IRP Comments for WUTC, 19 Feb 2018
Comments sent via email to: records@utc.wa.gov

To: The Washington Utilities and Transportation Commission
RE: Dockets UE-160918 and UG-160919

Dear Honorable Commissioners,

The bulk of the comments you may read and hear as part of PSE's IRP docket discuss electricity generation (Tacoma LNG plant, Colstrip, new natural gas generating plants). But we cannot look at generation in a vacuum – we must also carefully consider **TRANSMISSION**. One cannot exist without the other. The comments below are aimed at the consequences **of inadequate TRANSMISSION planning in the Integrated Resource Plan.**

Transmission Planning

PSE has not been transparent and supportive of WAC 480-100-132. PSE only added Chapter 8 of the IRP late in the process – and only *after* the WUTC insisted PSE do so. Sadly, it is insufficient. This section needs significant improvement - *now*. It is unacceptable to allow PSE to "pass" - waiting to provide accurate, and up-to-date transmission planning analysis until the NEXT IRP. PSE must be required to accurately assess Transmission Planning in THIS IRP.

In the WUTC's own words (***160918-19-Staff-Comments-re-PSE-2017-IRP***), they have never disallowed costs for studies of potential solutions to resource needs (pg 4-5).

- Climate change may impact values for winter peaks (pg 6)
- Flat-to-negative growth rates (pg 9)

The WUTC's Staff Detailed Comments on PSE's 2017 IRP clearly outline a host of deficiencies in the IRP. Please send PSE a strong message. Hold PSE accountable to their ratepayers. Put customers first. It's time for PSE to go back and provide detailed, up-to-date analyses for transmission planning.

Alternatives

PSE has NOT provided adequate demand analysis in Chapter 5 of the IRP. PSE fails to include "Lowest Reasonable Cost" in their analysis as required by WAC 480-100-238.

The battery alternative studies provided in PSE's IRP use outdated 2014 cost and capacity data. Flow batteries (like UniEnergy Technologies) are excluded from consideration in the study, even though PSE recently stated that flow batteries could be significantly more economical than lithium ion batteries due to their long service life. PSE's study is not up-to-date with competitive battery information.

The WUTC needs to provide data to City Councils in their consideration of transmission projects in their jurisdictions (examples: Lake Hills-Phantom Lake Transmission Project and Energize Eastside). Was the project properly evaluated in the IRP? Is the project an Essential Public Facility? Are other technologies (batteries, flow control devices, demand response) included in the analysis of this project? Have alternatives properly been taken into account that may now render older proposed projects obsolete?

PSE grossly exaggerates the size of the battery needed to serve the Puget Sound Eastside based on flawed studies and data (Reference: PSE's 2015 battery study conducted by Strategen). PSE's commissioned study does not take into account the scalable nature of battery storage. Capacity can be

added over time as needed - incrementally. Full capacity is not required up-front in 2018. The Strategen Study over-estimated the size (capacity and real estate) needed to implement battery storage. The Strategen Study over-estimated the length of time that would be required to install battery grid storage. Recent projects (Australia, Southern California) show the viability of scalable battery storage that was installed quickly and at much less expense than the wire alternative of additional transmission lines.

PSE's IRP is deficient in many areas regarding transmission planning alternatives:

- PSE refuses to take the WUTC seriously by ignoring requests to provide a comprehensive analysis of new technologies (like battery storage)
- PSE has ignored requests to provide in-depth discussion of PSE's Energize Eastside transmission project (Chapter 8, pages 8-30 to 8-53 is deficient in many areas)
- PSE fails to provide in-depth discussion of Non-Wire Alternatives (NWA), DER, and wired alternatives
- PSE is motivated to pursue profit at any cost for its foreign equity shareholders, over the best interests of its customers (approx. 10% Return on Equity for infrastructure projects, like **transmission facilities that are not required to be competitively bid**)

If the UTC is looking for a recent example of an older proposed project being canceled due to new technology and analyses, look no further than Bonneville Power Administration**. BPA recently canceled the I-5 Corridor Reinforcement project citing, in-part, that better technological solutions exist rather than building large transmission infrastructure.**

https://www.bpa.gov/news/newsroom/Pages/BPA-will-not-build-I-5-Corridor-Reinforcement-Project.aspx

http://www.opb.org/news/article/pge-bpa-cancel-plans-for-major-transmission-line/

A more resilient, more reliable, more environmentally sound plan includes a combination of demand response, electrical efficiency, distributed generation, battery storage, and simply re-conductoring older transmission lines to be more efficient. This combination of alternatives is not treated holistically in the IRP, and PSE's incomplete, outdated piece-meal approach is not serving PSE customers with the lowest reasonable cost options for electricity.

