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February 23, 2022

VIA ELECTRONIC FILING

Public Utility Commission of Oregon
201 High Street SE, Suite 100
Salem, OR 97301-3398

Attn: Filing Center

RE: LC 77—Response to ALJ Bench Requests 1 through 7

Pursuant to Administrative Law Judges (ALJ) Rowe's and ALJ Mapes' Ruling of February 17, 2022, enclosed for filing in this docket are the Responses to ALJ Bench Request Nos. 2 through 5 and Attachments 2, 3, and 5. The remaining responses will be provided separately on March 4.

Please direct any questions regarding this filing to Cathie Allen at (503) 813-5934.

Sincerely,

Shelley McCoy
Director, Regulation

Enclosures

ALJ Bench Request 2

Amount of Coal Generation in the IRP vs. RFP: Please address the overall level of coal generation in the 2021 IRP preferred portfolio in 2025 and 2026 compared to the amount of coal generation in those years in the 2020AS RFP final shortlist modeling.

Response to ALJ Bench Request 2

For clarification purposes, the Company states that the 2020 All Source Request for Proposals (2020AS RFP) is based on PacifiCorp's 2019 Integrated Resource Plan (IRP) Preferred Portfolio (and its associated modeling) published in October 2019; not PacifiCorp's 2021 IRP Preferred Portfolio published in September 2021. With the foregoing clarification as stated, the Company responds as follows:

Please refer to Attachment ALJ Bench Request 2 which provides the coal generation values in PacifiCorp's 2021 IRP preferred portfolio and the 2020AS RFP final shortlist (FSL) modeling. Coal generation is lower overall in the 2021 IRP compared to the 2020AS RFP, and varies year-to-year. The coal generation starts out higher in the 2021 IRP preferred portfolio, and decreases more rapidly than in the 2020 AS RFP. There are many updates to the 2021 IRP compared to the 2019 IRP, which the 2020AS RFP is based on. The 2021 IRP was modeled in PLEXOS while the 2019 IRP was modeled in Enterprise Portfolio Management (EPM), the software for the previously utilized Planning and Risk (PaR) model and the System Optimizer (SO) model. Additionally, there were updates to the load forecast, fuel costs, market prices, market purchase limits, and demand-side management (DSM) which would impact coal dispatch. Please also refer to coal retirements and conversions discussed in the Company's response to ALJ Bench Request 5.

Coal Generation (gigawatt-hours (GWh))

Year	2021 IRP Preferred Portfolio	2020AS RFP FSL
2021	31,359.17	28,249.03
2022	29,841.89	27,568.88
2023	28,638.64	26,725.43
2024	28,488.93	25,908.39
2025	21,821.08	19,925.87
2026	18,346.11	18,883.32
2027	17,671.83	18,567.96
2028	14,425.47	14,984.41
2029	13,606.67	13,434.12
2030	11,403.49	12,946.36
2031	9,516.71	12,281.49
2032	8,091.01	11,478.78
2033	7,272.76	12,440.49
2034	6,354.14	10,900.75
2035	5,838.39	10,351.29
2036	6,526.23	10,166.99
2037	5,824.56	7,758.21
2038	1,773.43	4,917.14
2039	1,563.20	-
2040	1,967.70	-

ALJ Bench Request 3

Amount of Off-System Sales in the IRP vs. RFP: For the years 2025 and 2026, please provide the amount of market sales (in GWh and dollars) in the 2021 Integrated Resource Plan (IRP) preferred portfolio compared to the variant "P02h-JB 3-4 Retire" and the 2020AS RFP final shortlist modeling.

Response to ALJ Bench Request 3

For clarification purposes, the Company states that the 2020 All Source Request for Proposals (2020AS RFP) is based on PacifiCorp's 2019 Integrated Resource Plan (IRP) Preferred Portfolio (and its associated modeling) published in October 2019; not PacifiCorp's 2021 IRP Preferred Portfolio published in September 2021. With the foregoing clarification as stated, the Company responds as follows:

Please refer to Attachment ALJ Bench Request 3 which provides the market sales (in gigawatt-hours (GWh) and total dollars) for calendar years 2025 and 2026 for (1) PacifiCorp's 2021 IRP preferred portfolio, (2) the 2020 AS RFP, and (3) the variant study "P02h-JB 3-4 Retire". There are many updates to the 2021 IRP compared to the 2019 IRP, which the 2020AS RFP is based on. The 2021 IRP was modeled in PLEXOS while the 2019 IRP was modeled in Enterprise Portfolio Management (EPM), the software for the previously utilized Planning and Risk (PaR) model and the System Optimizer (SO) model. Additionally, there were updates to the load forecast, fuel costs, market prices, market purchase limits, and demand-side management (DSM) which would impact coal dispatch. Please also refer to coal retirements and conversions discussed in the Company's response to ALJ Bench Request 5.

