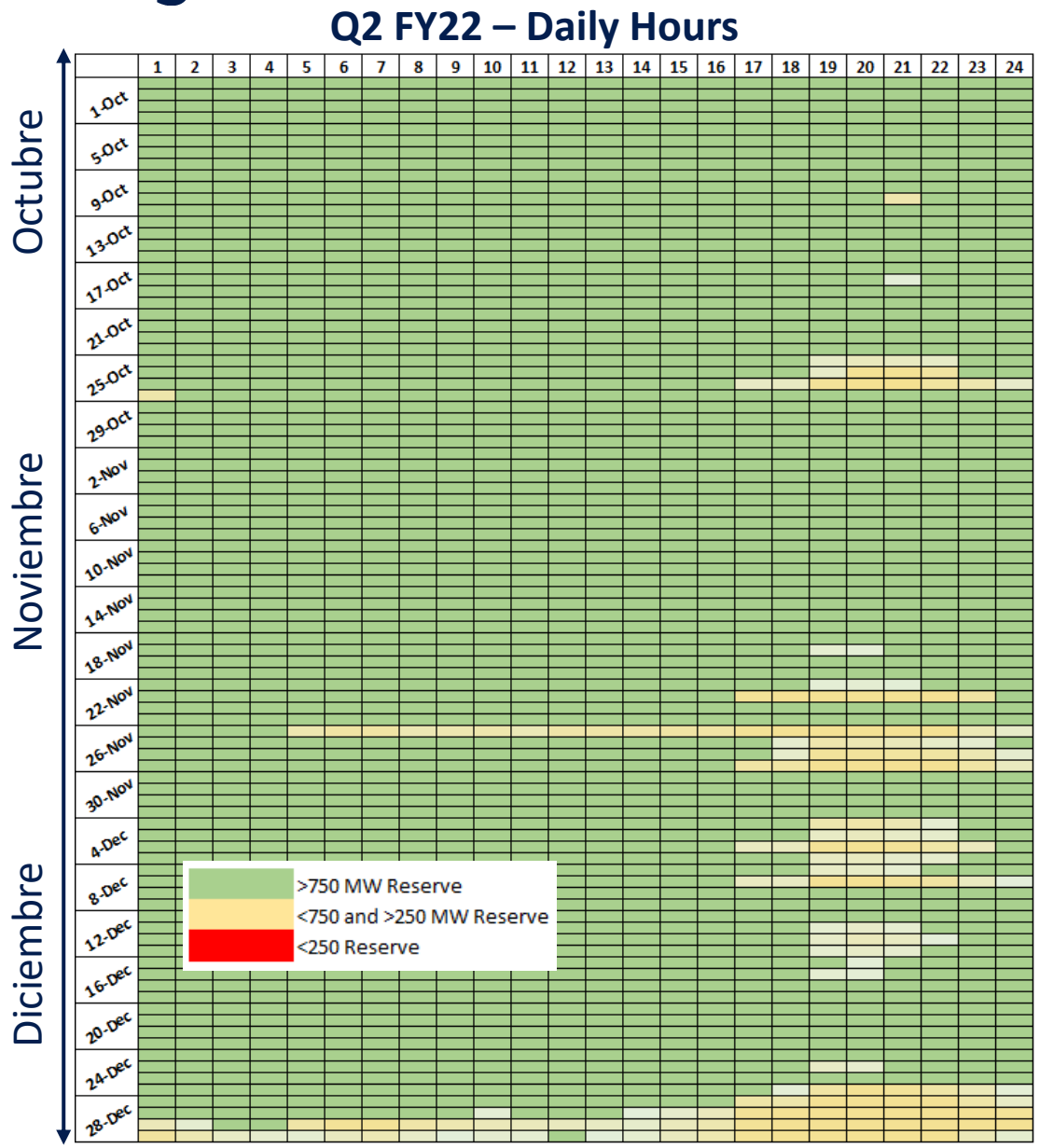
Análisis de Riesgos en la Proyección

La proyección por hora demuestra los riesgos y las oportunidades

Hour	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2,108	2,115	2,154	2,149	2,125	2,148	2,165
2	2,034	2,020	2,062	2,049	2,028	2,060	2,087
3	1,980	1,970	1,996	1,998	1,976	1,995	2,008
4	1,940	1,936	1,957	1,960	1,940	1,962	1,965
5	1,906	1,940	1,958	1,963	1,945	1,966	1,948
6	1,883	2,025	2,045	2,049	2,029	2,037	1,947
7	1,832	2,116	2,132	2,127	2,100	2,108	1,923
8	1,797	2,112	2,113	2,115	2,081	2,100	1,920
9	1,833	2,199	2,194	2,187	2,156	2,171	1,994
10	1,886	2,268	2,258	2,253	2,228	2,240	2,051
11	1,909	2,288	2,280	2,263	2,227	2,253	2,058
12	1,953	2,299	2,313	2,295	2,267	2,265	2,060
13	1,955	2,300	2,290	2,289	2,269	2,269	2,071
14	1,949	2,304	2,290	2,290	2,264	2,276	2,061
15	1,964	2,326	2,335	2,313	2,283	2,290	2,085
16	1,998	2,351	2,359	2,339	2,302	2,317	2,121
17	2,075	2,407	2,420	2,388	2,349	2,347	2,205
18	2,119	2,381	2,398	2,368	2,327	2,329	2,238
19	2,323	2,528	2,529	2,502	2,463	2,437	2,407
20	2,381	2,557	2,553	2,526	2,488	2,449	2,420
21	2,391	2,540	2,536	2,508	2,475	2,424	2,382
22	2,385	2,490	2,485	2,458	2,431	2,377	2,322
23	2,334	2,411	2,404	2,378	2,358	2,360	2,269
24	2,232	2,289	2,276	2,265	2,252	2,262	2,190

