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PSE.com

October 17, 2018

Heidi Bedwell, Environmental Planning Manager
City of Bellevue
450 110th Avenue NE
Bellevue, WA 98004

**RE: South Bellevue Segment Energize Eastside – Response to Technical Review Letter, Part 3
Conditional Use (File# 17-120556-LB)
Critical Areas Land Use Permit (File #17-120557-LO)**

Dear Ms. Bedwell:

Puget Sound Energy, Inc. (PSE) provides the following responses to the City of Bellevue’s (City’s) August 14th, 2018, letter requesting additional information on the above referenced permit applications. The response is specific to Tree Removal and Vegetation Management.

Land Use Review Comments - Tree Removal and Vegetation Management:

Requirements

The Federal Energy Regulatory Commission (FERC) has certified the National Energy Regulatory Corporation (NERC) as the electric reliability organization who establishes legally enforceable mandatory standards for the U.S. bulk power system. PSE is required by NERC standards to maintain safe clearances between vegetation and utility lines. Specifically, NERC FAC-003-4 (Transmission Vegetation Management) sets forth the vegetation management requirements for transmission lines operated above 200 kV.

Under NERC FAC-003-4, PSE must manage vegetation to prevent encroachments into the Minimum Vegetation Clearance Distance (MVCD) of its applicable line(s). Since the Energize Eastside Project entails replacing the existing 115 kV lines with 230 kV lines, the upgraded transmission lines must comply with the NERC standard and PSE’s 230 kV vegetation management standard, which generally require the removal of trees with an expected mature height of more than 15 feet from the wire zone. Management of trees within the transmission right of way may also be required depending on tree species, tree health, distance from the wires, and topography.

Using GIS modeling that uses the above referenced standards, it has been estimated that there are approximately 550 significant trees that do not meet the NERC and PSE vegetation management standards in Bellevue – south segment. Also, it is important to note that these trees are already located within an existing and managed transmission line corridor. Further, more than 80 percent of these trees

are in poor to fair condition. The original tree inventory field work was completed on October 13, 2016, and includes trees that may have been removed by entities other than PSE since that time. Additionally, the GIS modeling estimate does not account for additional trees that may now be regulated as significant trees due to growth since the original inventory. Some of these trees that are now classified as significant are expected to require removal. It is estimated that those trees plus those confirmed during recent property owner meetings (see below) equate to around 579 significant trees that are expected to be removed for the project.

Private Property

Removal of trees associated with transmission lines, especially when upgrading within an existing transmission line corridor, is typically a dynamic process. One factor that can influence the removal determination process is the various access limitations that can arise along the corridor during the planning and design phase of a project. As stated previously, an initial tree inventory and GIS modeling were performed as the basis for evaluation during the EIS process and used to develop PSE's permit application materials.

Using the data collected during the tree inventory work, the Vegetation Impact Analysis (VIA) identified an estimated number of trees that are anticipated for removal in the corridor. Since collection of the data and subsequent analysis, PSE has been inviting property owners to meet and discuss vegetation replacement options. At the property owner meetings, project staff shares the current project design and gathers the property owners' input on how their respective properties can be replanted. Project staff shares an Energize Eastside-specific plant palette (see attached), a reference guide of compatible replacement vegetation, and asks property owners to share their preferences. Also during meetings with property owners, PSE re-confirms, and if necessary, updates the original tree inventory data. Our project staff then uses the tree inventory data (which is field verified during the site visit), each property owner's preferences for compatible vegetation, and the project-specific plant palette to evaluate and develop replacement options for each property.

Using these tools, combined with discussions with the property owners, information is gathered that will help inform the development of a Draft Landscape and Tree Replacement Plan (see sample). The modeling data is then reviewed and the trees are further assessed to determine if removal is required. Typical factors that affect the removal determination are field-confirmed tree sub-species or variety, property specific topography, and existing physical form and current maintenance activities (e.g., a specific variety of fruit tree that is regularly maintained would not be expected to reach its maximum potential height and therefore would not need to be removed).

Following the initial property owner meeting, project staff develops the property specific Draft Landscape and Tree Replacement Plan. Project staff then schedules a second meeting with each affected property owner to share and discuss the draft plan for their property. During the second meeting, the plan is reviewed carefully with the property owner and changes, if necessary, are discussed and documented.

PSE’s approach is to encourage property owners to incorporate additional trees into their landscape and tree replacement plans; however, PSE cannot require property owners to do so. While some property owners take this as an opportunity to add additional trees to their properties, others decline the offer of any replacement trees. As of the end of September 2018, PSE has met with approximately 45% of the property owners who are expected to have vegetation changes along the route in Bellevue – south segment.

PSE anticipates that a number of trees cannot be replaced onsite due to property owners’ preferences. In those cases replacement trees will need to be planted outside the corridor. One benefit of offsite planting is the option to plant larger trees, which contribute to habitat quality, tree canopy, and area aesthetics. Offsite options that PSE has considered include city parks, neighborhood groups/HOAs, and other developments within the City.

PSE reviewed the number of significant trees located on private property. Table 1 indicates the number of these trees that are in critical areas, buffers, and structure setbacks.

