The CENSE Plan
An Alternative to PSE’s Energize Eastside proposal from CENSE (Coalition of Eastside Neighborhoods for Sensible Energy)

The problem
PSE says that increasing electricity loads, driven by population and economic growth, will strain electrical infrastructure on the Eastside as soon as 2017\(^1\). The company’s only proposed solution is to run 18 miles of new high-voltage transmission lines through five Eastside cities.

Residents worry that 130-foot towers will scar our cities, reduce property values, and cause health problems due to increased electromagnetic radiation and corona pollution. There are also safety concerns about installing high-voltage lines over pipelines carrying high-pressure jet fuel.

The Eastside currently gets 30% of our electricity from a coal plant in Montana that is the #1 carbon emitter in the West, and the #1 emitter of mercury in the nation\(^2\). PSE’s solution does nothing to reduce our reliance on this polluting energy source.

The solutions
PSE’s solution is focused on what one company can do to increase peak load capacity to one area of their system. Super-size poles and wires are the “business as usual” solution, with negative consequences for our communities and the environment.

CENSE proposes an alternative plan that incorporates new technology, improved policies, and rapid advances in energy efficiency. Our goal is to better balance supply and demand, diminishing the need to burn more coal. Instead of relying on a utility company to solve all our problems, the CENSE Plan recognizes the importance of residents and policymakers participating in the solution. This comprehensive approach is better for our communities, safer for residents, just as reliable, and less costly.

The CENSE Plan consists of five parts:

1. PSE will achieve significant savings by implementing recommendations in a 2014 report by one of the company’s subcontractors.
2. PSE will implement “Critical Peak Pricing.”
3. City councils will accelerate efficiency programs and update municipal codes to foster greater stewardship of electricity.
4. Residents will increase use of incentive programs to reduce electricity consumption.
5. PSE should begin implementation of grid battery storage.

This document provides further detail on each of these proposals, and compares the costs and benefits of the CENSE Plan with two wired solutions.

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\(^1\) [http://www.energizeeastside.com/need](http://www.energizeeastside.com/need)

1. PSE will implement existing recommendations

To establish a clear need for the Energize Eastside project, PSE is required to show that alternative solutions aren’t feasible. As part of their planning studies, PSE calculated that the project could be delayed by 4 years if peak loads were reduced by 70 MW. PSE hired an independent consulting company named E3 to determine if this reduction could be achieved in a cost effective way. In February, 2014, the consultants identified 56 MW of potential reductions. This fell slightly short of the 70 MW target. Consequently, PSE ignored the reductions that were found.

These reductions are significant, as you can see in PSE’s Customer Demand graph shown below. When 56 MW is subtracted from the 2021 load forecast, the result falls below the System Capacity line.

Implementing E3’s recommendations would delay the need for the project for at least 3 years. This extra “breathing room” would allow time to evaluate rapidly maturing technologies that can meet our needs in a manner more supportive of our community values.

2. PSE will implement “Critical Peak Pricing”

One strategy to reduce peak loads that E3 did not study is “Critical Peak Pricing” (CPP). This is a demand response program used by many utilities to address peak load problems. Under this program, PSE would increase the price of electricity during the few hours per year that infrastructure is stressed. This provides an economic incentive for customers to reduce their usage during these emergency conditions.

PSE studied Residential CPP in its most recent Integrated Resource Plan, and found it could reduce peak loads by 11 MW by 2021, for a total cost of $36 million. If the E3 recommendations described in the previous section were augmented by CPP reductions, peak loads would remain comfortably below System Capacity until at least 2021, delaying need for corrective action for at least 4 years:

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3 CENSE utilized PSE’s projected growth rates to prepare this document, although CENSE disputes these projections, as detailed in other documents.
3. City councils must participate

The electricity used by cities to run streetlights and traffic lights adds to peak loads. For a fraction of the cost of Energize Eastside, cities could make measurable reductions in demand by switching to more efficient LED lights.

There are also opportunities to reduce load caused by electric heating, especially in new high-rise buildings. City councils should update city codes to discourage developers from installing cheap electric heat (which is expensive for their residents) that causes electricity use to spike on cold winter days. A decision that may seem attractive to developers shifts costs to other residents.

There are many other opportunities for cities to use energy more efficiently. These should be researched and ranked, and the most cost-effective policies should be implemented.

4. Residents can step up

Residents have already been reducing electricity use with energy efficient appliances. In the past 3 years, residential electricity use has fallen 12% nationally, even though Americans purchased nearly a billion new devices. However, there are opportunities to encourage even more reductions. PSE has a great program that delivers 20 free LED light bulbs to customers (see PSE.com/HomePrint). Unfortunately, this program is not well-known among most Eastside residents. If it were more widely used, it could also reduce electricity loads, and it should be more effectively advertised.

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5. PSE should install grid batteries for the Eastside

Using the strategies above, we can delay implementation of other infrastructure improvements for at least 4 years. During this time, grid battery storage will become more common in many U.S. cities, and the cost will come down significantly. PSE agrees that grid batteries are the “wave of the future,” but the company insists that batteries are too expensive or too risky to install today.