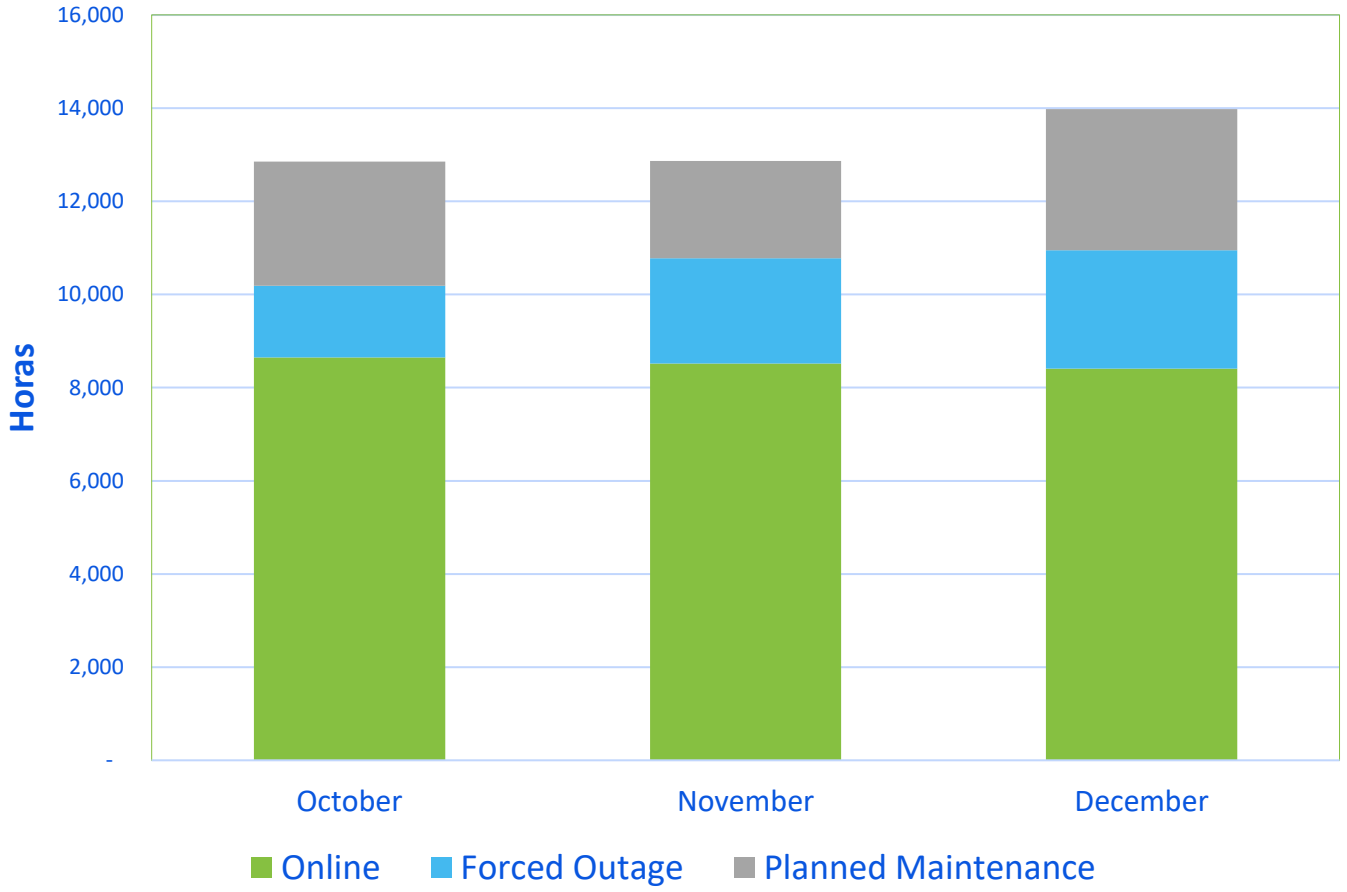
- La demanda pico durante las horas de 6-10 pm siempre es el periodo de mayor preocupación y de exposición a riesgo.
- Alta demanda generalmente se extiende luego de la medianoche, lo cual presenta problemas a corto y largo plazo:
  - Un programa orientado al manejo de demanda puede reducir la demanda pico residencial.
  - Si el almacenamiento de energía es un componente básico de la estrategia de recursos, se requiere una mayor duración de almacenaje de baterías.

