Exh. RJM-7
Docket UE-25____
Witness: Ramon J. Mitchell

BEFORE THE WASHINGTON

UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant, v. PACIFICORP dba PACIFIC POWER & LIGHT COMPANY Respondent.	Docket UE-25_____

PACIFICORP

EXHIBIT OF RAMON J. MITCHELL

DA/RT Percentile Modifier

April 2025

$1.470 billion (absent production factor adjustment). Actual NPC for calendar year 2022 was recorded at $2.041 billion, an under-forecast of $570 million relative to the PCORC forecast.

Q. What modeling improvements have been implemented since the 2021 PCORC?

A. The following modeling improvements have been implemented since the 2021 PCORC:

- The DA/RT market price adder will be changed from a flat value to a percentage.
- Trapped energy will be appropriately substituted for curtailment of generation to reflect actual operations.
- The maximum capacity of certain thermal generation units will be updated to reflect ambient derates to unit capacity during the summer months.

A. DA/RT Adjustment - Price Component

Q. Please explain how the price component of the DA/RT adjustment operates.

A. The price adder component of the DA/RT adjustment addresses the costs incurred by the Company as a result of multiple variables within a dynamic system in which the Company has historically bought more during higher-than-average price periods and sold more during lower-than-average price periods.

To better reflect the market prices available to the Company when it transacts in the real-time market, the Company includes separate prices for forecast system balancing sales and purchases in Aurora. These prices account for the historical price differences between the Company's purchases and sales compared to the trading-hub-

indexed market prices. Previously these prices were calculated by adding or subtracting a flat dollar amount to the hourly scaled prices from the OFPC.

Q. Please explain how changing the DA/RT adjustment price component from a flat value to a percentage of market price results in a DA/RT adjustment that is more reflective of actual operations.

A. Changing the price calculation to a percentage of the market prices aids in accounting for the volatility caused by prices and system conditions not captured in day-ahead transactions. Take, for example, a $5 price adder in an hour when the market price is $25. This resolves to a 20 percent price adder. But using the $5 price adder when market prices are $75 would fail to account for the system and market conditions during that hour. Using a 20 percent price adder during hours when market price is $75 would yield in a $15 price adder, which is more reflective of the system conditions. A key benefit of using a percentage adder is that it allows the modeling to capture intra-month variability. Consequently, this is a more accurate representation of real operating conditions experienced by the Company.

Q. Please quantify the impact of this adjustment.

A. The impact of this adjustment at the total-company level is an increase of $10.7 million to NPC. The primary driver for this change is the captured effect of intra-month market volatility.

However, a consequence of this adjustment at the total-company level is that the average price ($/MWH) of wholesale sales decreases by a modest amount, which lowers the cost of re-balancing the shortfall in the WIJAM to close the net open

position. Consequently, in the WIJAM the impact of this adjustment *decreases* Washington-allocated NPC by $0.18 million as a result.

B. Trapped Energy

Q. Please explain the Company's trapped energy concept.

A. Primarily, trapped energy is a modeling concept only and does not exist in actual operations. It represents any excess generation that cannot be used to serve load due to transmission constraints or system-level oversupply. Because of limited transmission and the need for supply and demand to always be balanced, the trapped energy is captured within a modeled trapped energy zone and serves "pseudo load" that is regulated by a "pseudo generator" with an infinite ramp rate ("pseudo" - *i.e.*, the load and generation in the trapped energy zone are also modeling constructs that do not exist in actual operations).

Q. Why was the trapped energy modeling concept necessary in the old Generation and Regulation Initiative Decision Tools (GRID) model?

A. Conceptually, the trapped energy zones allow for a feasible model solution in the event of an inability to maintain the supply/demand balance when there is excess supply. However, the primary function of trapped energy zones in prior GRID NPC simulations was to allow for Company-owned production tax credit (PTC) eligible wind to be modeled with a reasonable degree of accuracy. Due to an inability in GRID to model resources with a negative dispatch cost (representative of PTCs, in the case of wind), these wind resources could not provide the proper price signal to the model and therefore could not be accurately represented within GRID's resource stack. As a work-around, the wind resources were simulated as must run resources