

Transmission Line Routing Community Sounding Board Information Session 2 Summary

September 17, 2020

Overview

Puget Sound Energy (PSE) hosted an online information session for Community Sounding Board (CSB) members on September 17, 2020. The meeting's purpose was for CSB members to gain additional information about electromagnetic fields and undergrounding transmission lines.

The meeting was held online via Webex due to PSE and public health requirements restricting in-person gatherings at this time. Attachment 1 contains the list of meeting participants.

Opening remarks

Kierra Phifer (PSE) welcomed the group, shared a safety moment, and provided a brief recap of past CSB meetings and information session 1. The group welcomed Tom Curly who will be Mark Fisher's replacement as the Suquamish Tribe representative. Kierra also gave a notice to the CSB about planned Winslow Tap pole replacements starting as early as September 22.

Electromagnetic fields overview

Drew Thatcher (Consulting Health Physicist) gave an overview on electromagnetic fields or EMF. EMF is a combination of electric and magnetic fields generated by electrical currents. Numerous case studies conducted by scientists have determined that EMF is not likely to cause childhood leukemia or cancer. Based on a large body of scientific research, the World Health Organization (WHO) concluded that "the current evidence does not confirm existence of any health consequences from exposure to low level electromagnetic fields".

Drew answered questions from CSB members throughout the presentation. Drew's responses and key discussion points are noted below:

- **Have you found studies comparing EMF related to cell phone usage with EMF related to transmission lines?**
Drew shared that while the magnetic and electric fields that arise from transmission lines and the radiofrequency energy from cell phones are both non- ionizing, they are fundamentally different frequencies and are not related to each other.
- **Is it possible we don't yet have the science to understand why people self-identify as sensitive to EMF and experience effects?**
Drew explained that there is always a possibility that science or methodologies have not yet developed metrics to understand this data. However, numerous double blind studies have been conducted and conferences have been dedicated to resolving this issue. The bottom line is that the symptoms that people who self- identify as sensitive to EMF experience are not correlated with EMF exposure.
- **Do you have any idea what the EMF level/output might be that could create a sensation for some people, include seeing bright lights?**
Drew said there is currently no scientific evidence that correlates EMF to these kinds of effects when near transmission lines.

- **As a city representative, how do I respond to a citizen who has concerns about EMF?**
Drew offered that referring citizens to the expert reviews produced by the [WHO](#) and other international organizations would help them feel safer about EMF; PSE can provide these references. Most people have not heard about the multiple studies that provide evidence of EMF not causing adverse effects on people. The best way to respond is to pass along the expert reviews that have scientific backing.

A question was asked about any literature on power lines and property values. The question was not related to EMF and was tabled.

Undergrounding transmission lines

Lowell Rogers (Oak Strategic, Inc.) gave an overview on underground transmission lines. The presentation gave a synopsis of comparing overhead transmission lines and underground transmission lines, including materials, cost, structures, needed right-of-way for installation and maintenance, and limitations (i.e. environmental impacts, routing criteria, etc.). While underground lines can provide higher reliability (fewer service outages) compared to overhead transmission lines, the significant difference in cost and the limitations related to routing and right-of-way maintenance result in utility companies and jurisdictions needing to carefully consider these implications before determining that undergrounding transmission lines is feasible.

Lowell and PSE answered questions from CSB members throughout the presentation. Responses and key discussion points are noted below:

- **Is wildfire risk a consideration for underground routes?**
Lowell explained that underground transmission lines are very unlikely to cause wildfires. Many wildfires caused by transmission lines can be traced back to dry vegetation touching the power line or the overhead components of the line failing. To mitigate the risk of wildfires caused by transmission lines, it is important to implement vegetation management practices to create adequate space between transmission lines and vegetation.
- **If an underground cable is damaged for whatever reason, what is the repair time?**
Lowell shared that the repair time for underground cable(s) will vary depending on the location and damage to the cable(s). Because the underground cable is not visible, finding the damage to the line can be much more difficult and require much more time compared to identifying damage to an overhead transmission line.
- **Would we prevent most of our transmission line outages by building underground lines?**
Lowell noted that while it's true that outages due to trees are reduced when lines are underground, underground transmission lines can experience damage and outages from dig-ins, geological conditions, or material failure. He explained that overhead lines are very reliable when properly maintained--residents and businesses need to understand that many tree-related outages result from an inability to maintain adequate vegetation management. There's always going to be tension around trimming trees when residents are thinking of the beneficial uses provided by trees, like shade and aesthetic characteristics, while utility companies approach tree trimming from safety and reliability standpoints. PSE, the City, and community liaisons could help get this message out on vegetation management and how this management improves transmission reliability and safety.

