

Energize Eastside

South Sub-Area Committee Meeting

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energize**EASTSIDE**

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Agenda

- Project overview
- Key questions and PSE responses
- Clarifying questions
- Review workshop #1 and #2
- Committee discussion
- Next steps

Meeting outcomes

- Develop input on evaluation factors
- Determine key points for the committee to send to the advisory group for consideration
- Identify key questions for the advisory group to further explore

Energize Eastside overview

- Growth is straining our region's existing transmission system
- Conservation alone is not enough
- We need to act now
- We are working with the community to identify solutions

Energize Eastside will build new electric transmission infrastructure to ensure dependable power

Sub-Area Workshops overview

South Workshop #1 - March 27, 2014

- 104 attendees
- 56 issues checklist worksheets received
- 18 comment cards and feedback forms received

South Workshop #2 - April 24, 2014

- 72 attendees
- 58 individual scoring sheets received
- 11 group scoring sheets received
- 40 comment cards and feedback forms received

Key questions and responses

- Alternatives analysis/route selection process
- Undergrounding
- Seattle City Light corridor
- Olympic Pipeline
- Property values
- Electromagnetic fields (EMF)

Solution selection process

1

What are the potential approaches to meet the Eastside's electricity needs?



conservation



local generation



infrastructure

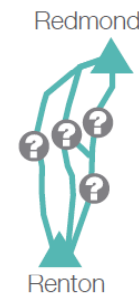
2

What approaches provide enough electricity to meet the Eastside's needs?



3

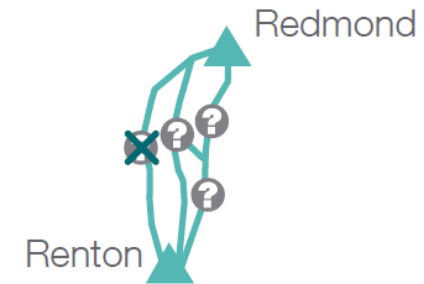
What solutions best deliver electricity to the Eastside?



Solution selection process

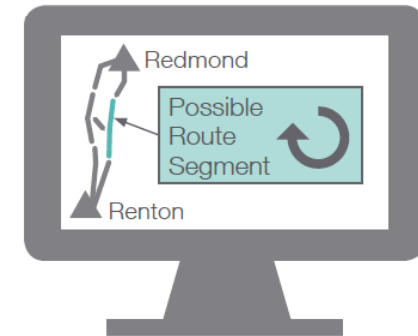
4

What solutions can PSE move forward with?



5

Where could PSE build a solution?



6

What does the public recommend?



What about undergrounding?

- PSE is proposing an overhead transmission line project
- The reasons:
 - **No. 1: Cost**

Underground	Overhead
\$20-28 million per mile <i>estimated labor, material and equipment costs</i>	\$3-4 million per mile <i>estimated labor, material and equipment costs</i>

Who pays to underground?

Requesting group pays the difference between undergrounding and overhead

- Requesting group needs to initiate and identify the specific members of the group
- Money paid up front for both engineering and construction



Underground distribution lines

- Distribution lines serve individual neighborhoods, while transmission lines bring power to large areas
- Opportunities allow for new distribution lines to be underground
 - During the construction of new housing developments (developer pays)
 - In concurrence with large public improvement projects (PSE/jurisdiction cost share)
- About 50 percent of PSE's distribution system is underground, while PSE has no underground 230 kV transmission lines

Seattle City Light corridor

- PSE has reached out to Seattle City Light (SCL)
- SCL uses their 230 kV transmission lines to meet current and future operating needs

Olympic Pipeline

Demonstrated success with power lines and pipelines

- Replaced 300 poles in the existing corridor
- Snohomish County – installed 8.5 miles of 230 kV transmission line along Olympic Pipeline
- In Skagit County, Sedro-Woolley to Horse Ranch project crossed Northwest Pipeline



230 kV transmission line in Everett, WA

Property values

- Property values are comprised of many factors, including economic outlook and location, as well as proximity to jobs, schools, transportation, parks and other amenities.
- Attempting to determine the impact of a transmission line on property values outside of the context of a purchase and sale transaction requires a certain degree of speculation. Again, due to the unique qualities of each property, there's no one size fits all formula.
- We will not use property values to site infrastructure because it is inequitable.

