EXH. JPH-20C DOCKETS UE-240004/UG-240005 2024 PSE GENERAL RATE CASE WITNESS: JAMES P. HOGAN

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY,

Docket UE-240004 Docket UG-240005

Respondent.

NINETEENTH EXHIBIT (NONCONFIDENTIAL) TO THE PREFILED DIRECT TESTIMONY OF

JAMES P. HOGAN

ON BEHALF OF PUGET SOUND ENERGY

REDACTED VERSION

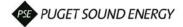
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FEBRUARY 15, 2024



Corporate Spending Authorization (CSA)

Date Created:	Friday, February 17, 2023
Discretionary/ Non-Discretionary:	Non-Discretionary
Multi Year Rate Plan:	Specific
Equity Impact:	Yes
Strategic Alignment:	Operate the Business-Reliability
Estimated In-Service Date:	Friday, August 1, 2025
Current State (Business Need):	The Upper Baker Dam Spillway Stabilization Project is to address potential Failure Modes (PFMs) that were identified in the FERC Part 12D Potential Failure Modes Analysis (PFMA) workshops conducted in 2014 and 2019. PFMs associated with the dam's right and left abutments have been evaluated and addressed in the Phase 1 and Phase 2 projects according to the recommendations made by the FERC approved Board of Consultants that is overseeing the project. The Phase 1 and 2 projects have evaluated FFMs associated with the dam's abutments and implemented instrumentation to monitor dam stability. The Phase 3 project is evaluating and addressing PFMs associated with stability and operation of the dam's spillway.
	PFMs 5-UB-3 and F-UB-3 postulate a potential failure mode in the rock foundation of the spillway due to a seismic event or overstressing of the spillway during a large flood for an extended period of time. The initial assessment of this failure mode indicated that there are geologic features in the spillway's rock foundation that could result in foundation failure. It has been further identified that if the spillway rock foundation were to fail it could result in foundation failure. It has been further identified that if the spillway rock foundation were to fail it could restart the movement in the foundation of Blocks 18 and 19 which potentially could result in failure of the dam.
	During the initial assessment of PFM F-UB-3 a new PFM associated with the rock apron immediately downstream of the spillway was also identified. Flow from the spillway impinges on the rock apron which has resulted in erosion of the rock over time as evidenced by the large pile of rock debris at the bottom of the apron. This PFM is being addressed by monitoring. Erosion thresholds and action limits have been developed and are in the DSSMP. When the threshold limit is hit the rock facing system design will be completed and when the action limit is hit construction will be implemented.
	These PFMs were identified as Category III under FERC Part 12D PFMA process during the 2014 PFMA workshop but were recategorized as Category II during the 2019 PFMA workshop (a credible failure mode).



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Three alternatives were developed to stabilized the existing spillway foundation. The first alternative is to support the slope with Grade 150, 1.75-inch diameter, 70-foot long post-tensioned rock anchors installed on 11-foot centers. The second proposed alternative is to fill the existing sluiceway structure with rock excavated from the tailrace channel and grout, creating a grouted rock buttress to support the base of the slope, employing two rows of Grade 150, 1.75-inch diameter, 26-foot long (embedded 13 feet into the sluiceway and 13-feet into the buttress), untensioned rock anchors installed in the sluiceway channel on 5-foot centers to provide additional shear resistance against sliding. The third alternative is a hybrid of alternatives one and two, utilizing some post-tensioned rock anchors and a rock and concrete buttress. Desired State (Proposed Solution): The preferred alternative is the drilled and grouted concrete buttress based on estimated cost. Currently the design has been completed, project advertised, and construction contractor selected. The project needs final FERC pproval and then construction will begin in March, 2024.



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Outcome/Results (What are the anticipated benefits): Upon completion, the anchored concrete buttress will be installed and the river channel will be back to original depths. The anchored buttress will address the spillway stability PFM and achieve acceptable factors of safety for operating the spillway.



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Dependencies:	No										
Dependencies comment:	None.										
Escalation Included:	Yes, escalation has been included per corporate guidance.										
Total Estimated Costs:											
Estimated Five Year Allocation:	Funds Type	ID	Li	ine Item Descriptio	n	Previous Years	Fiscal 2024	Fiscal 2025	Fiscal 2026	Fiscal 2027	Fiscal 2028
	Capital	k.10003.02.01.01	Capital			Actuals	Requested	Requested	Requested	Requested	Requested
Incremental O&M:	Both										
Qualitative Benefits:	The Upper Baker Dam Spillway Stabilization Project is to address foundation stability concerns in order to comply with FERC Dam Safety standards.										
Quantitative Benefits:	Quantitative Benefits	Benefit Type	Previous Years	Fiscal 2023	Fiscal 2024	Fiscal 2025	Fiscal 2026	Fiscal 2027	Fiscal 2028	Remaining Costs	Life Total
		Denen Type	There are a second s	TISCUI LOES	TISCH LOLY				TOCAL COLO	inclinating costs	Licitotal
Risk Summary:	Regulatory Approval (Reject strategies if needed. Construction Cost - costs ar address PFMs are assumed t Schedule - Monitored Moni	e based on detailed estimate to be within the costs current	and submitted prop tly identified.	posals. Mitigation	Costs identified in 1	this CSA update are	assumed to be wo				



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Change Summary:

Planning Cycle	Change Summary	Last Update Dat		
2023 Cycle 1	increase of since previous CSA tot 2023 besign and permitting COSS. Obs. Spinway Stabilization not nave these COSS in 2023 ob are required tor planned construction in 2024. The construction costs of the since previous CSA was part of the 5/26/2022 Various Generation System Safety, Beliability and Interrity Projects CSA. See document tab for attachment	3/15/2023		
2023 Cycle 1	Equity Score added since receiving guidance and info on 3/22/2023.			
2023 Cycle 1	Updated Risk and Equity Scoring	3/27/2023		
2023 Cycle 3	Updated previous years costs to put instrumentation in service. Updated status since near FERC approval and construction contract award.	1/9/2024		



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tory:	Approved By	Date Approved
Approved	by Cost Center Owner Likavec , Michael	3/28/2023
Approved	by Director Sponsor Carlson , Mark	3/28/2023
Approved	by Executive Sponsor Roberts , Ron	3/29/2023
CSA Statu	s changed to Approved	3/29/2023
Approved	by Cost Center Owner Olsen , Mauren	12/5/2023
Approved	by Director Sponsor Olsen , Mauren	12/5/2023
Approved	by Executive Sponsor Olsen , Mauren	12/5/2023
CSA Statu	changed to Approved	12/5/2023