What resources could power our clean energy future?

Public webinar

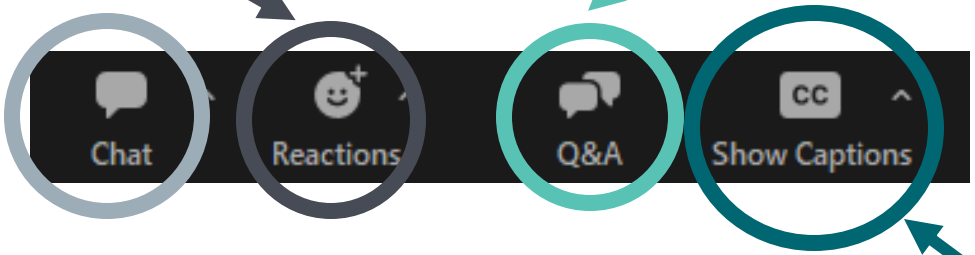
July 17 and 22, 2025

PUGET SOUND ENERGY

Welcome to the webinar!

Use the **Reactions** feature to respond to content with emojis

Use the **Q&A** tool to ask written questions throughout the webinar



Click **Chat** to view messages from the host and chat with participants

Click **Show Captions** to see real-time closed captioning in multiple languages

Facilitator requests

- Allow the facilitator to guide the group process
- Engage with other participants in a constructive and courteous manner
- Use the Q&A feature to share your questions during the webinar
- Keep your questions focused on the webinar topic to ensure relevance
- PSE will do their best to address as many questions as they can
- If PSE does not get to your question today, please look for a response in a follow-up feedback report which will be emailed to you
- For additional input you are welcome to use the feedback form or email us at isp@pse.com

Safety moment

- Prepare for peak wildfire season!
  - Create a household emergency plan and build an emergency kit
  - Make sure your PSE account contact information is up to date
  - If you use a medical device in your home that relies on electricity, apply for Life Support status on your account
  - Get your free Wildfire Ready Plan from the WA Department of Natural Resources

Today's team

- Annie Kilburg Smith, Facilitator, Triangle Associates
- Brian Tyson, Manager, Clean Energy Planning and Implementation, PSE
- Ray Outlaw, Manager, Communications Initiatives, PSE

Agenda July 17, 2025

Time	Topics	Speaker(s)
5:30 p.m.	Welcome and introductions	Annie Kilburg Smith, Triangle Associates
5:35 p.m.	Refresher: How did we get here?	PSE
5:40 p.m.	Today's energy generation	PSE
5:50 p.m.	Addressing future energy needs	PSE
6:05 p.m.	Developing an integrated system plan	PSE
6:25 p.m.	Final questions and wrap-up	Annie Kilburg Smith, Triangle Associates

Agenda July 22, 2025

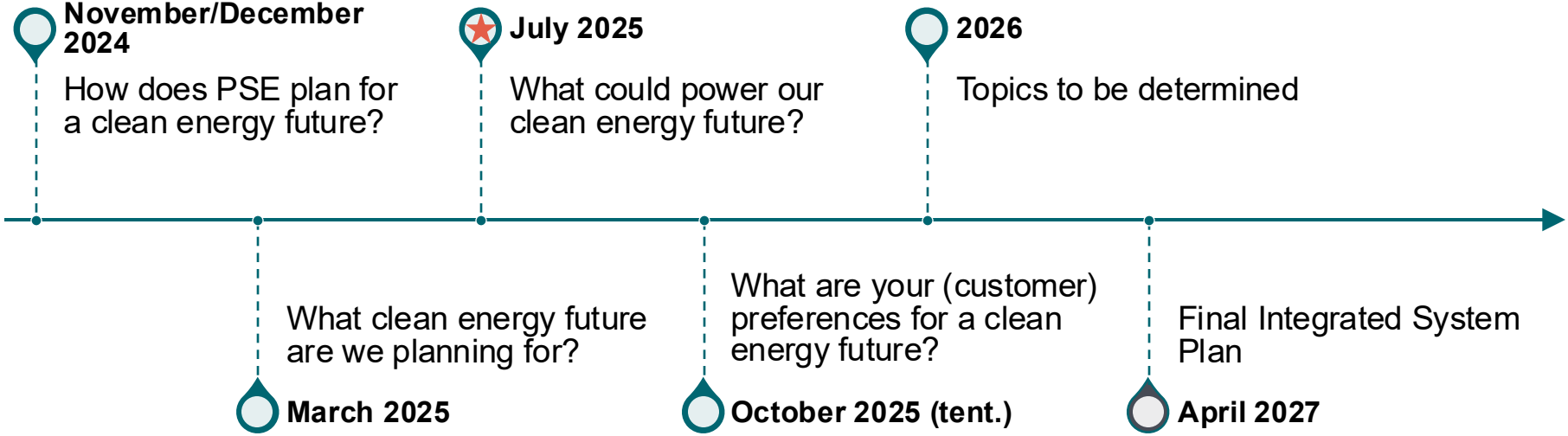
Time	Topics	Speaker(s)
12:00 p.m.	Welcome and introductions	Annie Kilburg Smith, Triangle Associates
12:05 p.m.	Refresher: How did we get here?	PSE
12:10 p.m.	Today's energy generation	PSE
12:20 p.m.	Addressing future energy needs	PSE
12:35 p.m.	Developing an integrated system plan	PSE
12:55 p.m.	Final questions and wrap-up	Annie Kilburg Smith, Triangle Associates