Electromagnetic fields (EMF)

- 45 years of research on EMF
- \$500 million spent on research in the United States alone
- About 2,900 studies conducted to date related to cancer
 - Very large amount of scientific knowledge
- World Health Organization in 2012 concluded that:
 - “The current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields”
- The international public exposure limits:
 - 2,000 mG - International Commission on Non-Ionizing Radiation Protection
 - 9,040 mG - Institute of Electrical and Electronic Engineers

<http://www.who.int/peh-emf/about/WhatisEMF/en/index.html>

Clarifying questions

Do you have any clarifying questions about the information presented?

Workshop #1 results

- PSE listened to community knowledge of segments and the area
- Attendees:
 - Identified key issues and considerations for segments in the sub-area
 - Brainstormed community values
 - Requested data that would be helpful to compare segments

Key issues results

For the potential route segments in the south sub-area, what key issues should the Sub-Area Committee consider?

Issue	Survey total	Workshop total	Cumulative total
Property values	13	51	64
Visual impacts	11	38	49
Aesthetics	10	37	47
Electromagnetic Fields (EMF)	13	29	42
Residential impacts	11	29	40
Environmental impacts	13	27	40

Key themes and evaluation factors

What we heard	Evaluation factors
<i>Eastside rail corridor "ERC" conflicts with multi-use bike trails, path, light rail</i>	Least proximity to sensitive community land uses
<i>Which route has least new impact on eagle / falcon habitat, wetlands</i>	Least proximity to sensitive environmental areas
<i>Real impact on property values</i>	Least proximity to residential areas
<i>Views of Lake Washington and Bellevue</i>	Least effect on aesthetics
<i>Olympic Pipeline in middle of corridor</i>	Most protective of health and safety
<i>Number of trees impacted</i>	Least impact to mature vegetation

Workshop #2 results

- PSE presented data requested in workshop #1 and also shared visualizations
- Attendees:
 - Used data to score all the route segments individually and as a group
 - As a group, wrote a key message to the Sub-Area Committee

Scoring sheet



South Sub-Area Workshop #2 Segment Scoring Sheet

4/24/2014

Instructions: Please score each of the segments in the South Sub-Area for using the evaluation factors below. These evaluation factors were developed during small group discussions at Workshop #1.

Scoring Key

- 5 points = Best meets the factor (i.e., the segment with the least potential impacts to land uses; the segment most protective of health and safety)
- 4 points = Meets the factor
- 3 points = Mostly meets the factor
- 2 points = Mostly does not meet the factor
- 1 point = Does not meet the factor at all (i.e., the segment with most potential impacts to land uses; the segment least protective of health and safety)

Evaluation factors	Segment K1	Segment K2	Segment L	Segment M	Segment N
Factor one: Least proximity to sensitive community land uses (parks, beaches and trails, other uses of the corridor)					
Factor two: Least proximity to sensitive environmental areas (eagle, osprey and falcon nesting habitat, wildlife, wetlands and streams)					
Factor three: Least proximity to residential areas (number of residences; noise)					
Factor four: Most protective of health and safety (EMF, Olympic Pipeline, geologic events)					
Factor five: Least proximity to mature vegetation (number of trees impacted)					
Factor six: Least effects on aesthetics (pole design; see graphic representations)					

Individual segment scoring averages

Evaluation factor	Segment K1	Segment K2	Segment L	Segment M	Segment N
1. Least proximity to sensitive community land uses	3.33	3.64	1.15	3.37	4.53
2. Least proximity to sensitive environmental areas	3.25	3.43	1.09	3.49	4.47
3. Least proximity to residential areas	3.11	3.46	1.09	2.76	3.53
4. Most protective of health and safety	2.85	2.96	1.45	2.24	3.59
5. Least proximity to mature vegetation	2.64	2.93	1.07	3.34	3.90
6. Least effects on aesthetics	3.32	3.61	1.04	3.90	4.21

Table group segment scoring averages

Evaluation factor	Segment	Segment	Segment	Segment	Segment
	K1	K2	L	M	N
1. Least proximity to sensitive community land uses	4.00	4.17	1.00	3.78	4.43
2. Least proximity to sensitive environmental areas	3.42	3.42	1.00	3.61	4.57
3. Least proximity to residential areas	3.83	3.83	1.00	3.11	3.57
4. Most protective of health and safety	3.08	3.38	1.44	2.22	3.43
5. Least proximity to mature vegetation	3.00	3.17	1.00	4.03	3.71
6. Least effects on aesthetics	3.37	3.87	1.11	4.36	4.29