Una perspectiva por hora destaca los periodos de preocupación en el segundo trimestre del año fiscal 2022



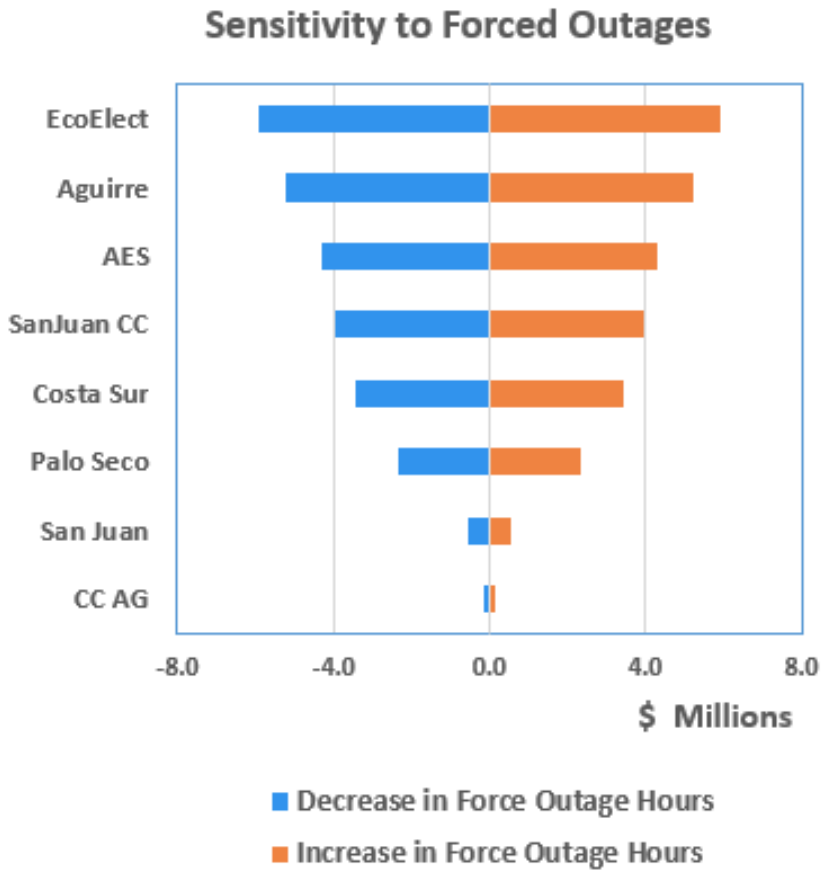
- Las secciones sombreadas en amarillo muestran los periodos en los que se proyecta que las reservas disponibles serán menor a 750 MW
- Las tendencias típicas por hora de mayor preocupación:
  - Entre las 6-10pm
  - La última semana de diciembre también es una preocupación notable

