A new vision for Eastside energy

When you imagine Eastside cities a generation from now, what do you see? A vibrant economy, powered by reliable, affordable electricity? A thriving environment, clean air, and abundant trees? Do you see healthy residents, confident in the safety of the energy infrastructure in their community?

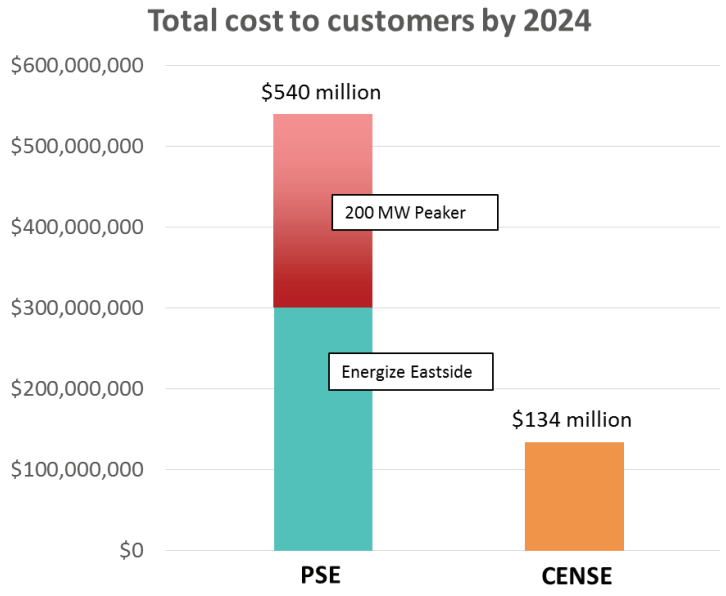
So do we!

CENSE is a group of citizen volunteers working to achieve the best solutions for our energy future. Over a year ago, we published the *CENSE Plan*, outlining how the Eastside could meet future electrical demand without building a dangerous and unsightly transmission line through five Eastside cities.

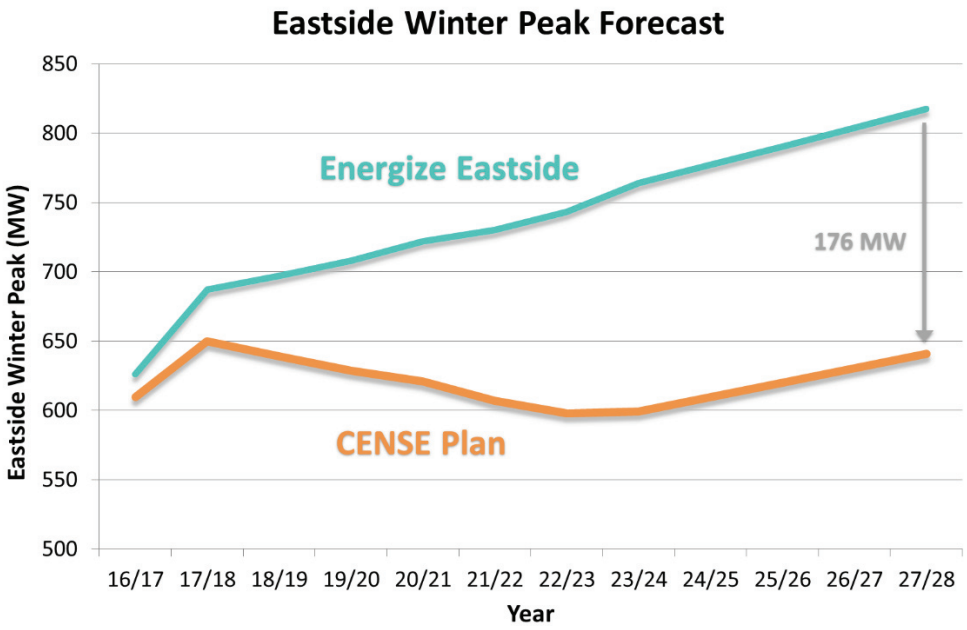
We hired an industry expert, EQL Energy, to provide accurate estimates of cost and capacity. The result is a realistic plan that is economical, safe, and supportive of our communities and the environment.