Public Participation & Outreach

PSE demonstrates a blatant disregard for public participation in transmission planning. PSE fails to meet the criteria of WAC 480-100-238 "Public Participation". PSE has engaged in bare minimal efforts to engage the public in truthful, fact-based dialogue.

Example: Most PSE ratepayers are completely unaware of the Energize Eastside project. Yet, this project will cost ALL ratepayers over $1 Billion dollars over the next forty years in the form of higher electricity rates. This is, in effect, **a regressive tax that hurts the most vulnerable in our communities**.

PSE has engaged in a campaign to deceive and obfuscate the truth about how transmission projects are paid for. Consider the following contradictory statements:

1. <From PSE's website from 2014 until August 2016> *"Who will pay for Energize Eastside and how much will it cost? Upgrades or additions to the electric infrastructure are shared by all of PSE's 1.1 million customers and paid for over time. We don't yet know the total cost of the project, but estimates range from $150 million to $300 million.* ***We expect approximately $1 to $2 of the average monthly bill for residential customers will go towards paying for Energize Eastside.*** *Once we determine the final design and alignment, we will have a better idea of the total cost."*

2. <From PSE's website, changed in August 2016> *"Who will pay for Energize Eastside and how much will it cost? Regular upgrades or additions to the electric infrastructure are shared by all of PSE's 1.1 million customers and paid for over time. We don't yet know the total cost of the project, but estimates range from $150 million to $300 million. Once we determine the final design and alignment, we will have a better idea of the total cost.* ***We don't expect customers will see any changes in their monthly bill to pay for this project."***
https://energizeeastside.com/faqs

3. <From PSE's recent Energize Eastside flyer received in the mail, 8/11/2017> *"How will Energize Eastside affect rates?* ***Customers will not see an increase in their monthly bill as a direct result of Energize Eastside.*** *That's because PSE's annual capital budget, which funds infrastructure upgrades is* ***already included in customer rates****."*

4. <From PSE's Docket Nos. ER12-778-000 and EL12-46-000, dated February 14, 2013> *"3. Cost of Capital/Return on Equity: The Settlement describes the Parties' agreement that PSE shall be entitled to earn a return on equity ("ROE") of 9.8% on its transmission rate base,* ***except that with respect to those transmission facilities identified in the Memorandum of Agreement between BPA, PSE, and Seattle City Light*** *(BPA Contract No. 11TX-15450) dated January 31, 2012 ("PSANI Facilities"),* ***PSE shall be entitled to an ROE of 10.3%.*** *The ROE provisions of the Settlement* ***reflect a downward negotiation from the 10.6% ROE originally requested by PSE in its January 6 Filing****. The higher equity return for the PSANI Facilities is reflected in Attachment 7 of the Formula Rate Template attached to the Settlement as Exhibit A. The Settlement also provides that the equity component of PSE's capital structure will be capped at 50%."*
http://www.oatioasis.com/PSEI/PSEIdocs/Formula_Rate_Settlement_Package.pdf (bottom of page 4, top of page 5)

5. <From communications with the WA Assistant Attorney General, Public Counsel Unit Chief, dated September 20, 2017> *"…The Utilities and Transportation commission does not pre-approve utility projects – in other words,* ***ratepayers do not pre-pay for projects****. Utilities must first make the investment, seek rate recovery, prove prudence, then ratepayers pay for the project. It is my understanding that Energize Eastside is still in the planning phase and has not yet been built….If the transmission project is built and determined prudent, the amount invested will be included in rates and all customers will pay for it in rates….In many respects* ***we are a reactionary party*** *– we react to proposals brought before the Commission by the utilities."*

From discussions with the WUTC (Mr. Mark Vasconi, WUTC Director of Regulatory Services) and the Attorney General's Office of Public Counsel, they have confirmed this process:

1. A utility builds an infrastructure project. The WUTC appears never to weigh-in *before* an infrastructure project is built. The WUTC does not pre-approve projects. They *review* rate case prudency after-the fact.
2. AFTER the project is built, the utility applies for a rate increase to be reimbursed for the cost of the project, *plus* an authorized rate of return. The WUTC evaluates the merits of the project based on:
    a. Is it Prudent?
    b. Is it Used and Useful?

c. Is it Open Access?

