




How Does PSE Compare to Public Power?



Randal Samstag, P.E.
Friends of Island Power
Bainbridge Climate And Energy Forum




Friends of Island Power
<http://www.island-power.org/>



Bainbridge Climate and Energy Forum
<http://www.bainbridgeislandforum.org/>

Edward Teller warned of global warming in a speech to the American Petroleum Institute in 1959.




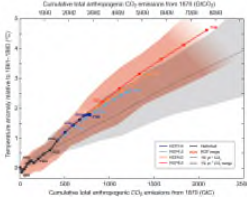
“Carbon dioxide has a strange property. It transmits visible light but it absorbs the infrared radiation which is emitted from the earth. Its presence in the atmosphere causes a greenhouse effect [....] It has been calculated that a temperature rise corresponding to a 10 per cent increase in carbon dioxide will be sufficient to melt the icecap and submerge New York. All the coastal cities would be covered, and since a considerable percentage of the human race lives in coastal regions, I think that this chemical contamination is more serious than most people tend to believe.”

2

<https://www.theregister.com/2018/01/01/edward-teller-warned-the-oil-industry-about-global-warming/>

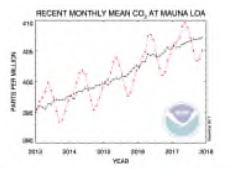
Burning fossil fuels causes sea level and temperature rise (and ocean acidification and other bad things).





Temperature anomaly (relative to 1979-1999) in °C

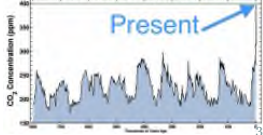
Contributor total anthropogenic CO₂ emissions from 1870 (GtCO₂)



RECENT MONTHLY MEAN CO₂ AT MAUNA LOA

PPHM (PPM) MILLION

YEAR




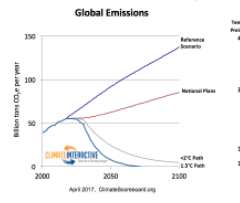
CO₂ Concentration (ppm)

Present

Sources: <http://www.climatecentral.org/news/the-last-time-co2-was-this-high-humans-didnt-exist-15938/>; IPCC Reports

Where are we headed if we don't stop?





Global Emissions

Billions tons CO₂e per year

April 2017, ClimateInteractive.org

2100 Values	
Temp. Increase Over	Atmospheric CO ₂
Reference Scenario	850 ppm
National Plans	665 ppm
4.0°C Path (RCP4.0)	455 ppm
2.0°C Path (RCP2.0)	420 ppm
1.5°C Path (RCP1.5)	410 ppm


- **National Plans** – 3.3°C (6.0°F) – No change after national contribution pledge period.
- **<2.0°C Path** – 1.8°C (3.3°F) – All countries peak by 2030 and then reduce steadily, with rates in the post-2030 period faster in the developed countries (5%/yr) than in the developing countries (3.5%/yr).
- **1.5°C Path** – 1.5°C (2.8°F) – All developed countries peak by 2025 and then reduce steadily at 10%/yr; all developing countries peak no later than 2030 and then reduce steadily at 8%/yr.

4

Source: <https://www.climateinteractive.org/programs/scoreboard/scoreboard-science-and-data/>

Puget Sound Energy

- Ownership includes Macquarie Capital of Sydney, AU and Canadian Pension Funds
- Rates and Bills: 25% above state average
- PSE CEO is Chairperson of American Gas Assoc.
- 1.2 million customers in 8 counties
- Largest carbon polluter of all utilities in Washington



5

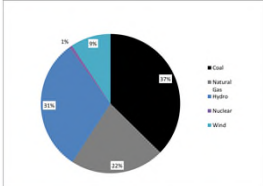
Public Power Utilities

- 62 Public Power Utilities In Washington State
- Public Ownership and Management
- Public Utility Districts, Municipal Utilities, Coops
- 60 Percent of Washington Load
- Rates and Bills: 25% less state average
- Average 15 times less carbon pollution than PSE

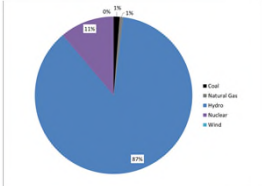
6

Electricity Production Fuel Mix

PSE (59 % Fossil Fuel)



