BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

LC 68

In the Matter of	)
	)
IDAHO POWER COMPANY,	)
	)
2017 Integrated Resource Plan.	)
	)

FINAL COMMENTS OF THE

OREGON CITIZENS' UTILITY BOARD

January 18, 2018

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I. INTRODUCTION

The Oregon Citizens' Utility Board ("CUB") submits it Final Comments to Idaho Power Company's (the Company) 2017 IRP (IRP). CUB appreciates the opportunity to comment on Idaho Power Company's 2017 IRP. CUB would like to primarily comment on the Company's approach to resource portfolio design and analysis.

II. PORTFOLIO ANALYSIS

A guiding principle of an Integrated Resource Plan is to identify the least cost and least risk resource portfolio. In order to identify this ideal portfolio, the Company has used a "factorial experimental design" as its preferred portfolio design approach. This approach is an idiosyncratic approach to resource portfolio resource development, and the Company has no knowledge of another utility using this approach in an IRP. The Company's approach compares two discrete resource decisions: B2H and Jim Bridger Retirement Scenarios. Each resource decision is represented as an individual component in the factorial experimental design.

These two components are matched to create twelve resource portfolios.

			Primary Portfolio Element		
			First Component		
			B2H	Solar/ Natural Gas	Natural Gas
Treatment of Jim Bridger Units 1 and 2	**Second Component**	Invest in SCR	P1	P2	P3
		Retire Unit 1 in 2028 and Unit 2 in 2024	P4	P5	P6
		Retire Unit 1 in 2032 and Unit 2 in 2028	P7	P8	P9
		Retire Unit 1 in 2022 and Unit 2 in 2021	P10	P11	P12

III. PORTFOLIO DESIGN DOES NOT ALLOW ALL RESOURCES TO BE EVALUATED ON A CONSISTENT AND COMPARABLE BASIS

One of the substantive requirements of an IRP is all resources must be evaluated on a consistent and comparable basis.[1] Idaho Power used a manual screening approach to filter the resource plan to a few resource alternatives. In the 2015 IRP, twenty-three resource portfolios were compared, while the 2017 IRP only compared fourteen resource portfolios.[2] The 2015 IRP presented a wide variety of resource designs. There is significantly less variation in the design of resource portfolios presented in the 2017 IRP.

The portfolio analysis section should consider a wider selection of resources for comparison. The current IRP only includes the most cost effective technologies and portfolio options. The IRP provides several examples of the most cost effective options, including: single-axis solar PV, natural gas reciprocating engines, and natural gas combined cycle combustion turbines.[3] Future IRPs should include emerging technologies, even if the

[1] Order No. 07-047, Page
[2] LC 68 – Idaho Power 2015 Resource Plan, p. 97.
[3] LC 68 – Idaho Power Company's Reply Comments, p.46 [hereinafter "Idaho Reply Comments"].

technologies are not currently the most cost effective options. Including emerging technologies as possible portfolios would enable a consistent comparison of resource choices overtime.

IV. FUTURE INTEGRATED RESOURCES PLANS SHOULD INCORPORATE CAPACITY EXPANSION MODELS

Instead of manually screening each resource portfolio, CUB prefers the Company's capacity expansion models, utilized in future IRP's. Capacity expansion models allow for thousands of different resource permutations to be narrowed down to a manageable amount of resource portfolios. Unlike manually screening resource portfolios, capacity expansion models are free from bias.

Idaho Power uses the AURORA software, which has the capability to model a utility scale capacity expansion model. The Company has stated it would be open to implementing capacity expansion modeling in the 2019 IRP cycle. CUB prefers to see a greater variety of resource portfolio options presented in future IRPs.

V. IT IS UNCERTAIN PORTFOLIO SEVEN IS THE LEAST COST OPTION

Idaho Power has selected portfolio seven as its preferred resource portfolio. It is uncertain portfolio seven should be the preferred portfolio. The Company has stated CUB does not believe portfolio seven is the least cost option, because it does not rank first in fixed cost and variable costs ranking.

Portfolio seven is not least cost because the differences in the cost of four portfolios are not statically significant. The presented total cost of each portfolio is a point-estimate, which represents Idaho Power's best guess of an unknown future. While the point estimate of the total cost of Portfolio 7 is lower than the point estimate of total Portfolio 4, the Company cannot

state that changing the retirement dates of Jim Bridger 1 and 2 will have an effect on total cost. As stated in CUB's Opening Comments, there is only a 0.04% difference in the total cost of portfolio 4 and portfolio 7.[4] Additionally, the ANOVA results indicate there is insufficient evidence of a cost difference between the four Jim Bridger retirement scenarios.[5] Based on the results of the ANOVA, the Company is unable to determine which portfolio is consistently least cost. [6]

Idaho Power states its point estimates of total cost indicate continuing operation of Jim Bridger 1 and 2 beyond 2021 and 2022 is a lower cost than retiring the units in 2021 and 2022. [7] Based on the ANOVA, there isn't a statistical difference in the cost retiring the units in 2021 and 2022 and installing SCR. CUB would like Idaho Power to detail this assertion.

VI. CONCLUSION

CUB acknowledges Idaho Power is not the principal owner of the Jim Bridger Units. The Company cannot unilaterally decide to either retire Jim Bridger 1 and 2 or install SCR into the units.[8] The Company has selected the same retirement and SCR options presented by PacifiCorp. CUB is satisfied with the Company's general direction on coal power generation. Idaho Power plans on eventually retiring its share of Jim Bridger 1 and 2. Additionally, Idaho Power is seeking Commission acknowledgment of its plan to shut down its ownership share of coal-fired operation at the North Valmy Unit 1 and 2 by 2019 and 2025 respectively. CUB

[4] LC 68 – CUB's Opening Comments, p. 2.
[5] Idaho Reply Comments, p. 50, Lines 17-20. See CUB's Data Request No. 3 for ANOVA table.
[6] Idaho Reply Comments, p. 50, Lines 14-16.
[7] Idaho Reply Comments, p. 50, Lines 22-23 & p. 51, Lines 1-2.
[8] Idaho Reply Comments, p. 57, Lines 13-14.

supports Idaho Power divesting its interests in the North Valmy units. Moving forward, CUB would like the Company to use capacity expansion models in the 2019 IRP cycle.

Signed this 18th of January, 2018.

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