3. Based on the outcome of this "prudency review", the WUTC either allows, disallows, or conditionally allows the charges for the project to be authorized through customer rate increases.

Note: Mr. Vasconi publically testified before the City of Bellevue that the WUTC has never denied PSE a rate increase for infrastructure upgrades.

From that August 2017 mailing from PSE (cited above), PSE leads customers to believe that their rates will not increase. In fact, **PSE's statements lead ratepayers to believe they are already paying for Energize Eastside.**

Has PSE already pre-negotiated a ROE on Energize Eastside of 10.3% as far back as 2013? The Memorandum of Agreement (MOA) between BPA, PSE, and Seattle City Light discusses Energize Eastside (nee: Sammamish to Lakeside to Talbot Rebuild Project and Lakeside 230 kV Transformer Addition Project).
http://www.energizeeastsideeis.org/uploads/4/7/3/1/47314045/2015-06-01_moa_with_bpa-seattlecitylight-pse.pdf

Are ratepayers already paying for a transmission infrastructure project before the EIS has been finalized? Are ratepayers already paying for an infrastructure project before the City of Bellevue (lead SEPA agency) has issued permits? **Are customers paying for a project that has not yet gone through a prudency review by the WUTC?**

PSE has failed to conduct adequate Public Outreach in an open and transparent fashion as required. Ratepayers should be aware of upcoming transmission projects along with transparent discourse on rate increases. Ratepayers should have access to unambiguous information about planned transmission project costs. The information that PSE does provide regarding proposed projects and rate increases is confusing, contradictory, and misleading. Our communities cannot afford a regressive tax on all who depend on electricity for survival. PSE should be providing ratepayers with truthful, unambiguous answers when they engage in public outreach.

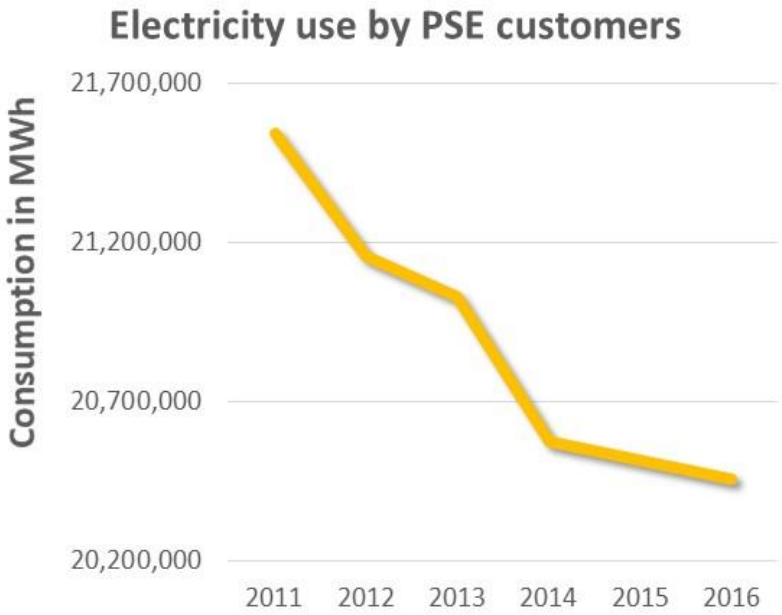
Are PSE's misleading statements about the prudency process worthy of a formal complaint? Are PSE's deceptive Public Outreach practices worthy of a formal complaint?

