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WUTC Data Request 49

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Power Costs - Witness Painter states, “The EDAM will economically control and optimize most of the day ahead, hour ahead, and intra-hour Company generation and market transactions.” (JP-1T at 27:21-22)

(a) Please identify which of the following NPC components will be controlled and optimized by the EDAM in whole, in part, or not at all. For each NPC component that is not controlled and optimized by the EDAM in whole, please describe the main factors that can potentially cause variation in the portion that is not controlled or optimized by the EDAM.

1. Wholesale Sales Revenue
 - i. Long Term Firm Sales
 - ii. Short Term Firm Sales
 - iii. System Balancing Sales
2. Purchased Power Expense
 - i. Long Term Firm Purchases
 - ii. Qualifying Facilities
 - iii. Mid-Columbia Contracts
 - iv. Storage and Exchange
 - v. Short Term Firm Purchases
 - vi. System Balancing Purchases
3. Coal Fuel Expense
4. Natural Gas Fuel Expense
 - i. Gas Fuel Burn Expense
 - ii. Pipeline Reservation Fees
5. Wheeling and Other Expense
 - i. Firm Wheeling
 - ii. EIM/EDAM Administrative Fees
 - iii. Other Generation Expense
 - iv. Any other NPC components omitted from this list

(b) Please identify any generation resources whose costs are included in the NPC that the Company anticipates may not be eligible to participate in CAISO’s Day-Ahead Market. Please explain the reason for each resource and the implications for NPC calculations and forecasts.

(c) Witness Painter states, “The EIM is an intra-hour market...” (JP-1T at 26:12) and that the “EDAM is a day-ahead, hour-ahead, and intra-hour market ...” (JP-1T at 26:15). CAISO documents refer to the EDAM as day-ahead market

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- only. Is the reference to hour-ahead meant to refer to CAISO's RTM and the reference to intra-hour meant to refer to CAISO's FMM? If not, please explain under what process the hour-ahead market would be included.
- (d) Are any costs associated with PacifiCorp's role as an EDAM Transmission Service Provider included in the NPC? Please explain.
 - (e) Are any costs associated with providing ancillary services included in NPC? Please provide details on these costs and how they will be controlled and optimized since they are not managed by the EDAM.
 - (f) Please explain how the EDAM Legacy Contract rights provision of CAISO's EDAM tariff language applies to PacifiCorp, if at all.
 - (g) Will the EDAM control and optimize self-scheduled units? If not, how will PacifiCorp control and optimize dispatch of self-scheduled units? What is the projected utilization of self-scheduling?
 - (h) How will PacifiCorp calculate EDAM start-up and minimum load costs for each generation unit?
 - (i) How will PacifiCorp calculate EDAM bid pricing for each generation unit?
 - (j) Will PacifiCorp's participation in the EDAM include costs related to Proxy Demand Resources? If so, please explain how these will be included in NPC.

Confidential Response to WUTC Data Request 49

The Company objects to this request as outside the scope of this proceeding, and not reasonably calculated to lead to the discovery of admissible information. Without waiving the foregoing objection, PacifiCorp responds as follows:

- (a) The majority of coal, natural gas, and other generation dispatch plus system balancing sales and purchases, Mid-Columbia (Mid-C) contracts, storage and exchange in regard to batteries, and energy imbalance market (EIM) / extended day-ahead market (EDAM) administrative expenses will be controlled by the EDAM. Long-term firm (LTF) sales and purchases, short-term firm (STF) sales and purchase that are hedges, qualifying facilities (QF), and firm wheeling will not be under the control of EDAM. Some examples of variation to the net power costs (NPC) components not under EDAM control are customer demand, variations in renewable generation, weather, transmission or generation outages, hedging, and long-term contracts.
- (b) Long-term power purchase agreements (PPA), QFs and portions of fixed costs in coal supply agreements (CSA) are costs, related to generation resources,

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that are included in NPC but will not be under the control of EDAM.