Refresher: How did we get here?

July 2025

PUGET SOUND ENERGY

Evolving engagement timeline



Today’s energy generation

July 2025

PSE PUGET SOUND ENERGY

What are energy generation resources?

Baseload

Provides reliable, always available energy generation

Examples: Hydroelectric (some), nuclear, and fossil fuels like coal and natural gas

Peaking resources

Provides energy generation when energy use is high (e.g., hot summer afternoon)

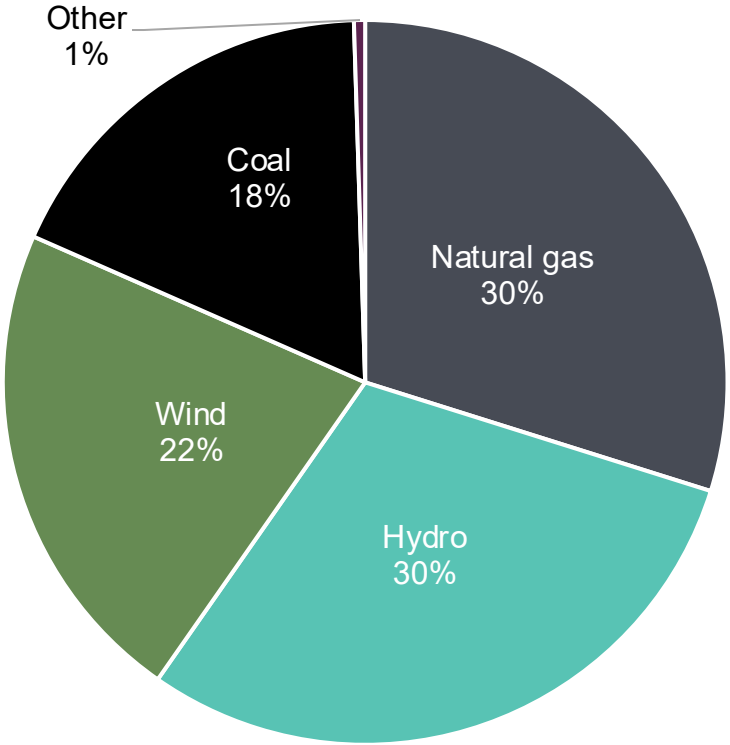
Example: natural gas, battery energy storage

Intermittent resources

Provides energy under certain conditions; must be complimented by baseload and peaking resources

Examples: wind, solar, hydroelectric (some)

What do we use for energy generation?



Source: https://www.pse.com/en/pages/energy-supply/electric-supply

Questions?