Individual compared to group

Individual averages

Segment K1	Segment K2	Segment L	Segment M	Segment N
3.33	3.64	1.15	3.37	4.53
3.25	3.43	1.09	3.49	4.47
3.11	3.46	1.09	2.76	3.53
2.85	2.96	1.45	2.24	3.59
2.64	2.93	1.07	3.34	3.90
3.32	3.61	1.04	3.90	4.21

Group averages

Segment K1	Segment K2	Segment L	Segment M	Segment N
4.00	4.17	1.00	3.78	4.43
3.42	3.42	1.00	3.61	4.57
3.83	3.83	1.00	3.11	3.57
3.08	3.38	1.44	2.22	3.43
3.00	3.17	1.00	4.03	3.71
3.37	3.87	1.11	4.36	4.29

Segment K1 – detailed individual scores

Evaluation factor	Number of responses by score					Average
	1	2	3	4	5	
1. Least proximity to sensitive community land uses	2	6	9	6	7	100/30 = 3.33
2. Least proximity to sensitive environmental areas	1	7	8	8	4	91/28 = 3.25
3. Least proximity to residential areas	1	7	10	8	2	87/28 = 3.11
4. Most protective of health and safety	1	9	12	3	2	77/27 = 2.85
5. Least proximity to mature vegetation	0	15	9	3	1	74/28 = 2.64
6. Least effects on aesthetics	0	6	11	7	4	93/28 = 3.32

Key themes from worksheet comments

- Preferred alternative is to underground or submerge under Lake Washington.
- Preferred alternative is to use the Seattle City Light corridor.
- Data provided is insufficient to score the segments.
- Photo simulations are misleading and not representative.

Key messages to the Committee

Group 1

- *Infrastructure doesn't have to be negative.*
- *Add infrastructure in a way that makes it better for the area.*
- *Consider other options 1) submarine 2) underground.*

▪ Group 2

- *PSE needs to keep on the table: underground, submarine, and/or share with Seattle City Light.*
- *Final choice needs to be least impactful to people's lives.*

Group 3

- *Narrow the request to evaluate only the area we live in (e.g., Segment L).*
- *Look at alternative power for all new buildings and that's safe for the natural environment.*
- *PSE take leadership in looking at alternatives.*
- *Community appreciates PSE involving the community.*

Group 4

- *Introducing new infrastructure in existing neighborhood will impact property values by 10 or 20%.*
- *Don't create negative impacts on lake/trail & public areas.*
- *Respect SMP (Shoreline Master Plan) guidelines for sensitive areas.*

Key messages to the Committee

Group 5

- *Data table needs to be reworked for more accurate info and decisions e.g. – number of homes that have views impacted, proximity to home structures (not just parcels), length of parks impacted, not just number of parks (e.g. Coulon Park), 600' distance reduced for churches, schools, businesses, industrial (makes no sense that far), condos should be counted each and same for apartments (not lumped as one).*
- *PSE should offer underground and underwater solutions (especially in selected tight residential areas).*
- *This process tonight was rushed with too much new data to digest that fast, and important data still missing entirely. We should be given the opportunity to do this meeting over, under more reasonable circumstances.*
- *Have a public meeting with Seattle City Light about opportunities to work with them.*

Group 6

- *We don't have the right options to evaluate: submerge, SCL corridor, underground.*
- *More wires do not make sense in the 21st century.*

Group 7

- *Pick a route with the least new adverse impacts.*

Key messages to the Committee

Group 8

- *Utilize existing infrastructure, i.e. City Light right-of-way.*
- *Risk understanding (assessment as related to rating).*
- *Routes with existing 115 kV infrastructure not introducing new lines in neighborhoods.*
- *Cost analysis for each of the route segments.*
- *Underground/submarine cable.*

Group 9

- *Impacts to drivers, cyclists, pedestrians, etc. is much greater along route L (Lake Washington Blvd) than any other, because it goes along the route vs. crossing it.*
- *Undergrounding (where appropriate) and utilizing Seattle City Light corridor need to be re-evaluated.*

Group 10

- *Underground.*
- *Not pit route segments against one another.*



Committee discussion

Upcoming meetings

- **Community Advisory Group Meeting #3**

June 4 from 5:30 to 8:30 p.m. at the Old Redmond Schoolhouse



Thank you!