

STRAIGHT TALK FROM KPUD

Part 3 of a series by Jim Smith and Rodger Nichols

Why replacing power sources is difficult

Washington's Clean Energy Transformation Act considers any wholesale electric purchase on the open market to be coal, from a cost of carbon perspective. That's even if the utility can demonstrate that it comes from a renewable resource.

CETA is one of the strictest energy acts in the nation, requiring all electric utilities in the state to eliminate power purchased from coal-fired generation by 2025.

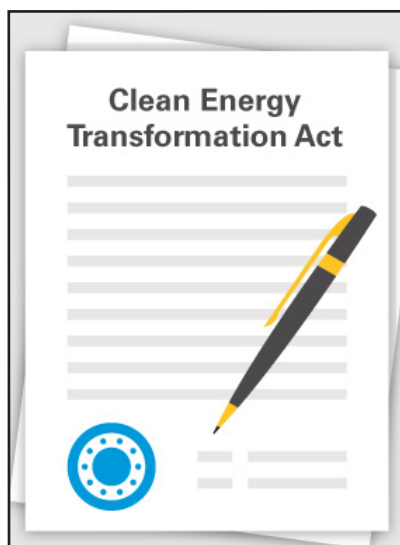
It also requires all power purchased to be greenhouse gas neutral by 2030. Electric utilities are expected to fully transition to carbon-free resources by 2045.

CETA also requires utilities to track and reduce low-income energy burdens, which will transfer those costs to those who do not qualify as low-income.

CETA requires that baseload coal generation be removed from the system and prohibits new natural gas electric generation. This presents a problem, as currently the only other generation options are new hydro, wind or solar generation.

Wind and solar power

are intermittent resources and need storage to back them up. This is a larger problem than we are reading about in the mainstream media. Most people appear to believe that if you add 1 megawatt (MW) of solar and a



small amount of battery storage, you can supply load 24/7

That is not true. We actually need significantly more solar power and battery sources than this.

For example, in the east side of Washington state, on average, solar panels typically only produce 20% of their max production capacity. This is because there are days, if not weeks, when solar will not produce due to clouds, rain or snow. The same is true for wind turbines. During those times, it would take hundreds of MWhs of storage and hundreds of MWs of solar to charge the bat-

teries just to have 1 MW of solar generation for use when it is needed 24/7.

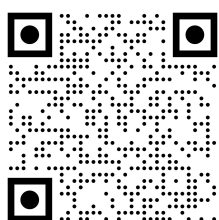
The costs and the land-use implications of this are staggering. Until a carbon-free option that delivers power 24/7 becomes available, or until natural gas peaking facilities are built to provide base-load power during these times, our electric rates will continue to rise.

There is no chance of adding more clean hydropower on the Columbia River, and if proposals to remove the four dams on the lower Snake River go through, the situation will be even more difficult.

According to BPA, those dams can provide 3,000 MW of peak power—11% of the BPA total system—at a cost of less than half of BPA's lowest preference power rate.

All of this combines to create a situation where electricity prices—during times of peak demand—are extremely expensive and volatile. These costs will flow through directly to PUD customers if they're not managed or mitigated, and we are not sure that we can mitigate these cost increases.

Next: our 5-part plan to deal with the situation



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The QR code will take you to more information online or book a PUD expert to talk to your group at 509-493-2255.



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