July 2025

PUGET SOUND ENERGY

Addressing future energy needs

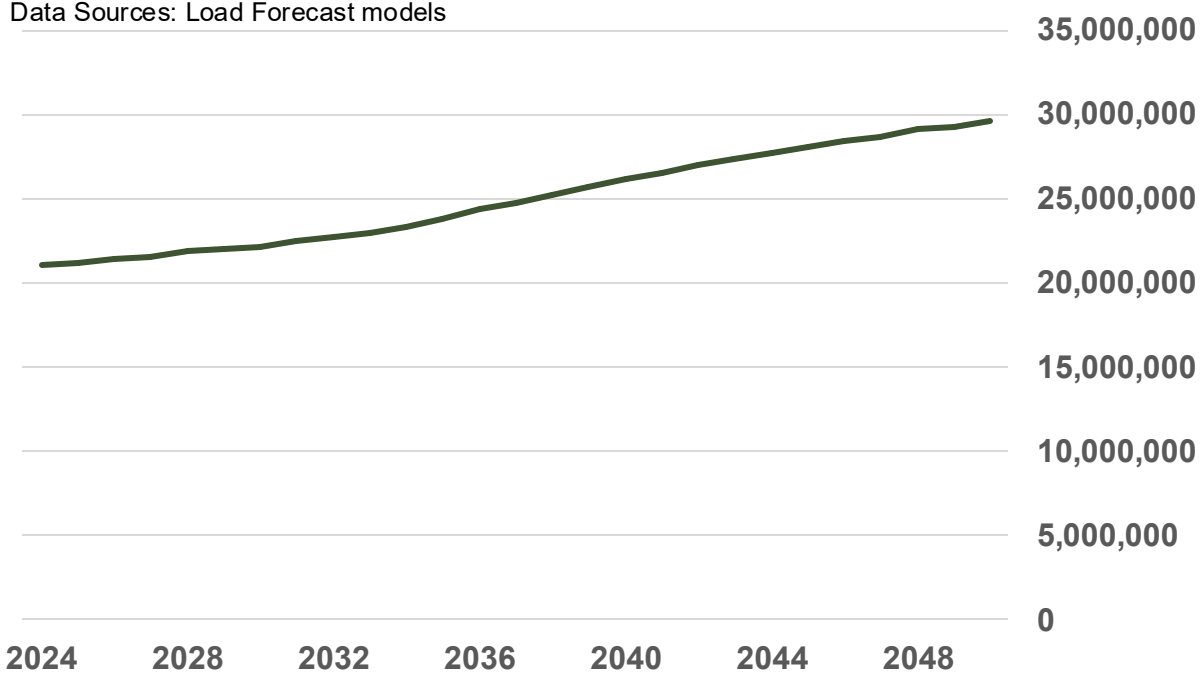
July 2025

PSE PUGET SOUND ENERGY

Remember, electric loads are increasing significantly

System Level Electric: Forecast of Delivered Load

Units: MWh
Data Sources: Load Forecast models



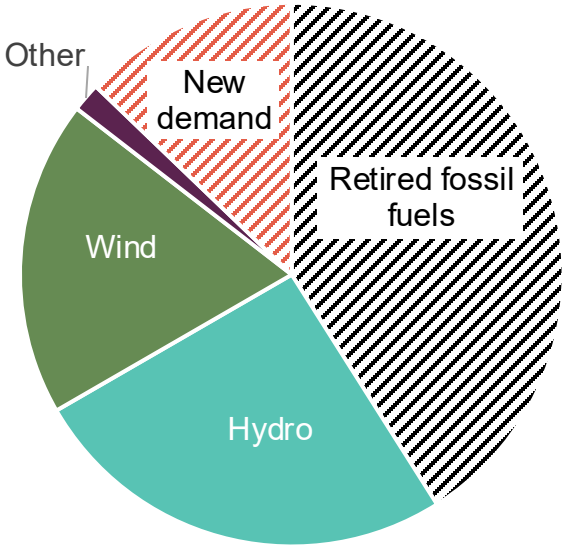
What's driving the increase?

- Population growth
- Electric vehicles
- Demand for commercial / residential cooling

Note: Electric demand forecast developed in 2024

What will our resource mix look like in 2045?

- Coal retired by the end of 2025
- 100% clean or nonemitting resources by 2045
- Hydroelectric is increasingly variable and declining due to climate change
- Wind and solar are variable resources meaning we can't produce the same energy all the time



Note: Figure is for illustrative purposes only.

The clean energy transition challenge

- Replace retiring resources with new clean or non-emitting resources
- Develop transmission and distribution system needed to deliver new resources and support growing demand
- Develop additional baseload and peaking resources to account for increasing demand and intermittent resources
- Integrate and expand customer programs (rooftop solar, batteries, vehicle to everything, energy efficiency, demand response)
- Support customers who choose to electrify (vehicles, homes, businesses)
- Keep costs low while reducing greenhouse gas emissions
- Address customer concerns related to costs, resource types, and resource locations

Questions?