Jefferson County PUD (2.5 % Fossil Fuel)

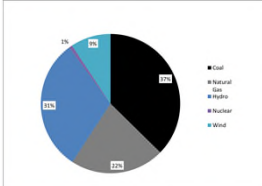


7

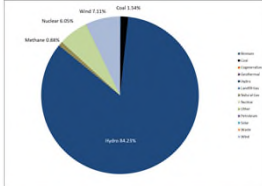
Source: <http://www.commerce.wa.gov/wp-content/uploads/2016/09/Energy-FMD-2016-final.pdf>

Electricity Production Fuel Mix

PSE (59 % Fossil Fuel)

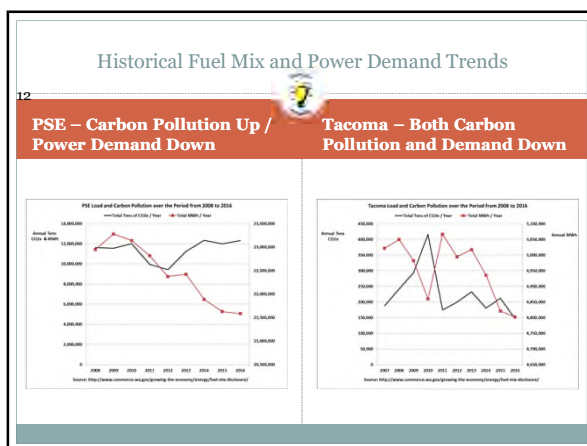
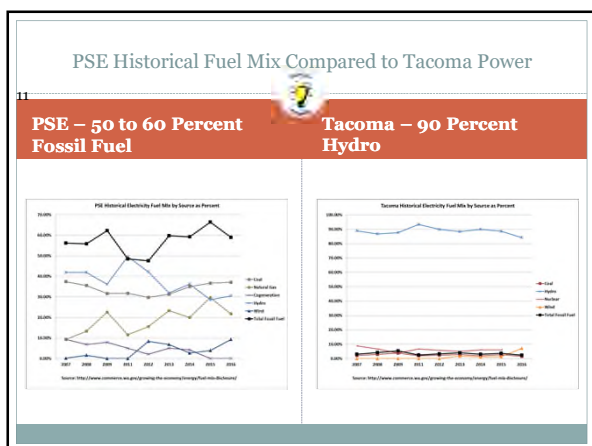
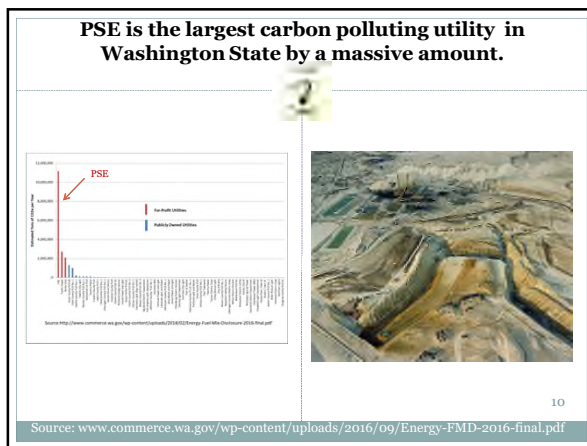
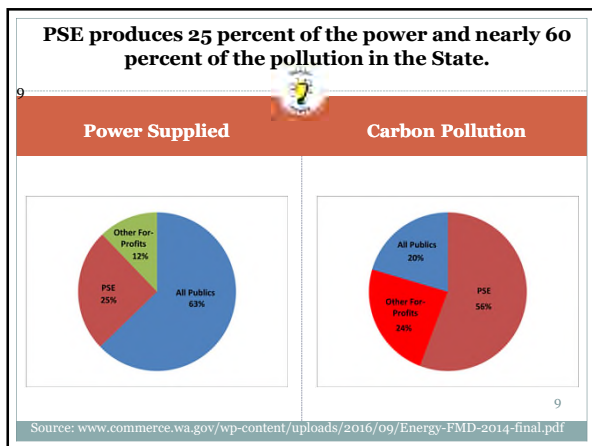


Tacoma Power (2.5 % Fossil Fuel)

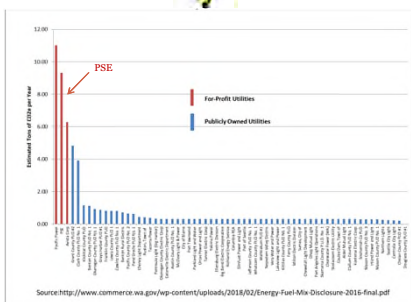


8

Source: <http://www.commerce.wa.gov/wp-content/uploads/2016/09/Energy-FMD-2016-final.pdf>



PSE produced 15 times more carbon pollution on a per-customer basis than BPA public power utilities in 2016.