- (c) The EDAM is a day-ahead market. The EIM is an intra-hour market that operates in five-minute intervals (real-time dispatch (RTD)) and 15-minute intervals (FMM). The hour-ahead scheduling process (HASP) is the hour-ahead market in the California Independent System Operator (CAISO) real-time market (RTM). However, any entity that joins the EDAM will also partake in the HASP and EIM. Therefore, the reference to “hour-ahead” and “intra-hour” means that PacifiCorp will be a market participant in a day-ahead, hour-ahead, and intra-hour market once PacifiCorp is operating in EDAM.
- (d) No. Transmission costs associated with the transmission function of the business as defined under the Federal Energy Regulatory Commission's (FERC) standards of conduct rules and referenced here as PacifiCorp’s role as an EDAM Transmission Service Provider are not a component of NPC.
- (e) As an initial matter, per the EDAM design, there will be ancillary services managed by the EDAM such as imbalance reserves and reliability capacity. However, the EDAM does not take responsibility for the compliance with North American Electric Reliability Corporation (NERC) standards that govern any reliability implicit in these aforementioned ancillary services. The Company, as a balancing authority (BA), will retain this responsibility. With this as context, yes there are costs associated with providing ancillary services and these costs are embedded in NPC.

Costs associated with ancillary services are the opportunity costs of energy not generated when setting aside capacity to serve those ancillary service requirements. These costs are embedded in the total system dispatch and not reflected in any specific line item. The ancillary service holdings are subject to NERC standards and requirements and to the extent that the NERC requirements allow for discretion, are subject to the flexible reserve study conducted in PacifiCorp’s most recent integrated resource plan (IRP).
- (f) The CAISO EDAM tariff provisions are still being developed by the CAISO through its EDAM stakeholder process. Because the CAISO EDAM tariff provisions are not yet final (and have not been filed with FERC for acceptance), PacifiCorp is unable to respond to this request at this time as it would require speculation.
- (g) No. PacifiCorp, as explained in the EDAM Final Proposal Section (II)(A)(1)(c)(2) – Concept of “Base Scheduling” and the EDAM, will use self-schedules to indicate to the market that the resource does not have an economic offer expressing a willingness for the market to optimize it. Self-schedule resources are price-takers that schedule their generation to dispatch

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at the preset schedule irrespective of market prices. The market has no control of those schedules. Currently, PacifiCorp is still determining how self-schedules will be utilized in the EDAM as there is not yet a FERC-approved CAISO EDAM Tariff nor are there related CAISO business practice manuals (BPM).

- (h) PacifiCorp anticipates that start-up costs will be calculated similarly in EDAM to how they are calculated in EIM today: required start-up fuel amount multiplied by the fuel price. Minimum load costs are currently calculated to reflect the cost to generate at minimum load: heat input multiplied by fuel price multiplied by minimum load volume. Note: the CAISO is currently still finalizing documentation of EDAM requirements and all final processes regarding how to calculate start-up and minimum load costs will ultimately be done according with the CAISO's specifications and requirements. Given the expected go-live date of 2025, the technical manuals containing these specifications are not yet available.
- (i) PacifiCorp anticipates that bid pricing for each generating unit will be calculated using the methodology PacifiCorp currently uses for EIM bids. The breakdown or calculation of any bid price for resource (*i*) at price-quantity pair (*j*) is as follows:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Note: the CAISO is currently still finalizing documentation of EDAM requirements and all final processes regarding how to calculate costs will ultimately be done according with the CAISO's specifications and requirements. Given the expected go-live date of 2025, the technical manuals containing these specifications are not yet available.

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- (j) PacifiCorp does not currently have any proxy demand resources (PDR) registered for market participation with the CAISO. PacifiCorp utilizes demand response (DR) resources primarily for non-spinning reserves to meet reliability obligations and these resources are not bid into the market. Per past input from CAISO, its current DR offerings and associated program rules are not designed to easily accommodate utility DR programs located outside of California. To address this issue, the CAISO will need to launch a new stakeholder process, which has not happened over the past few years due to competing priorities. PacifiCorp is seeking input from CAISO regarding its intention to pick up this effort prior to EDAM program launch and/or any intention of making programmatic changes. Based on the information provided by CAISO, the Company may re-evaluate registration of DR programs as PDRs and bidding them into the market. To the extent that these DR programs are bid into the market and optimized, their benefits will impact system operations and lower overall NPC. To the extent that these DR programs have costs that are contractual, those are long-term firm contracts.

Designated information is confidential per Protective Order in UTC Docket UE-230172.

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