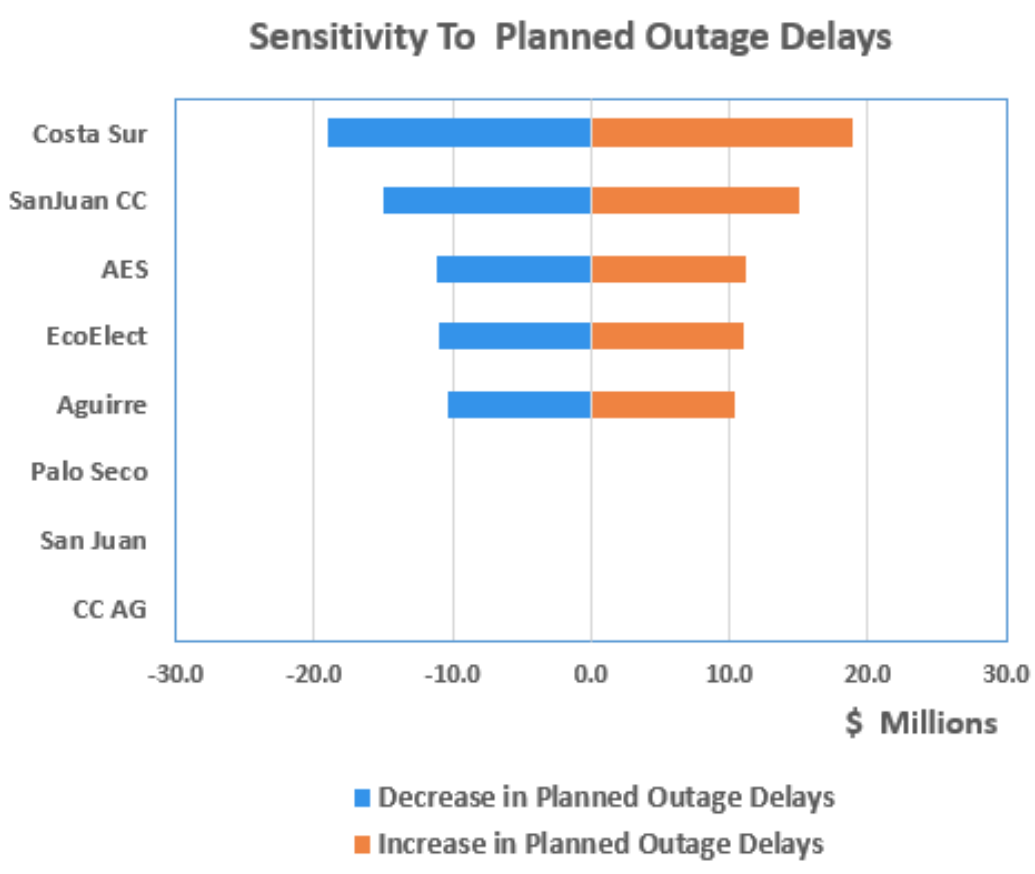
La disponibilidad de los generadores es modelada a base de los supuestos de la Salidas Planificadas y Salidas Forzadas