Advertising Costs & Truth in Advertising

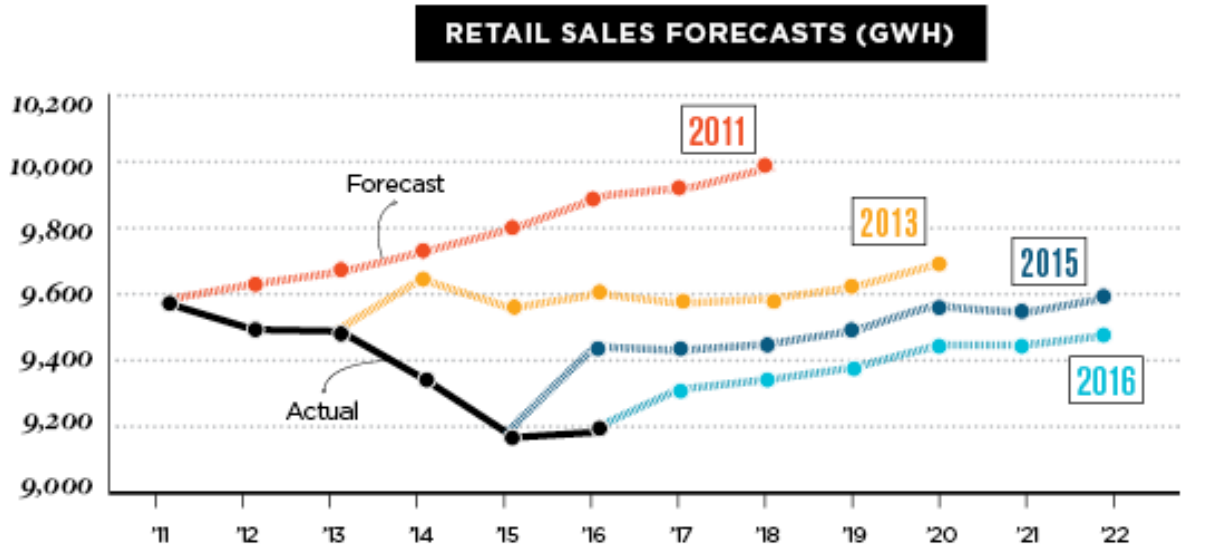
PSE has embarked on a campaign of half-truths and untruths in extensive - and expensive - advertising that is ultimately billed back to customers. I strongly urge the UTC to disallow reimbursement of these advertising costs. Below are only a few egregious examples.

"Growth on the Eastside is straining our electricity grid"
Numerous online ads and print ads have repeated made this claim. Here is one of many examples:

Data from PSE's regulatory filings tell a different story. Despite robust economic and population growth, electricity usage has decline about 11% over the last eight years. Why is that? Energy efficient appliances & lighting, LEED-certified building practices, micro-generation (solar and wind), conservation, and new technologies (e.g. Optimum Energy, UniEnergy Technologies) all result in an over-arching REDUCTION in electricity demand. There is nothing to indicate this trend will reverse.



Data shows that utilities have historically been **significantly inaccurate in forecasting electricity demand**. Meteorologists do better forecasting the weather than utilities typically do forecasting electricity. This Seattle City Light diagram clearly illustrates this point:

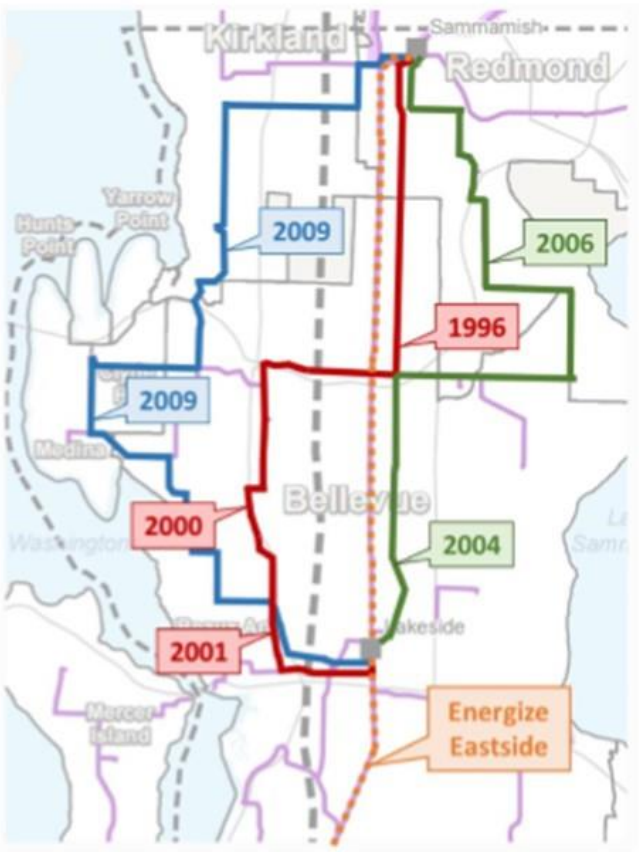


SOURCE: SEATTLE CITY LIGHT

"The Backbone" has not been upgraded in over 50 years"