July 2025

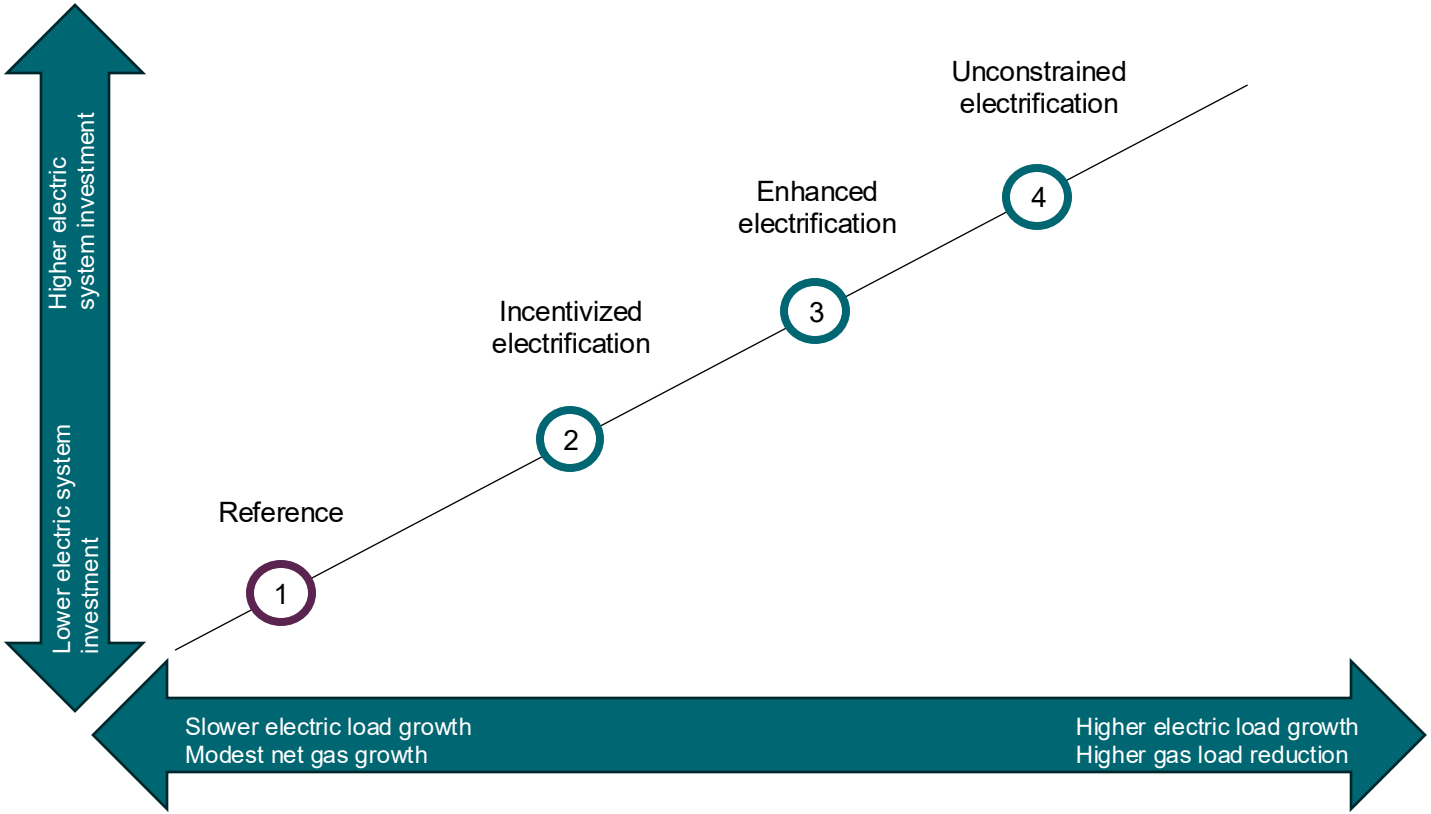
PUGET SOUND ENERGY

Developing an integrated system plan

July 2025

PUGET SOUND ENERGY

How will PSE evaluate what the future may look like?



What utility scale resources could help power the clean energy future?