Table 1
Private Property Significant Trees Proposed for Removal

	Non-Critical Areas	Critical Areas¹	Buffers²	Setback³	Total
Private Property	240	44	98	102	484

1. Includes wetlands, streams, steep slope and landslide geologic hazard areas, and flood hazard areas (100-year floodplain).
2. “Buffers” includes the standard buffers for wetlands and streams and a 50-foot top-of-slope buffer for steep slopes and landslide geologic hazard areas.
3. Structure setbacks includes a 15-foot structure setback for wetlands and streams and a 75-foot toe-of-slope setback for steep slopes and landslide geologic hazard areas.

Rights-of-Way and City Property

Based on permitting requirements for past PSE projects in Bellevue, the methods outlined in the Council of Tree and Landscape Appraisers, *Guide for Plant Appraisal* have been used to assess the value of trees that required removal from the City’s rights-of-way (ROW). PSE proposes to use the City’s previous tree valuation approach for Energize Eastside. PSE will provide appraised values of significant ROW trees to the City for approval based on the 10th Edition of the *Guide for Plant Appraisal*.

PSE reviewed the number of trees located in public ROW and on City owned properties. Table 2 indicates the number of significant trees within ROW and City owned properties that are in critical areas, buffers, and structure setbacks. It is important to note that most of these trees have been included in PSE’s ongoing vegetation management within the existing transmission line corridor that has been operational for around 80 years. Unlike the trees located within the public ROW, trees located on City owned properties are subject to PSE’s easements that predate the City’s incorporation. Therefore, trees on private property and city owned property are only eligible for replacement. The tree removal plans for trees in ROW and on City properties are attached.

Table 2
ROW and City Property Trees Proposed for Removal

	Non-Critical Areas	Critical Areas¹	Buffers²	Setback³	Total
ROW	32	23	0	11	66
City Property	6	6	9	8	29

1. Includes wetlands, streams, steep slope and landslide geologic hazard areas, and flood hazard areas (100-year floodplain).
2. "Buffers" includes the standard buffers for wetlands and streams and a 50-foot top-of-slope buffer for steep slopes and landslide geologic hazard areas.
3. Structure setbacks includes a 15-foot structure setback for wetlands and streams and a 75-foot toe-of-slope setback for steep slopes and landslide geologic hazard areas.

Tree Replacement Approach

PSE has successfully used an Adaptive Tree Replacement approach on similar 115 kV to 230 kV upgrade projects. Long-term utility corridors that are primarily established by easement can be challenging when it comes to tree replacement. Although PSE has the rights to operate transmission lines in the corridor, the ability to require property owners to accept mitigation (*i.e.*, additional trees) is not specifically identified in the easements. Additionally, it has been PSE's experience that vegetation replacement on properties where the owners actually want additional plantings is the most successful. Recognizing that less than half of the Bellevue property owners have met with PSE to discuss tree replacement options, an Adaptive Tree Replacement approach is being proposed as it will provide the most reliable information based on actual tree removal. This approach will allow for solidification of tree replacement numbers once construction begins. Trees in critical areas may be subject to additional requirements.

The proposed steps for the adaptive Tree Replacement approach include:

- At the time of construction, documentation of trees that are removed on a property by property basis will be collected. This will include the tree species, inventory tag number, and diameter at breast height (dbh) at the time of removal.
- This will be cross-referenced to the proposed landscape and tree replacement plan that was provided to the property owner. Changes to the proposed plan could occur based on a number of factors such as property ownership changes, prior removal of trees by the owner, as well as other factors.
- The landscape and tree replacement plan will be updated and provided to the City as documentation. This will document each tree that was removed and those trees that are installed.
- Upon completion of replanting, PSE will provide a summary report that documents the number and types of trees that have been removed and planted.
- PSE will guarantee plant survival for one year after the planting, with replacement of the plant as the primary remedy.
- Based on the agreed-upon replacement ratios, PSE will provide a financial guarantee that covers the estimated cost of tree replacement (including materials and labor) prior to the issuance of the Clearing and Grading permit. Release of said guarantee by the City will occur upon PSE's submittal of the summary planting report.

To serve as a basis for the financial guarantee and overall tree replacement requirement, PSE is proposing to replace trees using the ratios presented in the table below.

Tree Size (dbh)	Replacement Ratio	Regulated Trees	Replacement Trees
< 6"	As requested by property owner	N/A	TBD
6" to ≤ 12"	1:1	241	241
> 12" to < 30"	2:1	298	596
≥ 30"	3:1	11	33

To help increase tree numbers in Bellevue, PSE has been participating in the Energy Saving Trees program, which provides trees to those residents that want to add trees to their property in a manner that can help offset energy usage. While in most cases these trees are not along the project corridor, they are in the City and help buffer potential tree loss due to factors such as mortality and property owner changes (*i.e.*, a new property owner removes existing trees due to landscaping preferences). PSE initiated use of this program earlier in 2018 in an effort to help offset anticipated tree removal associated with Energize Eastside. During the spring event, PSE and the Arbor Days Foundation provided 551 trees to 300 Bellevue residents. Another round of the program is currently underway. We believe that use of this program allows for trees to be provided to property owners who want additional trees.

Thank you for your effort in processing our application. Please let us know if additional clarification is needed.

Sincerely,



Brad Strauch
Senior Land Planner

Attachments