PUGET SOUND ENERGY
The Energy To Do Great Things

Ferndale – 2023 Major (CTA&B Major, and CTA and ST Rewind)

Seeking Initiation Funding

Corporate Spending Authorization (CSA)

Before starting: Contact the Capital Budget team (CSA-TeamMail@pse.com) for any clarification needed and review the CSA Standard when completing this template.

The sections provided expand / are not limited to one row. **Ensure you provide adequate information and Uback-up documentation to support your business case.** If a section or item is not applicable, enter N/A; if unknown, enter TBD. The gray fields are provided as prompts; do not leave these fields with instructions visible.

Date Submitted:	4/29/2022
Officer Sponsor:	Ron Roberts, VP Energy Supply
Project Director:	Mark Carlson, Director Southern Generation and Natural Gas Storage
Responsible Cost Center:	5012

I. Project Overview

Update each section with high level information as applicable, noting any changes from the previous request/Gate.

Business Need:	The Ferndale plant was commissioned in 1994. It consists of two GE MS 7111EA CTGs and a GE Steam turbine, each coupled with a GE 7A6 generator. The plant is capable of 295 MW when utilizing duct burners. The plant is estimated to reach approximately 124k hours of operation by March of 2023. GE specifies inspections at certain intervals to minimize risk of failure and ensure availability of the units. CTA will have operated 27k hours since its last major inspection, CTB will have operated 26k hours since its last major inspection The stator rewinds on CTA and the steam unit will be the first since commissioning of the plant, putting the stator ages at nearly 30 years old. This is at the end of service life expectancy for these models and their insulation system. Continued operation without rewinding the generator will have an ever increasing risk of an in service stator failure. Sumas, a similar facility, performed an emergency rewind of their GE 7A6 stator when a significant fault was discoverd after 23 years of service. PSE's insurance carrier also inspects for compliance with the manufacturer's maintenance recommendations to reduce the risk of failure. Catastrophic failure of a unit during operations could lead to repairs costs up to the replacement value of the unit and lost generation revenue in excess of $16M and put personnel at a safety risk.
Proposed Solution:	Perform a Major Inspection on combustion turbine A (CTA) and combustion turbine B (CTB). During the outage concurrently perform stator rewinds on the CTB and steam turbine generators.
Project Outcome/Results:	Following successful project execution, CTA and CTB will not require any additional manufacturer recommended major maintenance until the next planned event that will occur after approximately 24,000 hours of additional running time.
OCM, Process & Training Impact:	◉ N/A ○ Low Impact ○ Medium Impact ○ Significant Impact Click or tap here to enter text.

PUGET SOUND ENERGY
The Energy To Do Great Things

Primary ISP Alignment:	Processes & Tools	**ISP strategy descriptions**
ISP Strategy Description:	Process & Tools - System reliability and integrity	
Portfolio Description:	Risk Mitigation	**Capital Allocation Definitions**
Project Complexity:	◉ Straightforward and well understood ○ Complex and well understood ○ Complex and not well articulated	

II. Key Schedule and Financial Information

Expected Start Date If Funded:	03/2023
Expected In-Service Date:	05/31/2023

High-Level Schedule *Enter Expected # of Years and Months*

Duration				
Planning	**Design**	**Execution**	**Total Project**	**Anticipated Closeout date**
Required Parts Ordered and Vendor contracting in Sept 2022	Procedure is well documented from previous work, including manufacturer specifications	Approximate 4-6 weeks dependent on discovery after the unit is disassembled and inspected	From start of planning to completion of project is 9 months to align parts and vendor	06/2023

Initial Estimated Funding % by Phase as of 04/25/2022**:** *Enter values to include both O&M and Capital in the cells below for percentage of funding to be used in each phase of the project.*

Initiation	Planning	Design	Execution	Closeout
0%	20%	0%	70%	10%

Initial Grand Total Estimate (contingency included and in $000s): **Contingency Standard**	**Capital: $15,008,000**	**OMRC/Project O&M: $** (Not including O&M Tail)

Estimated Five Year Allocation: *Enter values in the cells below for years anticipated, up to five years, plus any expected future years. Change "Year 1, Year 2, etc. to the relevant years for this project. Ongoing O&M begins after project close-out.*

Category:	2022	2023	Year 3	Year 4	Year 5	Total
Capital (contingency included)	$0	$15,008,000	$	$	$	$
OMRC / Project O&M	$	$	$	$	$	$

III. Ongoing Benefits

Summary Benefits (see Benefits realization plan for details):	Unit availability and risk mitigation will be improved providing more reliability at this time while these units are being operated.

Category:	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Ongoing O&M (to be funded by business)	$	$	$	$	$	$
Ongoing O&M (requesting $'s)	$	$	$	$	$	$
Benefits	$	$	$	$	$	$
Net impact (= Benefits – O&M)	$	$	$	$	$	$
* Payback in Years	Years = Total Costs / Annual Cash Benefits					

* Enter positive amount or Not Applicable

IV. Risk Management Summary

Identify high level risk categories expected for the project. Consider Project Dependency, Project Timing and Resourcing, as well as Regulatory Risk.

Summary of high level risks sentence:	Failure to perform manufacturer recommended maintenance may result in commission disallowance of repairs recovery should a major failure occur during operations. Risk is up to the value of the combustion turbine and/or its associated generator in excess of $10M should catospthoric failure occur. Additionally, we would have operational losses.

PUGET SOUND ENERGY
The Energy To Do Great Things

V. Phase Gate Change Summary

Use this section for changes from: ***Planning to Design****,* ***Design to Execution*** *or* ***Execution to Closeout*** *phases. To have a history of the changes at each phase gate change,* ***copy/paste the table below above the previous table.***

Phase:	Choose an item
Scope:	Major inspections and stator rewinds are schedule for Spring 2023
Budget:	Budget prepared from vendor bids. Some spend will occur 2022 for procurement of parts.
Schedule:	The event will require approximately 6-8 weeks of unit downtime pending discovery at the time of the event to complete.
Benefits:	Following OEM guidelines will increase the likelihood of reliable operations over the recommended maintenance interval. Insurance needs will also be met to insure coverage of the unit remains in effect.

Prepared by:	Nancy Atwood, Manager of Joint Thermal and Power Contracts

VI. CSA Approvals

Add/remove rows as needed in the table below. Email approval is acceptable. To maintain a history of the changes at each phase gate change, ***copy/paste the table below above the previous table.*** *Send to the Capital Budget team at CSA-TeamMail@pse.com. For a project in the Strategic Project Portfolio (SPP) review the Escalation Criteria for appropriate escalation and approvals.*

For guidance on approval authority levels, follow CTM-07 Invoice Payment Approval Exhibit I Invoice/Payment Approval Chart

Project Phase	Select Phase			
Approved By	**Title**	**Role**	**Date**	**Signature**
Mark Carlson	Dir, Gen & Gas Storage	*Director Sponsor	04/29/2022	
Ron Roberts	VP, Energy Supply	Executive Sponsor	04/29/2022	Ron Roberts
		Choose an item.		

*****Director Sponsor attests that all considered documentation has been approved.

Please direct any questions to either:

1. The Capital Budget team at CSA-TeamMail@pse.com, or
2. The Enterprise Project and Performance Project Practices team at EPP-ProjectPracticesTeam@pse.com