

# FCA – PPCA Variance Discussion

*Reconciliation period from December 2021  
to February 2022*

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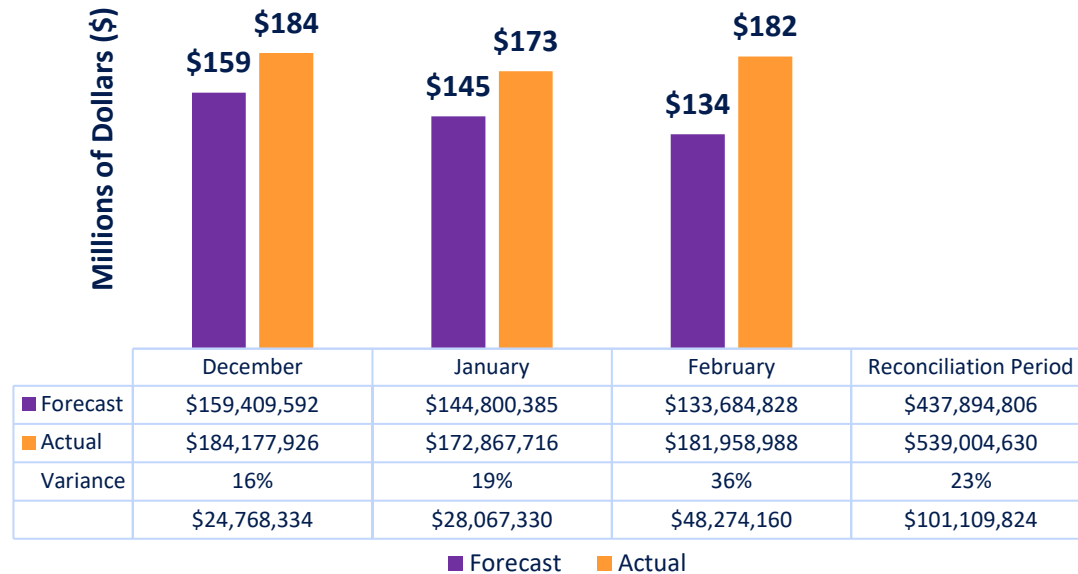
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# **Fuel Cost Variance**

## ***December 2021-February 2022***

# Actual fuel expenditure for this Q3 reconciliation period was 23% higher than projected in our December forecast

## Fuel Costs under FCA

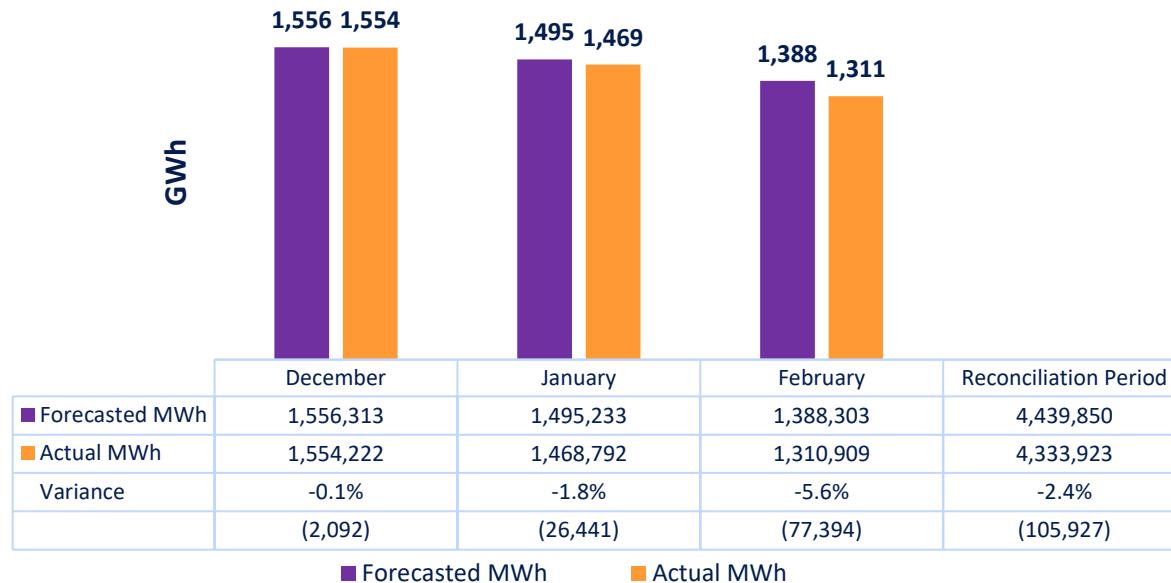


### 3-month Total Fuel Cost Comparison:

- Forecasted: \$ 437.9 Million
- Actual: \$ 539 Million
- Variance: 23% (\$101.1 Million)