Chicago provides a compelling counter example. By spring of next year, Chicago will be running three battery installations with 60 MW of capacity and a total program cost of $60 million\(^6\). Each installation contains 9 shipping containers on a plot of land measuring about 4 acres:

![Battery Installations in Chicago](image)

By comparison, PSE’s 18-mile power line will cost its customers approximately $200 million. Why are battery installations being deployed in other major cities, when our only solution comes from a previous century?

CENSE is not alone in calling for a more careful consideration of batteries. The company’s regulator, the Washington Utilities and Transportation Commission (UTC) criticized PSE’s dismissal of batteries in their most recent Integrated Resource Plan. PSE used cost and performance data that is now 4 years out of date to reject batteries as not cost effective\(^7\).

CENSE proposes that PSE begin installing a few battery containers in the Eastside as soon as it’s practical to do so. This will give PSE experience with this technology applied to our specific area needs before it is necessary to deliver peak energy. In future years, when peak loads approach system capacity, new containers can be added to address the need. This incremental approach allows us to buy the “right-sized” capacity we need, when we actually need it.

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\(^7\) [http://www.wutc.wa.gov/rms2.nsf/177d98baa5918c7388256a550064a61e/4b0c052bf4e679fe88257c7700773244!OpenDocument](http://www.wutc.wa.gov/rms2.nsf/177d98baa5918c7388256a550064a61e/4b0c052bf4e679fe88257c7700773244!OpenDocument), p. 6
A comparison of the plans
The table below compares the CENSE Plan to Energize Eastside and a transmission project with lines buried underground. The underground option is frequently suggested by Eastside residents, but PSE is bound by a rule adopted by the UTC (PSE actually proposed the rule). The rule says that PSE can’t charge their customers for the additional expense of undergrounding. Instead, the people who ask for the underground line must cover the additional cost. To date, no way has been found to make an underground line financially feasible. It’s included in this table for completeness.

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<td></td>
<td>~$200 million</td>
<td>~$447 million&lt;sup&gt;8&lt;/sup&gt; due to UTC rule, fewer customers would bear the additional cost for undergrounding</td>
<td>~$40 million assumes $4 million for CPP, $20 million for city upgrades, $16 million for a small battery project</td>
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<td>Cost (2018-2021)</td>
<td>$0</td>
<td>$0</td>
<td>~$22 million assumes $32 million for CPP, $30 million for batteries, and $40 million in savings from E3 projections</td>
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<td>Construction and environmental impact</td>
<td>High requires cutting or removal of ~8000 mature trees and digging holes up to 50’ deep to install poles</td>
<td>Very high many months of construction and disturbance of ground soil and traffic</td>
<td>Low</td>
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<td>Visual impact</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
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<tr>
<td>Health concerns</td>
<td>High EMF and corona pollution</td>
<td>Low high EMF directly above the buried line</td>
<td>Low</td>
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<td>Safety concerns</td>
<td>High proximity of high voltage wires over a high-pressure petroleum pipeline</td>
<td>Medium construction risks due to pipeline co-location</td>
<td>Low</td>
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<td>Reliability concerns</td>
<td>Medium vulnerable to weather, earthquakes, tree strikes, solar flares, terrorists</td>
<td>Medium vulnerable to earthquakes, problems can be difficult to locate and take weeks to repair</td>
<td>Medium new technology risk</td>
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<sup>9</sup> [http://www.energizeeastside.com/Media/Default/CAG/Meeting4a/7_CAG_UpdatedDataTable_2014_0625.pdf](http://www.energizeeastside.com/Media/Default/CAG/Meeting4a/7_CAG_UpdatedDataTable_2014_0625.pdf)
Frequently asked questions

Q: The CENSE Plan costs less than a third of the Energize Eastside project. Is that realistic?

A: CENSE calculates a total cost of $62 million until 2021:

- $36 million to implement Residential Critical Peak Pricing (from PSE’s 2013 IRP, Appendix K)
- $20 million in accelerated efficiency upgrades for Eastside cities (such as street lights, traffic lights, and other cost-effective upgrades)
- $46 million for a couple of battery installations similar to Chicago’s
- $40 million in savings will offset the above costs (this is the amount E3 says customers would save in energy costs and additional infrastructure investments if Energize Eastside were delayed until 2021)
- Some of the old transmission wires may need to be replaced or upgraded at an unknown cost.

Q: Does Critical Peak Pricing mean I will pay more for the electricity I use?

A: Critical Peak Pricing will affect the price of electricity when the temperature drops below 25° F on a weekday. This is not a common occurrence in our area, as shown in the graph below. If you reduce electricity use during these times, the increase in your bill will be smaller than the monthly increase that all PSE customers will pay during the next 40 years for Energize Eastside.
Endorsements
Below are some of the individuals and organizations who want a fair, accurate, and transparent comparison of Energize Eastside and the CENSE Plan before construction permits are considered.

You can add your signature to the online petition.

Experts
[TBD]

Homeowner associations
[TBD]

Members of PSE’s “Community Advisory Group”
[TBD]

Environmental organizations
[TBD]

Elected representatives
[TBD]

Community leaders and organizations
[TBD]

Health care professionals
[TBD]

Business
[TBD]

_CENSE_ is the Coalition of Eastside Neighborhoods for Sensible Energy: volunteers independent of political party, business interest, or any other organization.