

PSE's Transformation to Cleaner Energy

Association of Washington Cities
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We're making progress towards these goals

- Since 2019, we've procured more than **3,800 MW** of **renewable energy resources**.
- We're **aggressively pursuing** renewable energy resources, from large generation projects to energy produced locally in our neighborhoods and communities.
- We issued a request for proposals in July 2024 to supply up to **2.3 million annual megawatt hours of non-emitting resources**—the largest RFP in the company's history



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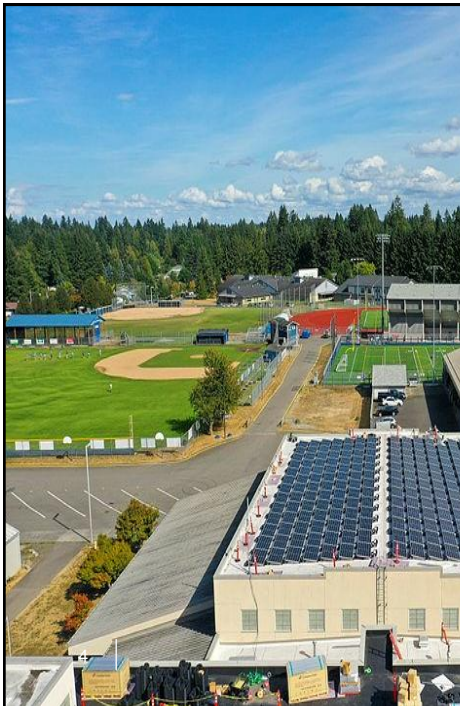


The path to a cleaner energy future is complex and not without challenges

- The **scale and pace** at which we need to acquire new, cleaner energy resources is **unprecedented**.
- The **demand** for electricity is expected to **increase significantly**
- **Cleaner energy technologies** that can replace reliable and dispatchable generation currently provided by coal and natural gas are **not commercially available** yet.
- Commercially available **renewable resources**, such as wind and solar, are **intermittent** in nature and lead to more volatile and **unpredictable power markets** and **reliability challenges**.
- The **electric grid** needs to be **expanded and modernized** to support the transition to cleaner energy.
- We have to balance this accelerated transformation with the need for **affordability and equity**.



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Distributed energy resources (DERs)

- Customer adoption of **DERs** (rooftop solar panels, batteries, EVs and other smart appliances) is **growing rapidly**.
- DERs promote **two-way flows of energy** and offer opportunities for utilities and customers to **work together** and innovate to meet rising demand.
- PSE envisions its role in this new landscape as a **“conductor”** within the energy ecosystem, empowering customer choice and flexibility, enhancing controls and automation, and optimizing interactions to achieve our clean energy targets.

(Left) Community Solar sites like these will play an important role along with utility-scale energy resources.



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PSE's Frederickson generating station is an example of a dispatchable energy resource



PSE's Wild Horse wind facility is an example of an intermittent/variable energy resource

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There's a need for on-demand, clean energy resources to replace carbon emitting resources

- After 2025, our resource portfolio will no longer include nearly 750 MW of traditional coal-fired **baseload generation**.
- We need to replace this energy that acts as an **on-demand, easily dispatched** resource, serving customers when the sun isn't shining or the wind isn't blowing.
- **Emerging technologies** that could fill this gap will likely not be **commercially available** for some time.
- In the near term, the large amounts of **variable resources**, including wind and solar, being added to the system poses a **reliability risk** and **hybrid thermal peaking resources** may be needed to **bridge the gap**.



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We're pursuing an "all of the above" strategy to address this critical reliability gap

- We're supporting **early project development** activities for an advanced **small modular nuclear** reactor facility.
- We're adding **utility-scale battery storage** solutions to our portfolio and exploring newer technologies for longer duration energy storage.
- We're playing an active role in the **Pacific Northwest Hydrogen Hub**



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We need to expand and modernize the electric grid to support the transition to clean energy

- The vast majority of **renewable energy resources** in the state are located **east of the Cascade mountains**.
- To bring this energy to PSE's service area, we need to **expand and modernize** the existing **transmission and distribution infrastructure**.
- We **continually invest in our system** to maintain customer and public safety, meet customer growth and service needs, and modernize and automate the grid.