Our region's transmission grid is exactly that – a GRID, a mesh, a "spider web" network with redundant paths. Our electricity grid is not a singular, centralized line subject to damage by accidents, storms, natural disasters, or attack. A "backbone" can be severed, leading to paralysis of the region. Our

transmission grid is a resilient network with redundant paths, and it ***has*** been upgraded on the eastside several times in the 1990s and as recently as 2009:



The map shows the TRANSMISSION upgrades that PSE has completed on the Eastside in the last 20 years. Public Records show that 3 of 5 North-South High Voltage Transmission Lines (HVTL) through the Puget Sound eastside were built over time during the last 20 years. High Voltage Transmission Line segments were added in 1996, 2000, 2001, 2004, 2006, and 2009. PSE has built 3 additional North-South high voltage transmission lines, increasing the Eastside's transmission capacity from 2 lines to 5 lines – a 250% increase in capacity – in the last 15 years.

"If we don't act urgently, the region will face rolling blackouts"

PSE has provided misleading statements about "rolling blackouts" if Energize Eastside is not built.

https://www.youtube.com/watch?v=ryNAEaqSUV8

Bonneville Power Administration has stated that, ***"it is unlikely that anyone's lights will go out***" because if necessary BPA's transmission planning (Day-Ahead and Hour-Ahead planning) manages peak load events via an automated system BPA implemented and has been using since 2007. In more than 15 years' worth of data, there is not a single example of the U.S. exporting anywhere near 1,500MW of power to Canada, especially during peak load events. BPA says that their automated system ensures there is sufficient electricity to the Puget Sound.
https://www.bpa.gov/news/pubs/FactSheets/fs200709-BPA%20to%20automate%20transmission%20curtailment%20procedure%20for%20the%20Puget%20Sound%20Area.pdf

PSE is engaging in a scare tactic to drive their financial agenda. How many Corrective Action Plans (CAPs) has PSE implemented in the last 5 years? 10 years? How long were their duration? What was the cause? PSE has not supplied any evidence that they have implemented ANY CAPs that would indicate the region is eminently facing rolling blackouts.

PSE's *Eastside Needs Assessment Report* Assumption of "1,500MW to Canada"
PSE started with the "WECC 2018 Base Case" and then added several critical assumptions that far exceed NERC reliability standards:

- sending 1,500 MEGA Watts to Canada (that's a LOT of power – enough to power most of British Columbia)
- temperatures below 23F on a weekday winter morning (M-F) between the hours of 5am-8am
- 2 of 4 transformers offline
- at least 6 west-of-Cascade emergency generators owned by PSE, and 5 other non-PSE owned emergency generators– all simultaneously are taken OFFLINE

This extreme confluence of worst-case events stresses the Bulk Electrical System well beyond hypothetical NERC reliability limits. By imposing these additional assumptions, the PSE/Quanta load flow study creates cross-Cascade (east-to-west) transmission problems – there isn't enough electricity available to flow over the Cascades (from Grand Coulee Dam over 11 east-to-west transmission paths) to meet these extreme conditions. PSE has not provided an explanation how their power flow studies and simulations deal with the resulting voltage collapse that occurs when layering these excessive assumptions on top of the WECC 2018 Base Case. PSE has demonstrated a lack of transparency regarding the changes they have made to the 2018 WECC Base Case.

Note: BPA does NOT have a Firm Transmission Requirement to deliver electricity to Canada under all contingency conditions, weather conditions, and during peak load events. Public Records searches, as well as letters directly from BPA, confirm this. The Columbia River Treaty "Disposal Agreement" (covering years 1998 – 2024) demonstrate no need to deliver Canada's share of Treaty power to the Canadian Border during this time period.

I strongly urge the UTC to disallow reimbursement of these advertising costs.

Regulatory Oversight and Reform

The acquisition of PSE by private equity shareholders of Macquarie in 2008-2009 narrowly passed by a split vote. When Puget Sound Energy was being acquired by Macquarie Infrastructure Partners, the WA Attorney General's office opposed the sale of PSE to Macquarie citing, *"...it will place great pressure on the Commission to approve the necessary large and frequent rate increases on a consistent basis...**reduce the Commission's ability to effectively regulate PSE**..."*

WUTC Commissioner Philip Jones also opposed approval of the sale. He said, *"The settlement agreement in its current form **creates too much risk and potential harm for ratepayers and stakeholders**. The proposed agreement sets forth a capital structure with excessive debt for Puget Energy and PSE, and creates a privately held investor consortium that lacks sufficient transparency compared to the status quo."*