# Actual electric generation provided to all customers for this Q3 reconciliation period was approximately 2 % lower than projected

## Generation under FCA & PPCA

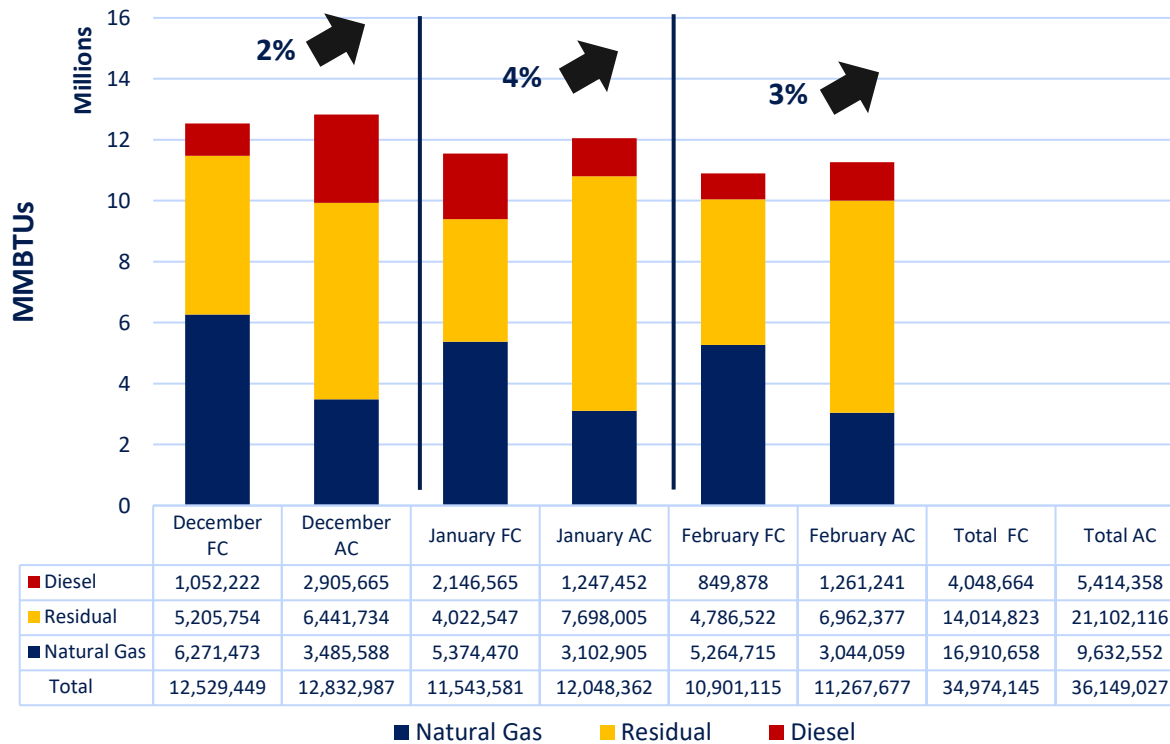


## 3-month Total Generation Comparison:

- Forecasted: 4,439,850 MWh
- Actual: 4,333,923 MWh
- Variance: -2.4% (105,927 MWh)

# MMBtu consumption was 3% higher than forecast, driven by a higher consumption of less efficient fuels and dispatch choices <sup>(1)</sup>