Market sales (in gigawatt-hours (GWh) and total dollars (\$))

Year	Portfolio	GWh	\$ thousands
2025	2021 IRP Preferred Portfolio	7,466.59	336,125.22
2026	2021 IRP Preferred Portfolio	7,703.49	373,081.74
2025	2020AS RFP FSL	9,124.08	380,128.16
2026	2020AS RFP FSL	9,083.07	406,054.28
2025	P02h-JB 3-4 Retire	7,445.15	335,603.04
2026	P02h-JB 3-4 Retire	7,682.75	371,835.44

ALJ Bench Request 4

Minimum Take Levels in the IRP vs. RFP: Please compare the minimum take modeling assumptions for each coal plant from the 2020AS RFP final shortlist with the minimum take assumptions in the 2021 IRP.

Response to ALJ Bench Request 4

For clarification purposes, the Company states that the 2020 All Source Request for Proposals (2020AS RFP) is based on PacifiCorp's 2019 Integrated Resource Plan (IRP) Preferred Portfolio (and its associated modeling) published in October 2019; not PacifiCorp's 2021 IRP Preferred Portfolio published in September 2021. With the foregoing clarification as stated, the Company responds as follows:

PacifiCorp did not model minimum take for coal plants in the 2020AS RFP as this functionality was not available in Enterprise Portfolio Management (EPM), the software for the previously utilized Planning and Risk (PaR) model and the System Optimizer (SO) model.

ALJ Bench Request 5

GHG Emissions in the IRP vs RFP: Please compare the annual greenhouse gas emissions in the 2021 preferred portfolio and the 2020AS RFP final shortlist modeling and describe drivers of any differences.

Response to ALJ Bench Request 5

For clarification purposes, the Company states that the 2020 All Source Request for Proposals (2020AS RFP) is based on PacifiCorp's 2019 Integrated Resource Plan (IRP) Preferred Portfolio (and its associated modeling) published in October 2019; not PacifiCorp's 2021 IRP Preferred Portfolio published in September 2021. With the foregoing clarification as stated, the Company responds as follows:

Please refer to Attachment ALJ Bench Request 5 which provides a comparison of greenhouse gas (GHG) emissions in the 2021 IRP preferred portfolio and the 2020AS RFP final shortlist (FSL). The 2020AS RFP FSL analysis was run in Enterprise Portfolio Management (EPM), the software for the previously utilized Planning and Risk (PaR) model and the System Optimizer (SO) model, consistent with the 2019 IRP that the 2020 AS RFP is based on. There are several differences in emission producing resources between the 2019 IRP and the 2021 IRP resulting in lower emissions in the 2021 IRP preferred portfolio. Those differences include the Jim Bridger Unit 1 and Jim Bridger Unit 2 natural gas conversion in 2024, Colstrip Unit 3 and Colstrip Unit 4 retirements in 2025 instead of 2027, and Hayden Unit 1 and Hayden Unit 2 retirements in 2028 and 2027, respectively, instead of 2030. In addition, there is a larger amount of renewable and non-emitting peaking resources in the 2021 IRP preferred portfolio than the 2019 IRP preferred portfolio. Finally there are no new natural gas simple-cycle combustion turbine (SCCT) or combined-cycle combustion turbine (CCCT) resources in the 2021 IRP preferred portfolio compared to the 2019 IRP preferred portfolio.

Emissions in thousands of tons of carbon dioxide (CO2)

Year	2021 Preferred Portfolio	2020AS RFP FSL
2024	36,668.77	36,646.07
2025	29,816.42	30,901.55
2026	25,692.90	29,637.01
2027	25,131.03	29,348.64
2028	20,793.17	25,126.55
2029	19,457.15	23,207.18
2030	17,016.65	22,813.03
2031	15,017.98	22,259.48
2032	13,897.91	21,637.25
2033	12,403.85	22,266.88
2034	11,833.75	20,359.40