- **Do you have cost estimates for the maintenance of an underground line versus an overhead line? Does the initial higher cost of installing a line underground pay off financially over time?**
Lowell anticipated PSE may be able to provide general estimates comparing the overhead routes and underground routes over the life span of the “missing link” transmission line. PSE will follow up with CSB members.
- **The underground splice vaults look enormous. Are there smaller options?**
Lowell noted the splice vaults are approximately 8 feet wide by 20 feet long by 9 feet high. They are sited at certain points along the underground route segment as determined by the length of cable section that can be installed, space available and compliance with safety requirements.
- **Is PSE looking at or investing in newer fusion splicing technologies to increase efficiencies, or to increase the length of the line so there are fewer vaults?**
Lowell explained that the splice vaults presented utilize a proven cable splice technology that has proven to be reliable over a long service life. Lowell also shared that for any project, PSE prefers to use equipment and technologies that have gone through rigorous testing prior to installation and implementation. The distance between splice vaults may vary due to the weight and length of the underground cable spool during construction and specific engineering requirements.
- **Will you replace existing substation equipment as part of this project?**
PSE explained when the “missing link” transmission line is built, PSE will replace substation-transmission line connection equipment as needed. New equipment will be installed that will handle the energy load distribution if power needs to be rerouted through a substation.
- **Is PSE willing to work with the community to install an underground route segment if it's something the community wants?**
PSE is willing to work with the community to consider use of underground construction in the project if the community expresses interest in doing so consistent with rules (tariff) on file with its state regulator. PSE would look to the community, specifically the City of Bainbridge Island, to pay the additional costs driven by underground design and construction above those for design and construction of PSE's proposed overhead transmission solution.

Public Comment

While there was one member of the public in attendance for most of the meeting, none were in attendance during the public comment portion of the meeting.

Next steps: upcoming meetings

CSB Meeting 4: October 12, 2020, 5-7:30 p.m.

Closing remarks

Susan and Kierra thanked CSB members for participating. The meeting concluded just after 7:30 p.m.

Attachment 1: Meeting Participants

Community Sounding Board

Individual Interests

Bill Lemon

Carl Siegrist

Elizabeth Doll

Erik Fong

Keith Bass

Ted Jones

Winifred Perkins

Organizational Interests

Glen Tyrrell, Bainbridge Island School District

Hank Teran, Bainbridge Island Fire Department

Jerri Lane, Bainbridge Island Downtown
Association

Maradel Gale, Sustainable Bainbridge

Maria Metzler, Helpline House

Mark Epstein, City of Bainbridge Island

Perry Barrett, Bainbridge Island Metro Parks &
Recreation District

Stephen Hellriegel, Net253 LLC

Tom Curly, Suquamish Tribe

Walt Hannon, Walt's Market

Subject matter experts

Drew Thatcher

Lowell Rogers

PSE Staff

Andy Swayne, PSE CSB Technical Liaison

Barry Lombard, PSE Project Manager

Kierra Phifer, PSE Local Government Affairs and Community Outreach

EnviroIssues Staff

Darcy Edmunds, EnviroIssues, Webex host and technical support

Nyles Green, EnviroIssues, Notetaker

Susan Hayman, EnviroIssues, Facilitator

Observers

David Cohen (public)

Diann Strom, PSE

Gretchen Aliabadi, PSE

Kerry Kriner, PSE

Kirk Moughamer, HDR

Renee Zimmerman, PSE

Richard Perlot, PSE

Shelby Naten, PSE