Jones said that he believes *"the increased debt load creates undue risk for ratepayers by requiring PSE to create sufficient cash flow to service the substantial amounts of new debt" and "it will **place great pressure on the commission to approve the necessary large and frequent rate increases** on a consistent basis."*
http://wutc.wa.gov/webimage.nsf/0/282DEDF46BFA989B8825753000005D8F

Sadly, those prescient words have become a reality. This is a nightmare for PSE ratepayers. Is it any wonder why Jefferson County disconnected from PSE? Or why Microsoft pulled the plug from PSE after paying $23M? Or why Bainbridge Island sought to form its own PUD last year? The message is clear: PSE is a monopoly that is flaunting a blatant disregard of regulatory requirements.

PSE has some of the highest electricity rates in the state of WA.
https://www.utc.wa.gov/regulatedIndustries/utilities/energy/Pages/residentialElectricBillComparison.aspx

PSE lobbies WA legislators to block the adoption of renewable energy, like solar (example: SB 5735). PSE lobbyists actively introduce measures that *inhibit* the adoption of clean, renewable energy sources. Investor-Owned Utilities (IOUs) are becoming more and more adept at protecting their profits at the expense of progressive energy reform.
http://invw.org/2015/04/18/solar-power-expansion-legislation-caught-in-political-crossfire/

The days are long gone when monopoly electric utilities need incentives to electrify the rural west. Today's legislation is a legacy from the days of Thomas Edison, when the societal goal was to build-out infrastructure to electrify rural populations. In that bygone era, the assumption was that electricity demand would always grow, doubling roughly every 10 years. Now that utilities are seeing flat-to-declining electricity demand, stodgy utilities stuck in their ways are countering declining revenue by building unnecessary transmission infrastructure projects.

I strongly urge the WUTC to bring Washington State into the 21st century. The energy landscape is transitioning rapidly. Existing infrastructure is aging, extreme weather events are becoming more commonplace, and there is growing need for additional energy security, reliability, and resilience for the welfare of all citizens. Technological innovation and increasing competitiveness of renewable energy are leading the way to significant changes in how electricity is generated, transmitted, distributed, managed, and consumed. WA can enact multi-year regulatory reform to align energy markets with the regulatory landscape:

- ***Provide the right incentives*** to utilities that make investments in clean energy, a diversified grid, and a diversified business model (demand response (DER) incentives, enhanced demand elasticity, improved operating efficiencies that better integrates customers with combined utility/third party investment). Make necessary changes to the current regulatory, tariff, market, and incentives structures. Utilities could become owners of distributed service platforms (DSP) that retail customers can use to buy – and sell – electricity. Utilities could be incentivized to utilize DER, but not own and operate their own DER. The availability of DER

allows utilities to more effectively manage peak demand. Incentivize utilities to support bi-directional resource generation.

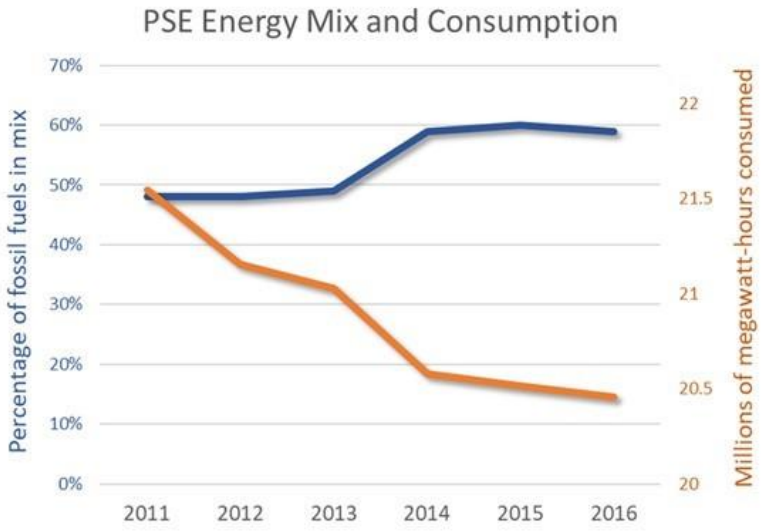
- ***Put consumers first***. Improve consumer choices, ensure affordability, and protect the health and welfare of citizens by decreasing carbon emissions. Provide incentives and programs for lower income customers and renters to participate. Require utilities to implement Time of Use (TOU) rates and create transparency showing the savings when shifting electricity usage from times of peak demand to times of lower demand. Successful implementation translates into significant savings to WA residents.
- To ***meet state-mandated greenhouse gas emission targets***, increase the deployment of distributed energy sources (micro-grids, solar, wind, storage) while reducing reliance on fossil fuels to generate electricity.
- ***Continue decreasing building energy consumption*** via legislation that rewards utilities and contractors to implement clean energy-saving solutions. While initial installation costs may be higher, allow utilities and contractors to share in long-term energy savings.

