



Satpal Singh Sidhu
Whatcom County Executive

UE-210795



February, 24, 2022

Amanda Maxwell
Executive Director and Secretary
Washington Utilities and Transportation Commission
621 Woodland Square Loop SE
Lacey, WA 98503

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COMMISSION

Re: Comments on Puget Sound Energy's 2021 Clean Energy Implementation Plan (Docket UE-210795)

Dear Ms. Maxwell:

My name is Satpal Sidhu and I am the County Executive of Whatcom County. I asked the Whatcom County Climate Impact Advisory Committee to review PSE's Clean Energy Implementation Plan. Whatcom County and most other local cities rely entirely on PSE as an electrical supplier, as do the vast majority of our county's businesses and residences. Therefore, our interest in the success of PSE's CEIP should be evident to the UTC because currently about two-thirds of PSE's electricity is generated using fossil fuels. Clean electricity and a modern, smart grid are central to reducing our emissions 50% by 2030 in industrial processes, transportation, and buildings. Fast action and impact are needed.

Recent November flooding in Whatcom County and last June's heat dome event should be a wake-up call for addressing the climate crisis at every level of government. Whatcom County alone lost about 30% of the raspberry crop and the additional economic damage from the recent November flooding is estimated at \$100 million. These events underscore the current and future threats that will only intensify with climate change. Since a clean, modern grid is fundamentally important to decarbonizing the economy, the UTC's role in enforcing Washington's Clean Energy Transformation Act is critical and compels us to comment on PSE's recent Clean Energy Implementation Plan (CEIP).

We would like to point out issues that should be addressed in the CEIP:

This CEIP should include climate change in its projections because climate change is the driving force requiring rapid change to our energy system. We would like UTC to encourage PSE to include the climate change impacts in their projections and planning process for renewable energy over next two decades. For over a decade consumer advocates have asked PSE to use temperature data sets that reflect climate impacts. PSE's models rely on temperature data going back 80 years, which minimize the accelerated changes in the last 30 years from climate change. Our region's winter lows and summer highs have gotten significantly warmer. PSE must plan its generation, transmission, and distribution facilities on likely future climate conditions rather than on the past in order to build a modern, smart electric grid.



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The Northwest Power and Conservation Council has modeled future energy demand and supply using temperature data that accounts for climate change. By incorporating climate change, the Council concluded “*Never in the 40-year history of the Council have we **foreseen such dramatic changes in the future power supply...***” Not only did the Council develop a climate-adjusted baseline for both loads and resources, but they also included the social cost of carbon in the baseline analysis. The Council’s draft plan calls for at least 3500 MW of new renewables by 2027 for their four-state region.

We acknowledge that PSE in the last two months started to incorporate the Northwest Power and Conservation Council models in their load forecasting for their next IRP due in late 2023, but this new information is not reflected in the current CEIP. The results show a significant difference in the amount of annual degree days for heating and cooling from the estimates that were used in the current CEIP. We commend PSE for updating their modeling, but their results just reinforce the need to incorporate climate change in their CEIP.

This CEIP does not address the urgency of the climate crisis and needs to move more rapidly to reduce demand and convert to clean energy.

In PSE’s 2021 Integrated Resource Plan they call for a new thermal generation plant operational by 2026. Faster acquisition of renewable resources and deployment of all cost-effective demand side resources would be a much better approach than investing hundreds of millions of dollars in a new thermal generation plant, which will only operate about 20 years (e.g., till 2045) under CETA. In addition, gas prices are volatile and have been rising lately. Renewable energy is cheaper and less vulnerable to price swings than fossil gas.

In response to community demand, PSE is planning a community solar project in Bellingham that will add about 400 kW. If we extend the Department of Energy goals for US community solar needs¹ to Whatcom County, strictly on a per capita basis, the county needs to set a target of adding several times² this amount of community solar **each year** over the next four years in order to meet state-wide goals on emissions reduction and social equity. Wind and solar energy costs are competitive with or lower than fossil-based electricity. Given the limitations on new facility siting for large solar and wind farms and transmission, it is not clear how much additional utility-scale renewables can be imported to Whatcom County. Local community solar provides greater resilience to extreme weather events, creates jobs, and can greatly improve equity.

Many states are aggressively incentivizing energy storage instead of building additional fossil fuel peaking facilities. Batteries are especially flexible for energy storage when their charging and discharging are managed properly. For example, to address both winter and summer peak

¹ DOE Announces New Initiatives and Growing Support to Rapidly Increase Community Solar Deployment: <https://www.energy.gov/eere/articles/doe-announces-new-initiatives-and-growing-support-rapidly-increase-community-solar>.

