

**EXH. RBB-11
DOCKETS UE-22___/UG-22___
2022 PSE GENERAL RATE CASE
WITNESS: ROQUE B. BAMBA**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

**Docket UE-22___
Docket UG-22___**

**TENTH EXHIBIT (NONCONFIDENTIAL) TO THE
PREFILED DIRECT TESTIMONY OF**

ROQUE B. BAMBA

ON BEHALF OF PUGET SOUND ENERGY

JANUARY 31, 2022

Vashon/Gig Harbor Long Term Solution
Select Phase
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.

Date Submitted: 4/7/2021

Officer Sponsor: Booga Gilbertson

Project Director: David Landers

Responsible Cost Center: 4022

I. Project Overview

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

Business Need:

PSE has a single gas supply from the mainland that serves customers on Vashon Island and in Gig Harbor. This single feed includes two subsea marine crossings of parallel pipelines that run approximately 11,000 feet from Des Moines underwater to Vashon Island (the East Passage), and 9,000 feet from Vashon Island underwater to Gig Harbor (the Colvos Passage). The subsea crossings are constructed of parallel pipelines to provide redundancy in the event of a single pipeline failure.

These supply pipelines were installed in 1969. They serve approximately 13,000 customers; 2,000 customers on Vashon Island and 11,000 customers in Gig Harbor.

The pipelines were designed and installed to rest on the bottom of the seafloor, and are not anchored to the seafloor in any location. Remotely Operated Vehicle (ROV) surveys have shown that both of the parallel pipelines in the East Passage have spans where the seafloor is not currently supporting the pipelines.

In July 2019 an analysis completed by DNVGL, a third party consultant, showed that tidal flow around the pipelines generates vortex shedding causing pipeline oscillations which might ultimately lead to failure due to fatigue in the spans. Critical span distances in the East Passage are up to 583 feet in length with 6 spans over 130 feet in length with a fatigue life ranging from 0.2 – 8.5 years depending on assumptions input to the analysis. The analysis recommended that these spans be addressed to prevent fatigue failure.

While the analysis recommends that both redundant pipes of the East Passage crossing be addressed, the pipes are located approximately 100' apart, have slightly different topography and different fatigue profiles. One pipe has a lower modeled fatigue life than the other redundant pipe. The objective is to both address reliable redundancy in the near term as well as long-term reliable supply to customers on Vashon Island and in Gig Harbor.

While these crossings have a reliable service life, as a precaution, short term steps have already been implemented to introduce additional surveying, leak testing, real-time monitoring and remote valve operation of the East Passage while additional interim and longer term solutions are being developed and implemented.

Proposed Solution:

The proposed solution is to proactively provide short-term interim supply options and implement a long-term reliable supply solution to reduce the risk of interruption to supply of natural gas to customers on Vashon Island and in Gig Harbor. We propose to accomplish this by:

1. Implementing short-term interim supply options
2. Implementing a long-term supply solution that continues to provide customers with reliable service and energy choice. The long term solution will either build a new pipeline in a new location or reinforce the existing crossing.

Project Outcome/Results:

The completion of a long-term solution will reduce risk of disruption to natural gas supply by eliminating the critical spans on existing pipeline marine crossing by reinforcing the existing crossing or replacing the existing pipeline in a new location and increase reliability of natural gas service for 13,000 customers.

OCM, Process & Training Impact:

N/A Low Impact Medium Impact Significant Impact
Click or tap here to enter text.

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: | 06/2020 |
| Expected In-Service Date: | 12/2026 |

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

| Duration | | | | |
|----------|--------|-----------|---------------|---------------------------|
| Planning | Design | Execution | Total Project | Anticipated Closeout date |
| 2 Year | 1 Year | 3 Years | 6 Years | 12/2026 |

Initial Estimated Funding % by Phase as of 04/7/2021: 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.

| | | | | |
|----------------------------------|-------------------------|---------------|------------------|-----------------|
| Phase 1 (Resiliency) | R.10060.01.01.02 | | | |
| Initiation | Planning | Design | Execution | Closeout |
| 1% | 2% | 11% | 85% | 1% |
| Phase 2 (Replacement) | R.10060.01.01.01 | | | |
| Initiation | Planning | Design | Execution | Closeout |
| 2% | 5% | 20% | 72% | 1% |

| | | | |
|---|-----------------|--------------|--|
| Initial Grand Total Estimate (contingency included and in \$000s): <u>Contingency Standard</u> | Capital: | | OMRC/Project O&M: \$248,000 (Not including O&M Tail) |
| | -25% | \$26,488,500 | |
| | Base | \$35,318,000 | |
| | +50% | \$52,977,000 | |
| | | | |

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.

| Phase 1 Category (Resiliency): R.10060.01.01.02 | Year 1 2019 | Year 2 2020 | Year 3 2021 | Year 4 2022 | Year 5 2023- 2026 | Total |
|---|------------------------|------------------------|------------------------|------------------------|----------------------------------|--------------|
| Capital (contingency included) | \$618,000 | \$1,700,000 | \$7,150,000 | \$0 | \$0 | \$9,468,000 |
| OMRC / Project O&M | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Phase 2 Category (Replacement): R.10060.01.01.01 | | | | | | |
| Capital (contingency included) | \$0 | \$0 | \$850,000 | \$25,000,000 | \$TBD* | \$25,850,000 |
| OMRC / Project O&M | \$78,000 | \$70,000 | \$100,000 | \$0 | \$0 | \$248,000 |

*Solution for this project is still being determined. Funding for 2023-2026 will be outlined when a long term solution is selected (targeting end of 2021).

III. Ongoing Benefits

| | |
|--|---|
| Summary Benefits (see Benefits realization plan for details): | The completion of a long term solution will eliminate the critical spans on the existing pipeline and increase reliability of natural gas service for 13,000 customers. |
|--|---|

| Category: | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Total |
|--|---------------|---------------|---------------|---------------|---------------|--------------|
| Ongoing O&M (to be funded by business) | N/A | N/A | N/A | N/A | N/A | N/A |
| Ongoing O&M (requesting \$'s) | N/A | N/A | N/A | N/A | N/A | N/A |
| 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: | High level risk categories expected for the long-term solution project may include robust permitting requirements and associated delays, Fossil Fuel opposition groups, and property acquisition. |
|--|---|

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: | N/A |
| Budget: | 2021 budget was changed from \$10M to \$8M; Lifetime budget was changed from \$87,318,000 to \$35,318,000. |
| Schedule: | N/A |
| Benefits: | N/A |

| | |
|---------------------|---------------------------------------|
| Prepared by: | Shawnte Anderson, Sr. Project Manager |
|---------------------|---------------------------------------|

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 | Planning to Design | | | |
|---------------|------------------------------|--------------------|--------------|---|
| Approved By | Title | Role | Date | Signature |
| David Landers | Director of Engineering | *Director Sponsor | May 10, 2021 | DocuSigned by: David Landers B6002897FD5542C... |
| Roque Bamba | Director of Project Delivery | Other Key Director | May 10, 2021 | DocuSigned by: Roque Bamba BC203E4E58BB426... |
| | | 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