13

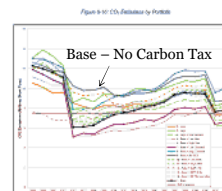
Source: www.commerce.wa.gov/wp-content/uploads/2016/09/Energy-FMD-2014-final.pdf

PSE's 2017 Integrated Resource Plan says PSE will produce 10-12 million tons per year of carbon pollution through 2035.

14

The Hype

The Reality



14

Source: https://pse.com/aboutpse/EnergySupply/Documents/8a_2017_PSE_IRP_Chapter_book_compressed_110717.pdf

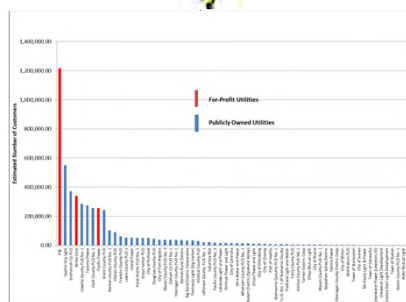
PSE is an investor-owned (for-profit) utility.

- Regulated monopoly by the Washington Utilities and Trade Commission
- Allowed 9.8 percent return on investment (assets)



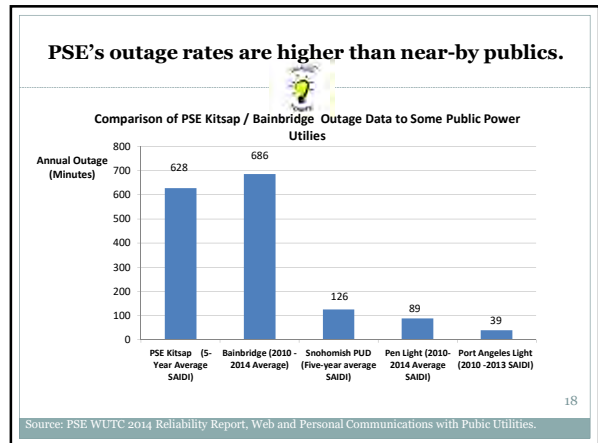
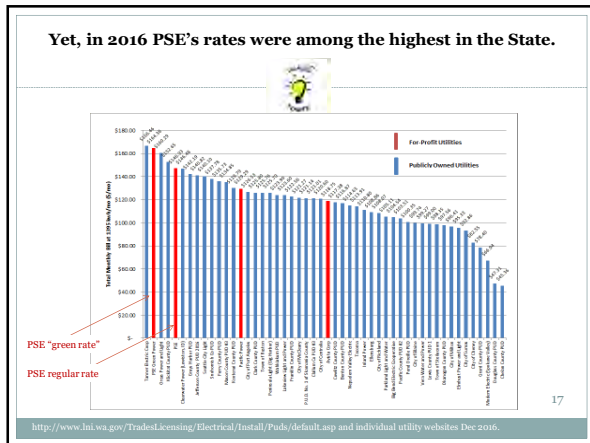
15

PSE has the largest number of customers of any utility in the State of Washington.



16

Source: www.commerce.wa.gov/wp-content/uploads/2016/09/Energy-FMD-2014-final.pdf



Conclusions

- We **have to stop** carbon pollution from burning fossil fuels.
- PSE is the **largest carbon polluting utility** in the State of Washington.
- PSE is planning to continue to pollute **beyond 2035**.
- PSE rate structures are among **highest** in Washington in spite of “economies of scale.”
- PSE's Kitsap County and Bainbridge reliability is **five to fifteen times worse** than comparable regional public utilities.
- Public power utilities have a much **better record** than PSE on **carbon impact, rates & reliability**.

19