² The DOE’s National Community Solar Partnership plans to add over 17 GW of community solar in the US by 2025 (next 4 years) to the existing 3 GW of community solar. This initiative’s focus is on local community solar, electricity reliability and climate resilience, so may be the most appropriate comparison. **On a per capita basis, this would require seven to eight times more local solar be installed each year (2022 – 2025) than the 400 kW Whatcom Falls installation.**



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demands, Massachusetts has instituted battery storage incentives for grid reliability and resilience.³ Solar PV plus batteries enable energy storage for afternoon and evening peak demand, plus backup during outages. Solar PV production is especially high in the late spring through early fall with long daylight hours in the northwest. A significant build-up of local solar plus batteries in western Washington will lessen transmission losses/costs of power coming from eastern Washington and out of state, increase resilience during outages, create good local jobs, and enable community solar for underserved populations. Managing peak demand will be critical as summer temperatures increase and the hydroelectric system is under ever increasing stress due to lower river flows and fish survival needs.

A more aggressive acceleration of renewable energy paired with storage and demand response would avoid the need to build additional fossil fuel generating capacity. Other northwest private utilities are ramping up their use of storage to meet peak demand. Portland General Electric announced plans in 2020 to offer 500 customers a discounted price for a battery energy storage system. In exchange, PGE would have the option to use a portion of this stored electricity during peak demand. In essence PGE is creating a distributed battery-based *virtual power plant*.

The CEIP should be more innovative in addressing today's energy needs. Instead, PSE has chosen to “study” demand response and time of use rates. These are not new topics that need to be studied and are already incorporated by many utilities in the US.⁴ In fact, PSE was involved in the water heater demand response trial project conducted by the Bonneville Power Administration in 2015.⁵ PSE is *considering* time of use rates for EV charging in off-peak hours.

An example of this lack of innovation is PSE's very visible campaign to promote Electric Vehicles (EVs), even providing an EV buying guide on their website. Conversion to EVs is a very important step to reduce greenhouse gas emissions, but this conversion does require growth in clean energy.⁶ Major automotive companies are committing to bi-directional EV charging/discharging for cars, trucks and buses so that millions of big vehicle batteries can also provide energy resilience to homes and businesses when the grid is down.

In some countries car batteries are used for decentralized grid support, Volkswagen sees bidirectional charging as a way for its vehicles to *be used in the energy market as flexible, mobile energy storage units*.⁷ For an example of innovation, PSE could leverage the emerging

³ <https://www.mass.gov/guides/massachusetts-energy-rebates-incentives>

⁴ The US Dept. of Energy website has a listing of utilities by state that currently have programs in demand response and TOU rates: <https://www.energy.gov/eere/femp/demand-response-and-time-variable-pricing-programs-western-states>

⁵ BPATechnologyInnovationProject336,CTA-2045WaterHeaterDemonstrationReport,November9,2018,pg.iii.
<https://www.bpa.gov/EE/Technology/demand-response/Pages/CTA2045-DataShare.aspx>

⁶ The PSE EV campaign promotes the necessity of the EV conversion by comparing gas and electric vehicle emissions against the Washington electric power mix (80% clean electricity). **The fact that only a third of PSE's electricity is generated from clean non-emitting sources makes it even more imperative that PSE speed their transition to renewables.** January 14, 2022 email to customers from PSE Up & Go Electric, titled “Tell us what you're excited about EVs in 2022.”

⁷ Volkswagen website: <https://www.volkswagen-newsroom.com/en/press-releases/convenient-networked-and-sustainable-new-solutions-for-charging-electric-volkswagen-models-7695>



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trend of individual ownership of batteries, whether stationary in the case of the Portland General Electric home battery program, or mobile as in EVs like the Ford F-150 Lightning, for energy resilience during disruptions of the grid.

In summary, we believe this CEIP needs to project current temperature trends forward in time with urgency to address climate change in Whatcom County. This initial 4-year CEIP can be significantly improved with greater emphasis in energy efficiency, demand response, and accelerated development of renewable energy and storage. Unless we act quickly and decisively today to curb GHG emissions, climate impacts will get much, much worse for our children and grandchildren.

Thank you for the opportunity to comment,

A handwritten signature in blue ink that reads 'Satpal Sidhu'. The signature is fluid and cursive, written over a large, faint, yellowish watermark of a fish that spans the width of the page.

Satpal Sidhu, Whatcom County Executive