



**BUSINESS OF THE CITY COUNCIL
CITY OF MERCER ISLAND, WA**

**AB 4261
February 4, 2008
Regular Business**

PSE UNDERGROUNDING PROJECT	Proposed Council Action: Consider Project Design Proposal
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DEPARTMENT OF	Maintenance (Glenn Boettcher)
COUNCIL LIAISON	n/a
EXHIBITS	1. Design Proposal
APPROVED BY CITY MANAGER	<i>Pub Council 1-30-08</i>

AMOUNT OF EXPENDITURE	\$	n/a
AMOUNT BUDGETED	\$	n/a
APPROPRIATION REQUIRED	\$	n/a

SUMMARY

With the extensive damage and disruption of the December 2006 windstorm still fresh in the community's mind, Puget Sound Energy (PSE) was asked in early 2007 to provide a short list of projects that would measurably improve the reliability of service on Mercer Island. PSE's response was to evaluate known chronic trouble spots on the Island. PSE already was pursuing an improvement called the South Mercer Reliability Project and chose as its top-ranked candidate an effort that would complement that project. The companion project would convert from overhead to underground the PSE system along SE 68th Street from the South Substation to East Mercer Way, then continue along East Mercer to SE 53rd Place.

The process for moving the project forward would involve several steps. The first major decision is whether to enter into a design agreement with PSE and its contractor Potelco. Potelco's estimated cost to design the project is \$83,200. Another \$40,000 to \$70,000 would be needed to perform a detailed survey and other work necessary to create the "base map" from which Potelco would work.

Once the project is complete, PSE would reimburse the City for 60% of the design cost according to state-mandated (WUTC) cost distribution "tariffs". If the project reaches a dead end, the City would bear full financial responsibility for the design. The reimbursement would apply only to Potelco's work and would not include the survey and associated activities.

A detailed construction cost estimate cannot be prepared until the project is designed. However, based on PSE's recent experience with other underground conversions in the region, it probably would be around \$3 million. PSE would be responsible for 60% of the direct cost of the underground conversion (i.e. WUTC tariffs). The construction of the trench that would hold the new underground lines, however, would be the City's full responsibility. Staff has attempted to create a planning-level estimate of the cost of trenching. That cost is expected to be in the \$1 million to \$1.5 million range, depending on whether minor restoration or a full overlay of East Mercer Way would be necessary after construction. Additionally, these costs do not include the relocation of the Qwest and Comcast lines that also are on the poles. PSE has advised that it could be considerable.

Given what's known without having gone through the design process, it appears that the City's total investment in the project, from design through construction, would easily surpass \$3 million. PSE's investment would be roughly half of that.

The underground conversion would be complex to build as well as costly to construct. Given the topography and challenges of working along a residential arterial, Potelco believes construction would take at least a few months. There would be a significant risk of expensive "surprises" during construction.

PSE engineers have been asked to try and quantify the benefit of converting the part of the system being considered for undergrounding. They have evaluated historic and other data in an attempt to do this. It is clear that major weather events like the December 2006 windstorm usually cause the most damage on the south end. Restoring power takes longer, sometimes days longer, than it does elsewhere on the Island. Over the past five years, there have been 62 outages on the South End, but 44 of those involved laterals or service lines that would not benefit from the proposed project. PSE's reliability data indicates that outages on the south end are more frequent than other parts of the Island – but not dramatically so.

Given this marginal benefit compared to the size of the investment that would be required, and taking into consideration the number of other priorities competing for City funding, staff recommends not moving forward with the full project design at this time.

An alternate approach would be to pursue a much smaller project that would convert to underground only the portion of PSE system along SE 68th Street. The City's upfront costs for design and surveying would be much lower, probably in the \$20,000 range. Trenching and other construction-related costs also would be proportionally reduced. Converting SE 68th would directly complement the South Mercer Reliability Project by adding yet another layer of redundancy in the transmission system serving the South End.