Fuel Consumption by Type under FCA



## 3-month Total Consumption Comparison:

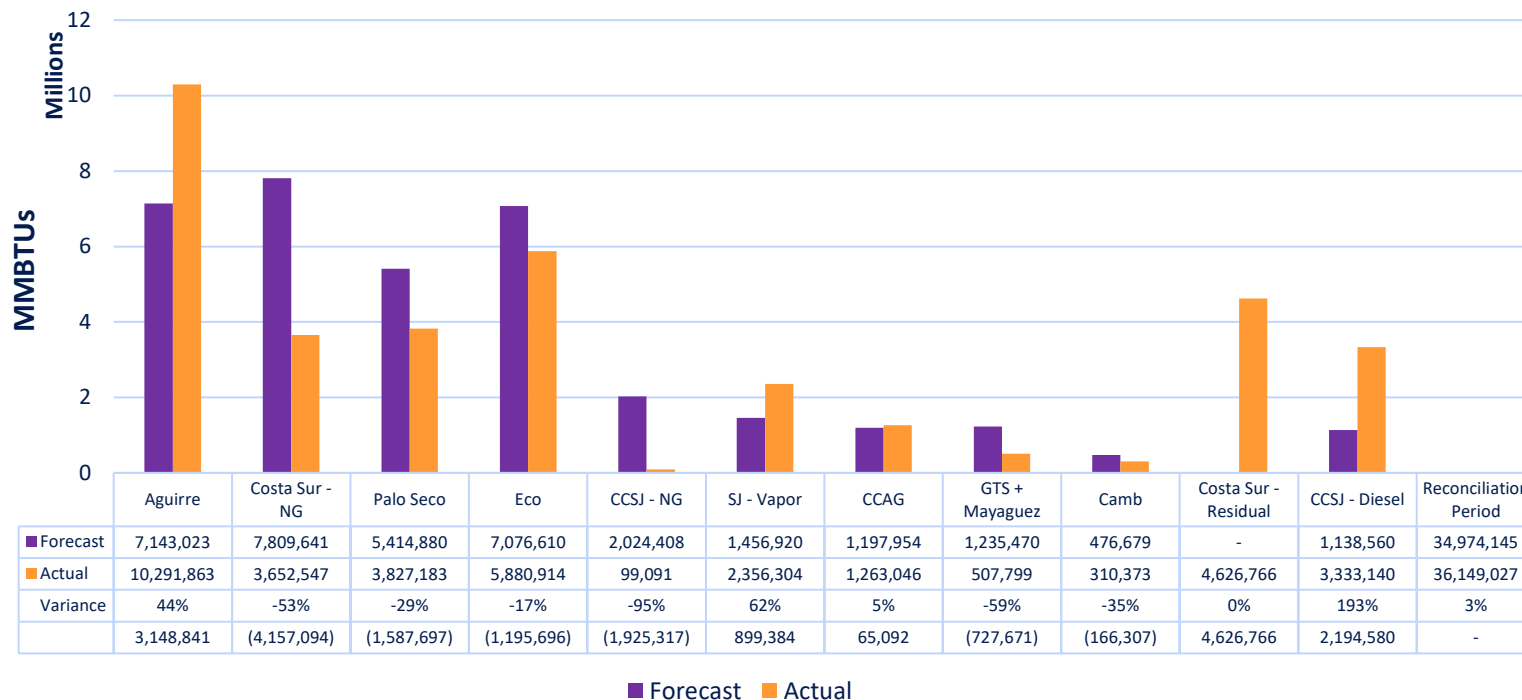
- Forecasted: 34,974,145 MMBtu
- Actual: 36,149,027 MMBtu
- VARIANCE: 3% (1,174,882 MMBtu)

Fuel Type	Forecast	Actual	% Variance
Residual	14,014,823	21,102,116	51%
Diesel	4,048,664	5,414,358	34%
Natural Gas	16,910,658	9,632,552	-43%
<b>Total</b>	<b>34,974,145</b>	<b>36,149,027</b>	<b>3.4%</b>

(1) Using Residual fuel and Diesel increases the heat rate and requires more MMBtus to be consumed than would have been for natural gas

# The quarter saw greater production by Aguirre and less production by Palo Seco and Ecoeléctrica, in addition to fuel switching decisions by PREPA