California's legislative reform and New York's REV (Reforming the Energy Vision) provide examples:
http://www3.dps.ny.gov/W/PSCWeb.nsf/All/CC4F2EFA3A23551585257DEA007DCFE2?OpenDocument

Green Power Program

For the past 15 years, PSE's "Green Power Program" has enrolled 43,000 customers to pay a premium for their electricity with the belief that by paying more they are using clean energy or contributing to local renewable projects (wind, solar, biomass). The Green Power Program revenue goes to support *"independent resource projects and grow voluntary demand for cleaner energy options…and educate customers about the program, and administer the program…"* (whatever that means). The WUTC does not directly audit PSE's Green Power Program, nor does it receive a report from other auditors. PSE claims their Green Power Program is certified by Green-e Energy, yet Green-e-Energy stats that *"Green-e Energy does not certify any generation facilities."* In fact, over the last seven years, PSE's usage of fossil fuels has INCREASED (see graph). In 2017, PSE derived 37% of its electricity from burning COAL – up from 33% the prior year. To assuage environmentally conscious consumers, is PSE playing accounting games in their annual reports?

https://www.motherjones.com/environment/2010/01/green-power-scam/
https://pse.com/savingsandenergycenter/GreenPower/Pages/Frequently-Asked-Questions.aspx#q7



PSE's "Green Power Program" appears to be an accounting shell game that extracts more money from its customers without showing any tangible decrease in reliance on fossil fuels.

Customers have won some battles – LED light give-aways, city street LED upgrades, a new emergency generation at Bellevue Presbyterian. But we are losing the war. PSE's dependence on fossil fuels has INCREASED in the last 4 years. PSE's most recent data disclosed that its fuel mix from all fossil fuels increased from 50% to 60%. PSE's electricity generation from greenhouse gas emitting fossil fuels is trending in the wrong direction.

Customers have had enough. If PSE continues these shenanigans – placing shareholder profits above the needs of ratepayers – we will form a commission to embark on the formation an east King County PUD. PSE is not being responsive to requests from the WUTC. PSE is not being responsive to the needs and requests of its customers.

IRP Conclusions

On February 15, 2018, FERC issued a ***Final Rule on Electric Storage Participation in Regional Markets***. FERC voted to remove barriers to the participation of electric storage resources in the capacity, energy, and ancillary services markets operated by Regional Transmission Organizations (RTOs). This Rule also proposes reforms related to distributed energy resource aggregations. In short, FERC is paving the way for utilities to reform antiquated business models and aging infrastructure with new technology solutions that can provide the lowest reasonable cost electricity to ratepayers.

PSE's transmission planning in the IRP needs to incorporate the latest rules from FERC and leverage the best opportunities now available. Sadly, PSE is stuck in the past:

- Transmission lines are vulnerable to storms, natural disasters, physical attack and cyber attack
- Natural gas peaker plants still emit greenhouse gases (but less than burning coal) and methane leakage that occurs during the mining of natural gas **increases climate change concerns about using natural gas as a viable alternative to coal**

PSE is keen on building additional natural gas generation plans, because they are a natural gas company. With PSE's electricity revenues declining (borne out by a review of PSE's SEC filings) if PSE boosts their natural gas business to supply electricity, it's a win-win for PSE. **Customers and the environment lose.**

I implore the WUTC to engage in meaningful discussions with PSE so that customers and the environment WIN. Before spending customer's money, I ask the WUTC to intervene and have PSE take a good hard look at whether or not to build anything at all. **The Northwest Power and Conservation Council's *7th Power Plan*** demonstrates that in 90% of the Council's scenarios, energy efficiency met all new energy demand in the region through 2030**. Commissioners, please require PSE to update THIS IRP with adequate Transmission Planning data and analyses.**

Sincerely,

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