The South End Reliability Project, which is in the planning stages, will create a second transmission route to the South Substation via Island Crest Way. The primary feed to the South Substation currently is from SE 68th. With an estimated cost of \$500,000, the South End Reliability Project will be funded solely by PSE. Because the project will require the removal of several trees in the right of way and in Pioneer Park along a one-block stretch of SE 68th Street, the approval of the Open Space Trust Board is being requested. Issues still to be resolved with the Board involve mitigation and design approaches that would minimize tree removal.

PSE officials will be in attendance at this evening's meeting to answer questions about both the underground conversion project and the South Mercer Reliability Project.

RECOMMENDATION

Maintenance Director

MOVE TO: Decline the design proposal to convert the PSE system along the south portion of East Mercer Way and request a modified design proposal for the conversion of only SE 68th Street, and direct staff to support PSE in gaining the approval of the Open Space Conservancy Trust Board for the South End Reliability Project.

City of Mercer Island – SE 68 ST & E MERCER WAY
DESIGN COST ESTIMATE & PROPOSED SCHEDULE PRESENTATION
Prepared: December 6, 2007

Project Number: 101045649
Municipal Liaison Manager: Cody Olson 425-462-3351 cody.olson@pse.com
PSE/Potelco Project Manager: Steve Schleer 253-606-2569 steve.schleer@pse.com
City Contact: Glenn Boettcher 206-236-5329 glenn.boettcher@mercergov.org

INTRODUCTION

In response to the Conversion Project Scope of Work provided by the City of Mercer Island and consistent with Section 3 of the Schedule 74 Design Agreement, this document and attachments hereto have been prepared by Puget Sound Energy (the Company) to present:

- 1) the Company's estimate of the cost to perform the Design Work for this Conversion Project (the Design Cost Estimate), and
- 2) the Company's proposed schedule to complete the Design Work (the Design Schedule).

The City should review the information contained herein and then meet with the Company to finalize the Conversion Project Scope of Work, Design Cost Estimate and Design Schedule.

CONVERSION PROJECT SCOPE OF WORK

This Design Cost Estimate and Design Schedule have been prepared based on the Scope of Work provided by the City, attached hereto (excluding drawings) as Attachment 1 [and as proposed to be modified by the Company below.

Government-requested upgrades to be included in the design for this project include the following: None.

Company-initiated upgrades to be included in the design for this project include the following: None.

Installation of ducts and vaults will be performed by the City (unless otherwise agreed by the Company and the City prior to the completion of the Project Plan.

ASSUMPTIONS & CONTINGENCIES

The Design Cost Estimate and proposed Design Schedule reflect the following assumptions, in addition to the attached Scope of Work.

1. The Company will receive written notice to proceed with the Design Work from the City not later than 25 days from the date of presentation to the City Council.
2. All facilities for the Underground Distribution System will be located within City public rights-of-way (Public Thoroughfare).
3. Facilities may be placed within the City's ROW or on City owned Easement.

DESIGN SCHEDULE

Upon receipt by the Company of the City's written notice to proceed with the Design Work, the Company proposes to perform the Design Work in accordance with the following schedule:

- Completion of preliminary design and presentation of sufficient space analysis (within Public Thoroughfare) -- 60 business days.
- Completion of design engineering and presentation of a draft Project Plan (including design drawings and specifications, project responsibilities, estimated project construction costs and proposed construction schedule) – 50 business days.

DESIGN COST ESTIMATE

The Design Cost Estimate attached hereto as Attachment 2 reflects the Company's good faith estimate of the cost to perform the Design Work for this Conversion Project in accordance with the proposed Design Schedule above. Future changes in the City's improvement project, the Conversion Project Scope of Work or the Design Schedule may require revision of the Design Cost Estimate.

CITY OF MERCER ISLAND-SE 68 ST & E MERCER WAY—PROJECT # 101045649
UNDERGROUND CONVERSION—SCOPE OF WORK.

December 6, 2007

CITY CONTACT: Glenn Boettcher, Maintenance Director, City of Mercer Island 9611
SE 36 ST, Mercer Island, WA 98040. Glenn.boettcher@mercergov.org. 206-236-5329

CONVERSION PROJECT DESCRIPTION

The primary objective of the project is to increase outage reliability related to wind related outages in the South Mercer Island area. The conversion will take place in SE 68 ST & E Mercer Way. The secondary objective is to retain the character of both corridors by minimizing impacts to the surrounding environment.