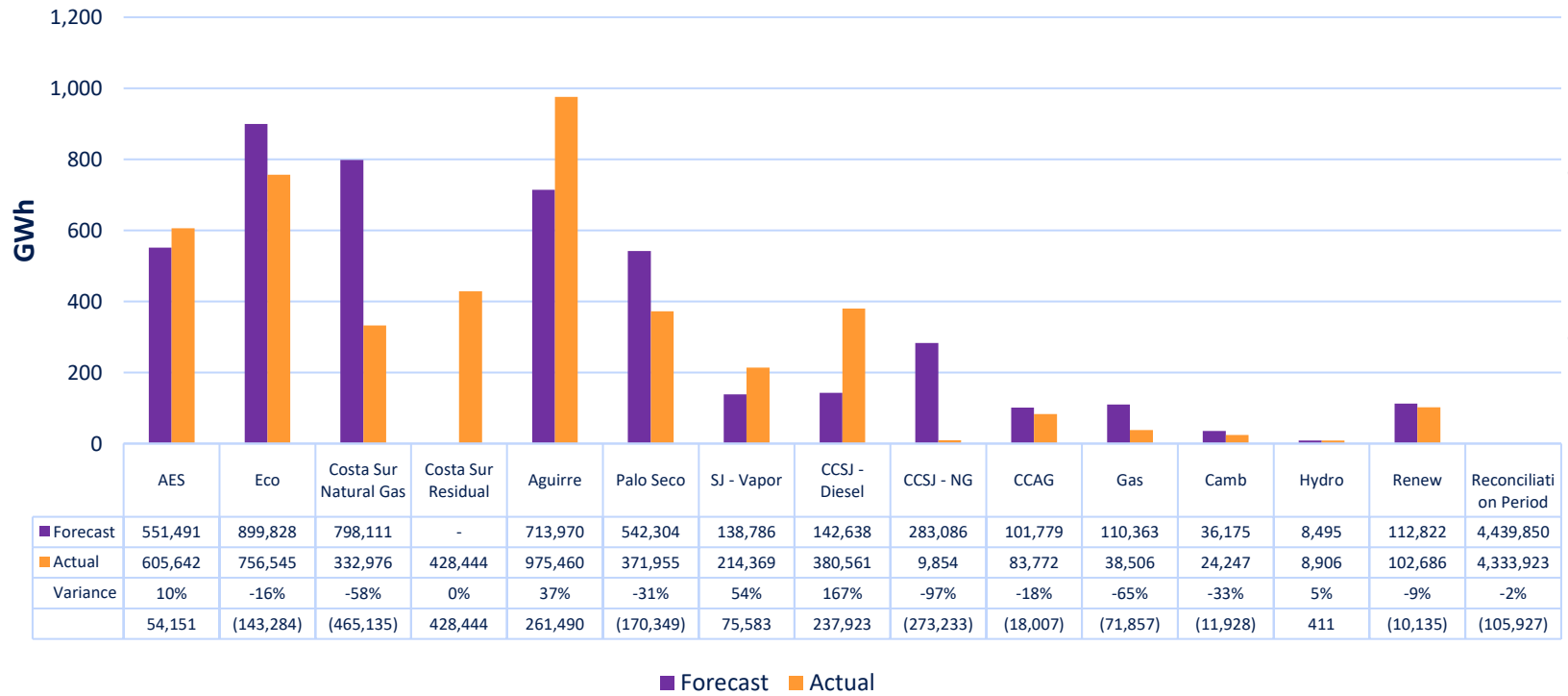
Fuel Consumption by Plant under FCA



- Costa Sur burned approximately 56% of its MMBtus by Residual instead of Natural Gas.
- San Juan CC burned almost all its consumption in Diesel, instead of the 75% natural gas profile assumed in model.
- Aguirre MMBtu consumption more than anticipated due to some scheduled maintenance activities not taking place.