Baseload

Potential resources:

- **Coal**
- **Natural gas**
- Hydroelectric (some)
- **Enhanced geothermal**
- **Advanced nuclear**

Peaking resources

Potential resources:

- **Natural gas**
- **Renewable fuel**
- Storage (short-duration)
- **Storage (medium/long-duration)**
- **Hydrogen**

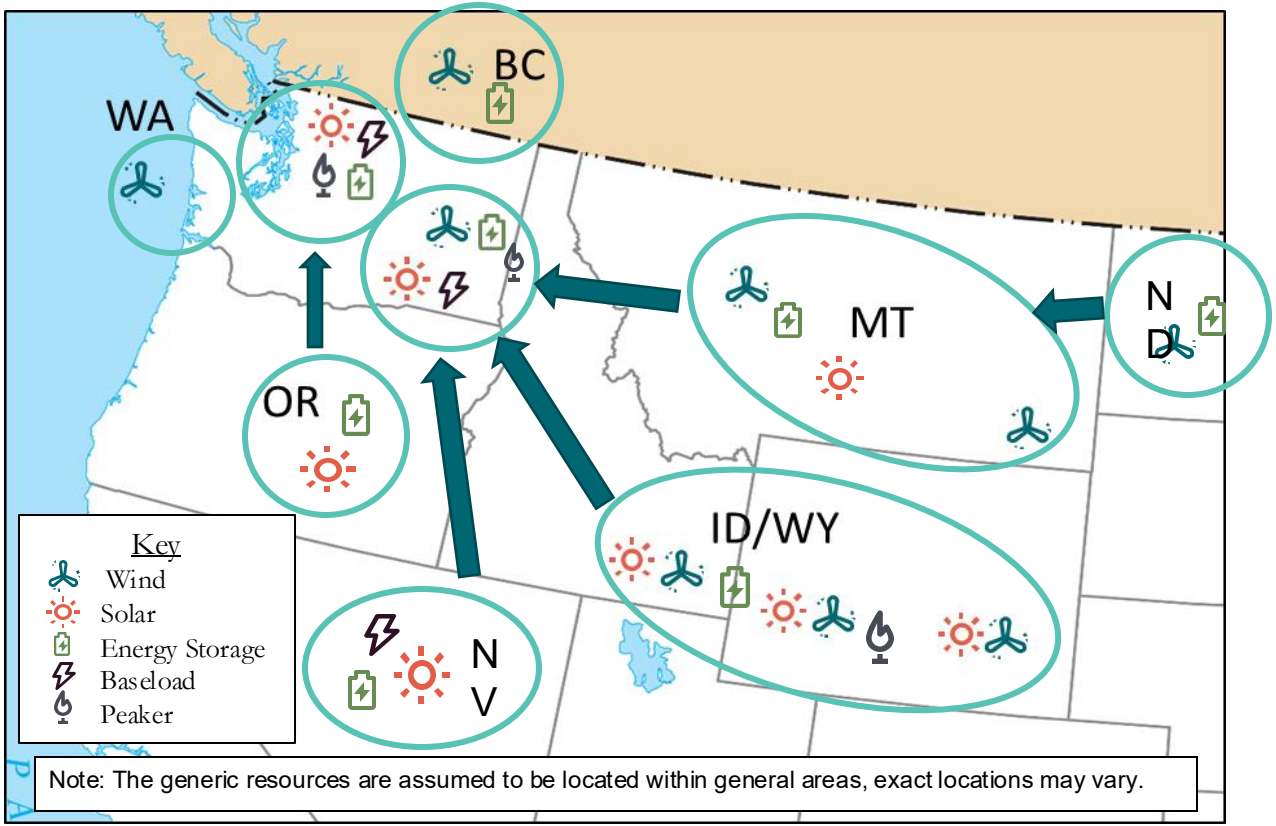
Intermittent resources

Potential resources:

- Solar
- Wind
- Hydroelectric (some)

Resource to be retired
Emerging resource
Clean fuel conversion by 2045

Where might these resources come from?



How can customers help power the clean energy future?

Energy efficiency

Demand response

Solar

Storage (battery)

Other voluntary green programs

Vehicle-to-everything*

** Emerging resource, not yet available*

How will PSE determine the right mix of utility and customer resources?

- Identify requirements for new resources
- Develop modeling scenarios based on possible futures
- Develop and finalize modeling input assumptions
- Model scenarios to identify potential resource plans
- Conduct iterative analysis of various resource plans
- Select final portfolio and develop system plan with specific actions

Questions?

July 2025

PUGET SOUND ENERGY

How can customers stay involved in the ISP process?

- Join our email list to stay informed on meeting and other engagement opportunities
- Visit the Integrated System Plan website
- Participate in future webinars or RPAG meetings
- Provide comments on key topics
- Review the draft ISP and provide feedback (2026)

Contact us

- Via email at isp@pse.com
- Via feedback form at: https://www.cleanenergyplan.pse.com/contact
- Leave us a voicemail at 425-818-2051

Thank you!

July 2025

PSE PUGET SOUND ENERGY