The City of Mercer Island (the City) requests that Puget Sound Energy (PSE) convert its existing overhead electric distribution system of 15,000 volts or less to a comparable Underground Distribution System within the following Conversion Area: SE 68 ST just West of Island Crest Way to E Mercer Way which comes to approximately 4800 feet and from E Mercer Way to SE 53 PL at a distance approximately 3300 feet. The project length totals approximately 8600 feet.

Because the portion of the project along SE 68 ST is only recommended for conversion if the Transmission Loop is built, the Design Cost Estimate has been separated. This explains having two Design Cost Estimates, Attachmate's 2 and 3. Attachmate 2 is the estimate for the complete project and Attachmate 3 pertains only to the E Mercer Way segment.

ADDITIONAL ASSUMPTIONS & CONTINGENCIES

- A) Existing overhead lateral taps will remain overhead. The new underground system will feed up the lateral poles. Either existing poles will be used or new poles placed at logical locations.
- B) In areas where adequate locations for padmount transformers are unavailable, overhead transformers may need to be placed on the lateral poles with underground services.
- C) PSE conversion plans will be sufficient to install the duct, vaults and electric system. They are not intended as a trenching design and may not be sufficient for the city to obtain excavation bids without City provided supplemental information.
- D) Road plans, Right of Way plans and surveyed existing utility plans have not been provided. Some survey, both for design and construction will be necessary. For example Right of Way lines at existing pole locations, future vault locations and property corners where underground services will be installed. The City will provide all necessary survey at their expense.
- E) The City will provide field locates (paint) of all City owned wet utilities.

- F) Underground utilities are not required to provide design locates. The City will provide any compensation required by utilities to locate their facilities during design.
- G) The project will be designed for a single construction effort. Redesign to break the project into multiple construction efforts will be covered by change order.
- H) As requested, design pricing has been provided for the entire project and just for East Mercer Way. If East Mercer Way is initially accepted and later 68th is added, the additional cost for 68 will be covered by Change Order and may differ from the initially quoted amount.
- I) This quote is based on 2007 labor rates. On February 1st 2008, contractual labor rate increases will go into effect. These increased costs will be passed on via Change Order.

KEY MILESTONE DATES FOR THE CONVERSION PROJECT -To be determined by mutual agreement between the City of Mercer Island and PSE.



Date: 12/5/2007
 Project Title: East Mercer Way Conversion
 Project Description: Convert the existing overhead distribution system to underground along SE 68th St from the substation to East Mercer Way then north on East Mercer Way to SE 53rd Pl.
 Rate Schedule: 74
 Project Manager / Phone #: Steve Schleer 253-606-2569
 Project Engineer / Phone #: Steve Schleer 253-606-2569
 Municipal Liaison Mgr / Phone #: Cody Olson 425-462-3351
 Project #: 101045654
 Revision #: 0
 Revision Date: _____

Design Costs Estimate Summary^{1,2}

	Shared Costs ³ Estimate	100% Government Entity Reimbursable Costs					Design Costs Totals Estimate
		Private Conversion Estimate	Gov Req Upgrade Estimate	Temporary Services Estimate	Prior Conv/Reloc Within 5 Years Estimate	Total 100% GE Reimbursable Costs Estimate	
Design & Engineering							
Labor	\$ 2,000	-	-	-	-	-	\$ 2,000
Material	\$ -	-	-	-	-	-	\$ -
Equipment	\$ -	-	-	-	-	-	\$ -
Service Provider Outside Services	\$ 69,800	-	-	-	-	-	\$ 69,800
Overhead	\$ 11,400	-	-	-	-	-	\$ 11,400
Design Costs Totals	\$ 83,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 83,200

Notes:

¹ Estimate of Company design work costs prepared in accordance with Section 3 of Schedule 74 Design Agreement

² All amounts shown in this estimate are rounded up to the next \$100

³ Shared Costs are allocated 40% to the Government Entity and 60% to the Company if the Conversion Protect is completed

Estimated Amount Due At Completion of Design Work	\$ 83,200
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