# Residual fuel and diesel was used in place of natural gas that was planned in the forecast model

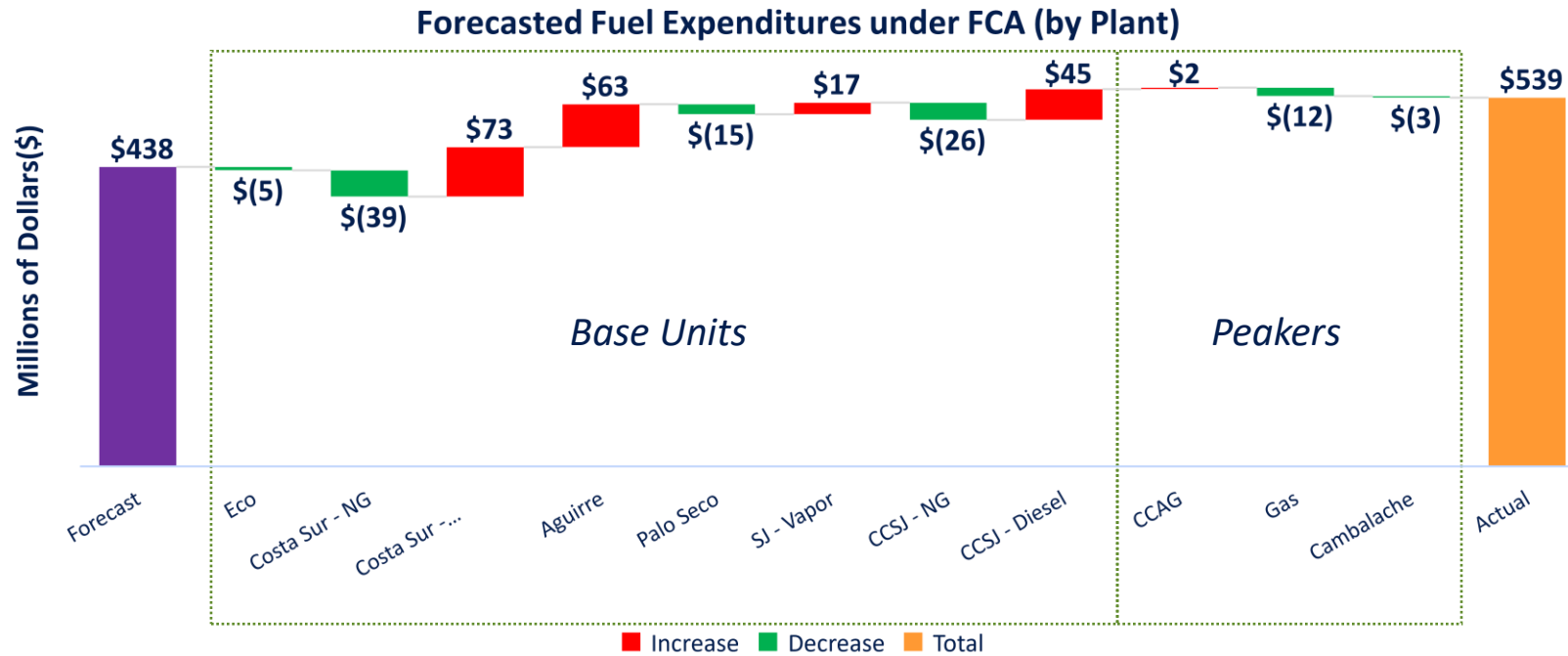
Generation by Plant under FCA & PPCA



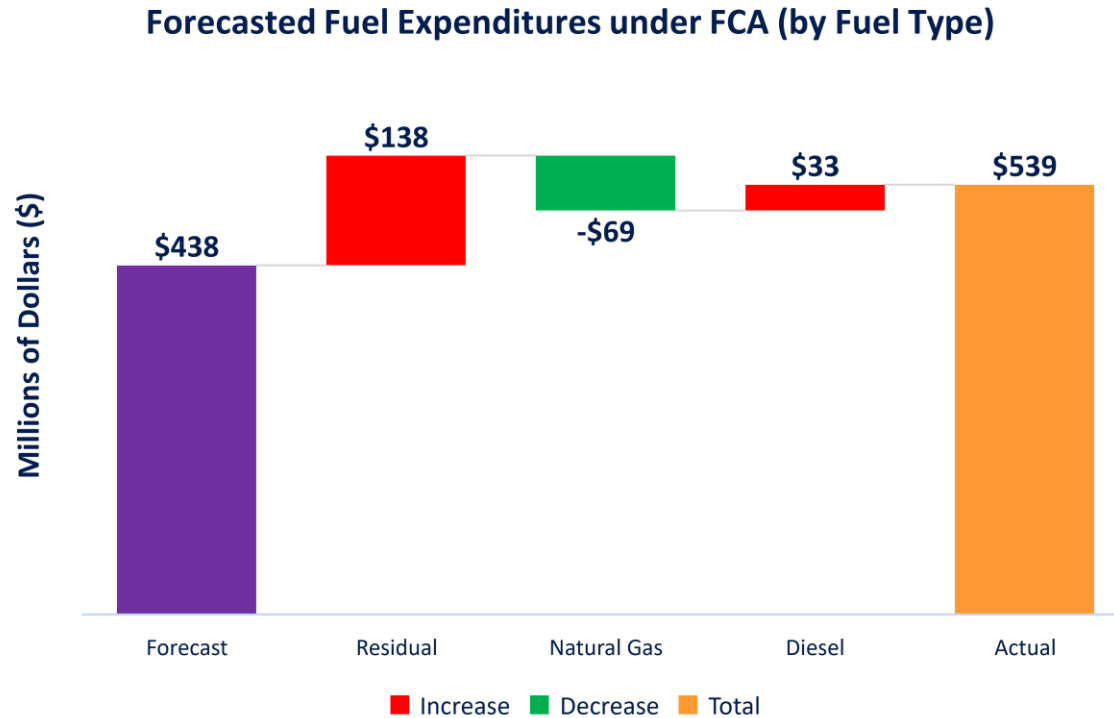
- Ecoeléctrica generation less than forecast due to operational issues.
- Peaker usage considerably less than forecasted.