Economical

The *CENSE Plan* would cost $134 million during the next 8 years. Compare that to PSE's "Energize Eastside" proposal which would cost $300 million up front. PSE says that growing demand for electricity requires construction of a 230,000-volt transmission line through mostly residential neighborhoods. To serve the demand, PSE announced it will also need to build a local gas-powered generation plant by 2021. The total cost of the transmission line and the power plant would be $540 million.



The *CENSE Plan* alleviates the need for both the transmission line and the generation plant by intelligently targeting demand growth. The following chart shows that the *CENSE Plan* reduces demand by 176 megawatts in 2028.



How does it work?

The *CENSE Plan* uses a mix of technologies and energy policies that have been proven to work by utilities all over the country.

- **Electrical Efficiency**
  Potential savings were studied by PSE's contractor (E3) and found to be practical and cost-effective.[1]

- **Conservation Voltage Reduction**
  Using equipment installed in substations, voltage is carefully regulated to provide a conservation benefit.[2] This is already working in a few local substations.

- **Combined Heat and Power**
  Very efficient gas-powered generators provide new buildings with both heat and electricity. This provides a reliability benefit as well as reduced carbon emissions. Systems are coming on line in places like Texas.[3]

- **Batteries**
  The *CENSE Plan* proposes 33 MW of battery storage, an amount which is practical and cost-effective. Southern California Edison is using batteries of many sizes in California.[4]

- **Dispatchable Standby Generation**
  Businesses and hospitals provide access to idle backup generators to provide power during peak loads. In return, owners get financial incentives like free testing and maintenance. This program has been a success in Portland.[5]

- **Day Ahead Demand Response**
  When the weather forecast indicates peak demand is coming, consumers are given financial incentives to curtail electricity use during peak hours on the following day. Programs like this have proven effective in California and New York.[6]

- **10-minute Demand Response**
  Large consumers of energy are given financial incentives to voluntarily curtail electricity consumption on an emergency basis. Hawaii uses this program.[7]

Advantages

The *CENSE Plan* will save customers a lot of money over the next few decades, but that's not the only benefit. The *CENSE Plan*:

- **Supports neighborhoods and the environment**
  Energize Eastside would destroy thousands of mature trees and carve an 18-mile scar through the Eastside. The *CENSE Plan* would preserve trees and reduce greenhouse gas emissions by moderating energy use. The Eastside can demonstrate leadership by taking these practical steps.

- **Provides better reliability during storms**
  If two faults occur on PSE's new line, Eastside capacity will be reduced by 20%. The *CENSE Plan* spreads the risk over many different components, delivering better reliability during storms and other disaster scenarios.

- **Reduces risk of pipeline fires**
  PSE's proposal would put high-voltage power lines in close proximity to high-pressure petroleum pipelines, increasing the risk of catastrophic pipeline fires like the one shown in the photo that killed three people in Bellingham in 1999.[8]

- **Invests in our local economy**
  The Puget Sound is home to leading-edge companies providing the energy solutions of tomorrow, like UniEnergy Technologies, a battery manufacturer in Mukilteo.[9] Supporting these businesses is an investment in the future of our local economy.

References

[1] E3 "Non-wires" study
https://energizeeastside2.blob.core.windows.net/media/Default/Library/Reports/PSEScreeningStudyFebruary2014.pdf

[2] Conservation Voltage Reduction
https://www.navigantresearch.com/newsroom/conservation-voltage-reduction-market-in-north-america-to-reach-nearly-800-million-by-2022

[3] Combined Heat and Power in Texas
http://www.harc.edu/feature/CHP_and_energy_efficiency_four_examples

[4] Batteries used by Southern California Edison
http://www.greentechmedia.com/articles/read/socal-edison-wants-new-grid-batteries-for-just-in-time-delivery

[5] Portland's Dispatchable Standby Generation
http://www.power-eng.com/articles/print/volume-105/issue-3/features/putting-standby-generators-to-work-on-grid-support.html

[6] Day Ahead Demand Response in New York City
http://www.coned.com/energyefficiency/demand_reduction.asp

[7] 10-minute Demand Response in Hawaii
http://www.energymanagertoday.com/hawaiian-businesses-get-10-minute-warning-for-demand-response-087900/

[8] Pipeline explosion in Bellingham
http://www.bellinghamherald.com/news/local/article22200432.html

[9] Mukilteo business at leading edge of energy solutions
http://www.uetechnologies.com/