PSE PUGET SOUND ENERGY

The Energy To Do Great Things

Winslow – Murden Cove 115-kV Line

Planning to Design Gate

Corporate Spending Authorization (CSA)

Date Submitted:	10/20/2022
Officer Sponsor:	Dan Koch
Project Director:	Roque Bamba
Responsible Cost Center:	4022

I. Project Overview

To address reliability concerns on Bainbridge Island, Puget Sound Energy, Inc. (PSE) completed the *Bainbridge Island Electric Needs Assessment* in 2018. PSE then worked with industry experts and conducted analyses of the traditional (wires) and non-wires alternatives (NWA). These analyses were conducted in order to determine a cost effective solution that addresses the identified system needs for Bainbridge Island over the 10 year planning horizon.

PSE's proposed solution is a combination of wires and non-wires components and is identified as the Top Hybrid Alternative in PSE's *Bainbridge Island Electric System Solutions Report, July 2019*. The solution is broken down into 3 components that address each of the (3) identified system needs separately:

- 1. Construction of Winslow Murden Cove 115 kV line (transmission reliability need);
- 2. Rebuild of the Winslow Tap 115 kV line (aging infrastructure need); and
- Installation of an approximate 3.3 MW 6.6MWh energy storage battery, implementation of an approximate 3.3 MW distributed energy resource (DER) portfolio, and the ability to curtail the planned 10 MW electric ferry load under Schedule 46 (substation group capacity need).

This CSA addresses the Winslow – Murden Cove 115 kV Line.

**Prior CSA's were combined with the other aforementioned Bainbridge Island scope elements. The individual projects now have unique scope, schedule, budget and risks. Therefore, this CSA is standalone and covers only the Winslow – Murden 115 kV Line from this phase gate forward.*

Business Need:	The Bainbridge Island Electric System Needs Assessment report summarized transmission system reliability and operational issues that arise from having two radial transmission lines serving the southern two thirds of Bainbridge Island. One radial line extends from Port Madison Substation to Winslow Substation and the other extends from Port Madison Substation to Murden Cove Substation. Data from 2013 to 2017 analyzed in the needs assessment and subsequent analyses of data from 2018 to 2020 indicate that a transmission line between Winslow and Murden Cove Substations, looping the system, would have reduced customer minute interruptions (CMI) by 40% over the 8 year period from 2013 to 2020. In addition, with a looped system each substation on Bainbridge Island would be served by two transmission
	each substation on Bainbridge Island would be served by two transmission lines. This will improve transmission operating flexibility and allow for sections of transmission line to be taken out of service for routine

DocuSign Envelope ID: 1B1ED961-5CDA-4202-A97E-A320B767DED3

PSE PUGET SOUND ENERGY

The Energy To	Do Great Things
	maintenance or emergency repair without interrupting service to customers or taking substations off line.
Proposed Solution:	The proposed solution is to build a new 3.4 mile transmission line between Murden Cove Substation and Winslow Substation. The route for the new line was selected after a two year public engagement process. The selected route will follow existing public roads and be co-located with existing distribution lines along its entire length. Winslow and Murden Cove Substations will need upgrades to terminate the new line including among other improvements - new control houses, new circuit breakers, new dead- end towers, new disconnect switches, new protection relays, and expanded storm water systems. To support high speed transfer tripping, Port Madison Substation will need a new control house, a new circuit breaker, and new protection relays. New fiber lines will also need to be installed along sections of the new and existing transmission lines.
Project Outcome/Results:	The project will reduce SAIDI and SAFI numbers on Bainbridge Island.
	The project will improve operational flexibility and allow for routine maintenance and emergency repair of sections of transmission line without interrupting service to customers or taking substations off line.
	There will be a reduction in long-term O&M costs due to the reduced need for emergency repairs.
	The project will improve customer satisfaction.
OCM, Process & Training Impact:	N/A C Low Impact C Medium Impact C Significant Impact
Primary ISP Alignment:	Customer ISP strategy descriptions
Portfolio Description:	Risk Mitigation Capital Allocation Definitions
Project Complexity:	Complex and well understood Complex and well understood Complex and well understood