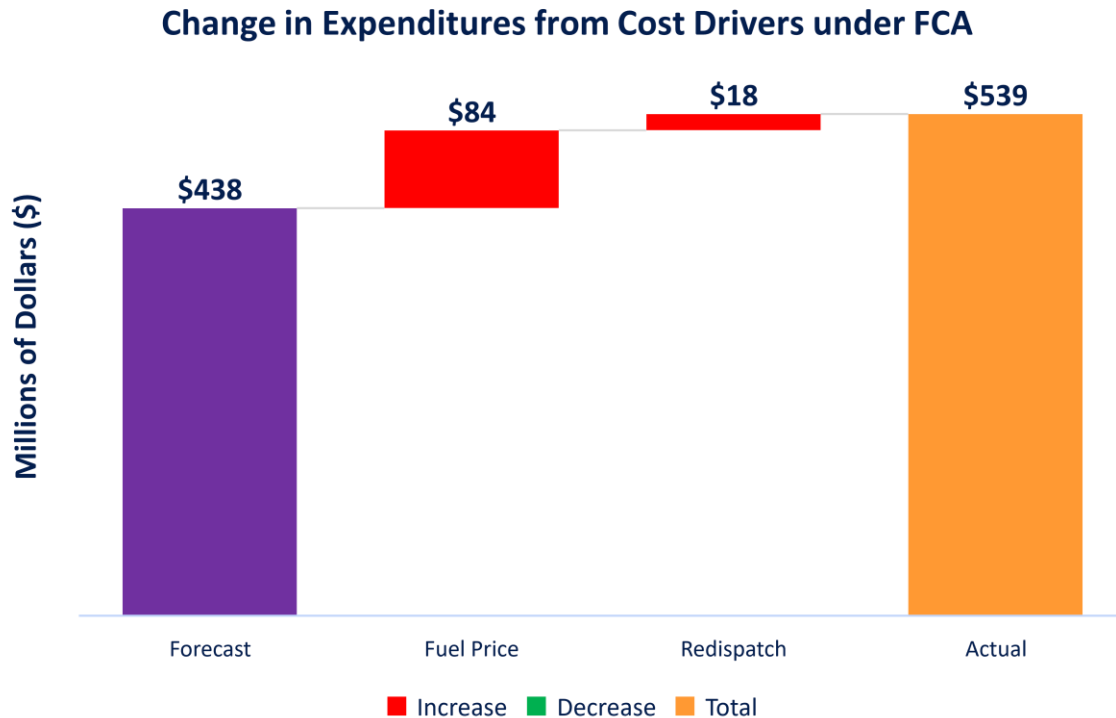
# Total dollar variance largely resulted from use of Residual and Diesel at San Juan and Costa Sur plus greater production from Aguirre (by plant view)



# Total dollar variance largely resulted from use of Residual and Diesel at San Juan and Costa Sur plus greater production from Aguirre (by fuel type)



# Higher fuel prices were the main contributor to variance in fuel expenditures for this reconciliation period (by cost driver)



	Forecast	Actual	Variance
Generation (MWH)	4,439,850	4,333,923	-2.4%
Production Cost (\$/MWH)	\$98.63	\$124.37	26%
Fuel Consumption (MMBtu)	34,974,145	36,149,027	3.4%
Fuel Cost (\$/MMBtu)	\$12.52	\$14.91	19%

- Some reasons for variance could be attributed to either fuel price or redispatch and judgement was applied in these cases.