- Cada generador produce su disponibilidad proyectada la cual conduce a la proyección del FCA
- Los mantenimientos programados para el segundo trimestre el año fiscal 2022 son muy poco flexibles
  - Desde la primavera muchas unidades aplazaron sus mantenimientos
- Las horas de salidas forzadas se fundamentan en promedios históricos por unidad

Exposición significativa al riesgo debido a salidas forzadas y mantenimientos programados



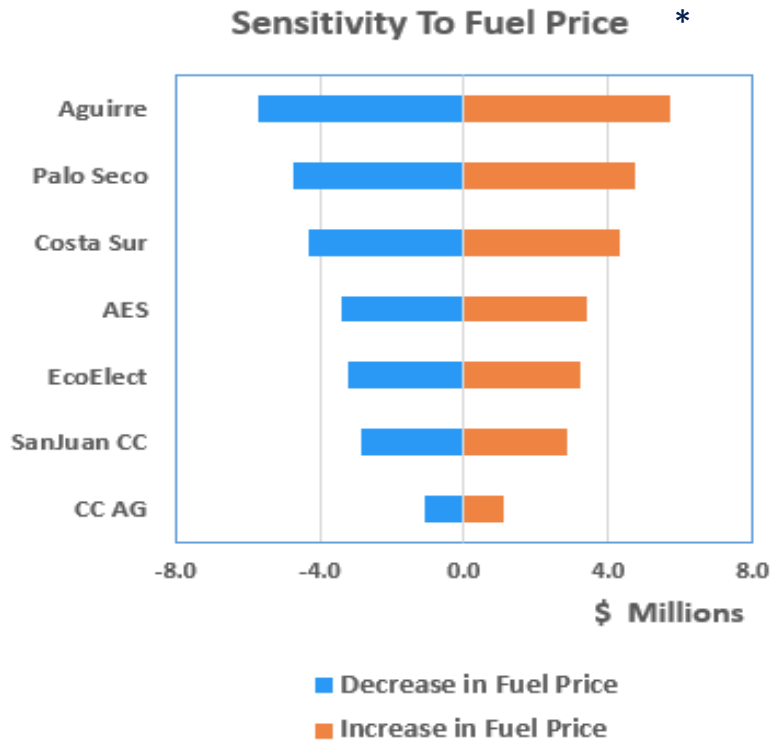


La sensitividad por la tasa de las salidas forzadas prueba el impacto de un aumento o disminución en la disponibilidad de 100 horas perdidas por salidas forzadas.

La sensitividad por el atraso de las salidas planificadas prueba el impacto de un aumento o disminución de 25% en la duración de la salida programada.

Los Precios de Combustible Incrementaron

Últimos doce meses



- Incrementos significativos en los precios de combustible durante los pasados 12 meses
  - ~75% de incremento en los precios de WTI (petroleo crudo)
  - >150% de incremento en Henry Hub (gas natural)
- Impacto directo al FCA

* La sensitividad del FCA para el segundo trimester del año fiscal 2022 tendrá un aumento o disminución en los precios de combustible de 5%

LUMA

Se desarrollan varios procesos de mejoras para mitigar riesgos

- Los cronogramas de salidas son revisados varias veces por semana
  - Se evalúan en PROMOD diferentes escenarios de salidas

- Se implementan nuevos procesos de recolección de datos y análisis de alternativas
  - Para apoyar la toma de decisiones
  - Operación de Sistemas están manteniendo registros históricos operacionales de una forma más estructurada

- Las tasas de salidas forzadas o atrasos en los mantenimientos planificados afectan la suficiencia de los recursos y generan costos más altos

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Gracias