II. Key Schedule and Financial Information

Expected Start Date If Funded:	05/2022
Expected In-Service Date:	12/31/2026

High-Level Schedule

		Duration		
Planning	Design	Execution	Total Project	Anticipated Closeout date
12/2019 -12/2021	2/2022 – 5/2024	5/2024 - 9/2026	12/2019 – 1/2026	12/2026



Initial Estimated Funding % by Phase as of 03/8/2022:

Initiation	Planning	Design	Ex	ecution	Closeout
4.5%	13.7%	20%	60	.5%	1.3%
	÷	·			
Initial Grand Tota	al Estimate				
(contingency included	and in \$000s):	Capital: \$27 800 000		OMRC/Proj	ect O&M: \$250,000
Contingency Sta	ndard	Cupital: \$27,000,000		(Not including	g O&M Tail)

Estimated Five Year Allocation:

Category:	2021 <u><</u>	2022	2023	2024	2025	2026	2027	Total
Capital (contingenc y included)	\$4,900,000	\$1,609,500	\$5,906,000	\$1,428,500	\$5,089,000	\$8,657,000	\$200K	\$27.8M
OMRC / Project O&M	\$0	\$0	\$130,000		\$60,000	\$60,000		\$250,000

III. Ongoing Benefits

Summary Benefits (see Benefits realization plan for details):	Improve reliability by reducing System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI); increase customer satisifaction; improve operational flexibility for routine maintenance and emergency repairs; reduce costs for unplanned maintenance and emergency repairs; reduce community risks related to outages; reduce work related incidents or accidents due to emergency repairs.
	emergency repairs.

Category:	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Ongoing O&M (to be funded by	N/A	N/A	N/A	N/A	N/A	N/A
business)						
Ongoing O&M (requesting \$'s)	*	*	*	*	*	*O&M increase based on business planning analysis for major CAP plant additions
Benefits*	N/A	N/A	N/A	N/A	N/A	N/A
Net impact (= Benefits – O&M)	N/A	N/A	N/A	N/A	N/A	N/A
Payback in Years	Years = Tota	al Costs / Ann	ual Cash Ben	efits		

DocuSign Envelope ID: 1B1ED961-5CDA-4202-A97E-A320B767DED3



The Energy To Do Great Things

* Enter incremental benefits for each year, not cumulative benefits

IV. Risk Management Summary

Summary of high level risks sentence:	Passing code amendments, obtaining permits, community resistance, acquiring easements, and the condemnation process pose the greatest risks to the project.
---------------------------------------	---

V. Phase Gate Change Summary

Phase:	Planning to Design
Scope:	Port Madison Substation Control House work and fiber installation were added to scope.
Budget:	Based on additional scope, permitting requirements, extended schedule and risk assessment findings the requested project budget has increased by \$11.3M from the budget in the Initiation to Planning CSA.
Schedule:	Due to required rezones, code amendments and weather related construction windows, project completion has been pushed out to 12/31/2026.
Benefits:	Reliability Improvement, Future Cost Avoidance, Customer Satisfaction Improvement, and Improved Operational Flexibility

Prepared by: Barry Lombard

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 <u>CSA-TeamMail@pse.com</u>. For a project in the Strategic Project Portfolio (SPP) review the <u>Escalation Criteria</u> for appropriate escalation and approvals.

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

Project Phase	Select Phase			
Approved By	Title	Role	Date	Signature
Tony Pagano	Mgr Project Management	Manager	10/23/2022	Tory Pagaro C7D3BC09443B4AC
Roque Bamba	Director Project Delivery	*Director Sponsor	11/03/2022	DocuSigned by: Roque Bamba BC201545455808429
Dan Koch	VP Operations	Executive Sponsor	11/04/2022	DocuSigned by: Dan Koch 7E7434ECBF5B4C0

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

Please direct any questions to Capital Budget team at <u>CSA-TeamMail@pse.com</u>