## Methodology

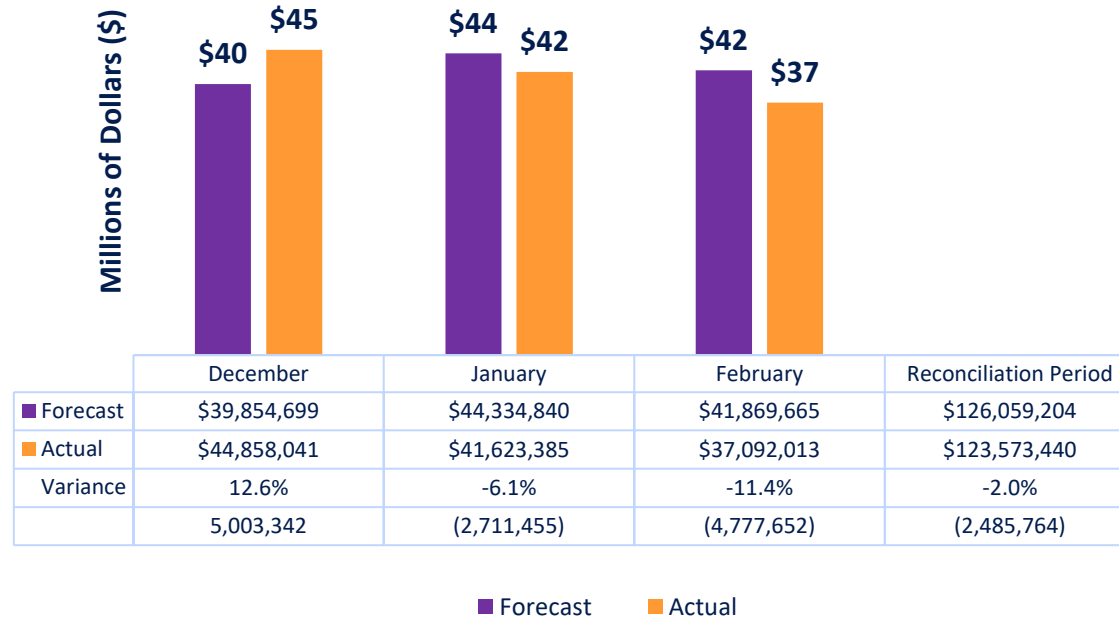
- Fuel Price variance = Forecasted MMBtu consumption x (Actual \$/MMBtu – Forecasted \$/MMBtu)
- Redispatch variance= Actual \$/MMBtu x (Actual MMBtu consumption – Forecasted MMBtu consumption)

# **Power Purchase Variance**

## ***December 2021-February 2022***

# Purchased power costs for this reconciliation period were 2% less than projected

## Purchase Power Costs under PPCA

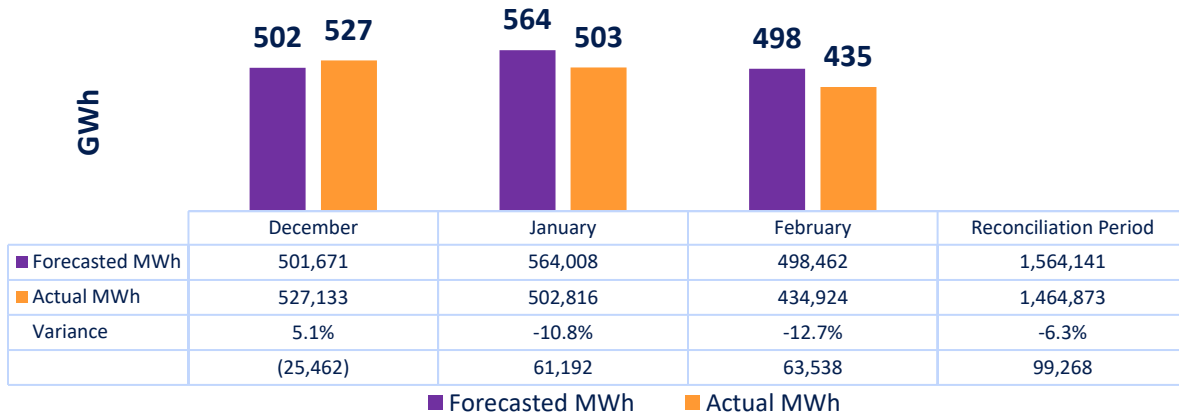


## 3-month Power Purchase Cost Comparison:

- Forecasted: \$ 126,059,204 Million
- Actual: \$ 123,573,440 Million
- VARIANCE: -2% (\$2,485,764 Million)

# Purchased power production was approximately 6% lower than projected as a result of outages which had previously been deferred occurring in this quarter

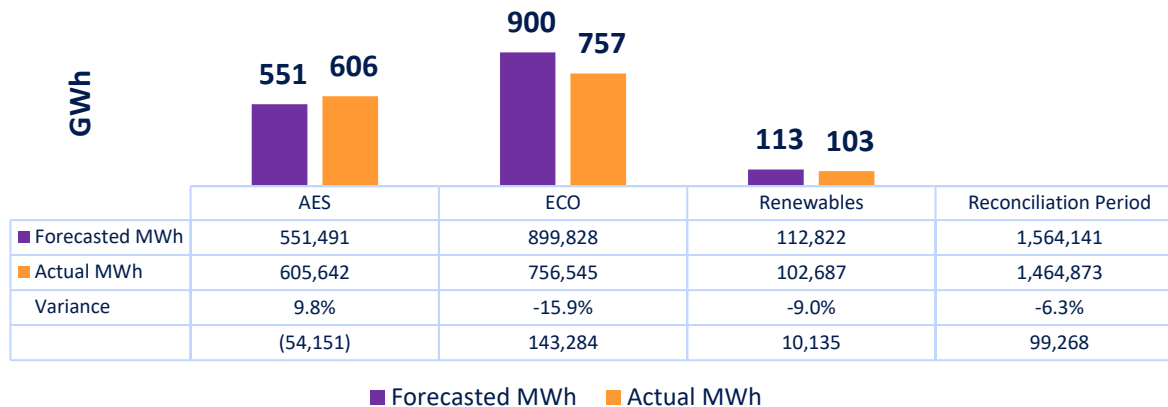
Purchased Power Generation under PPCA



## 3-month Power Purchase Generation Comparison:

- Forecasted: 1,564,141 MWh
- Actual: 1,464,873 MWh
- VARIANCE: -6.3% (99,268 MWh)

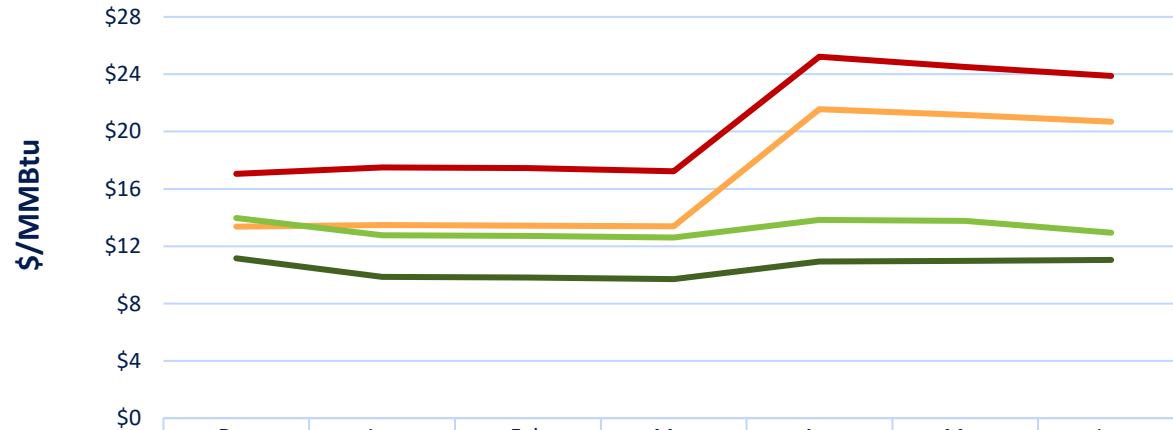
Purchased Power Generation under PPCA



# Appendix

# Fuel Price Forecast used in PROMOD simulations

Assumed Fuel Prices in PROMOD



	Dec	Jan	Feb	Mar	Apr	May	Jun
Diesel	\$17.05	\$17.50	\$17.46	\$17.24	\$25.21	\$24.50	\$23.87
Residual	\$13.36	\$13.48	\$13.44	\$13.39	\$21.57	\$21.16	\$20.70
N.G. - San Juan CC	\$13.96	\$12.76	\$12.72	\$12.62	\$13.83	\$13.78	\$12.95
N.G. - Costa Sur	\$11.16	\$9.86	\$9.82	\$9.71	\$10.93	\$10.97	\$11.04

— Diesel   
 — Residual   
 — N.G. - San Juan CC   
 — N.G. - Costa Sur

Numbers shown are from PROMOD run done on March 11<sup>th</sup>



# Henry Hub & WTI

