Customer priorities for a clean energy future

Public webinar

November 18, 2025

PUGET SOUND ENERGY

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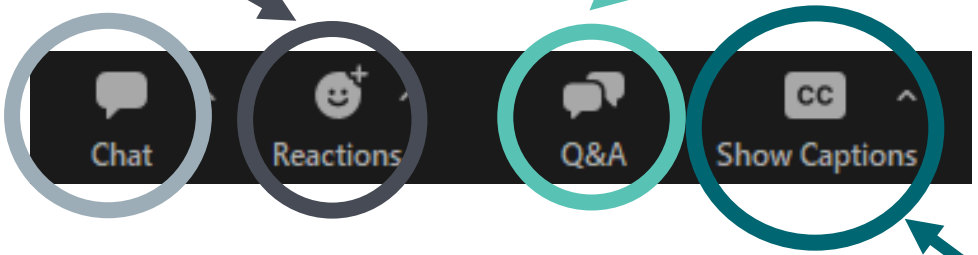

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Facilitator requests

- Allow the facilitator to guide the group process
- Engage with other participants in a constructive and courteous manner
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- 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 storm season!
  - Before:
    - Keep your emergency kit handy
    - Unplug sensitive electronic equipment such as computers
    - If you live in a flood zone, check out these flood safety tips
  - During an outage:
    - Use flashlights instead of candles
    - Keep your refrigerator and freezer doors closed except when necessary
    - Never use a gas range, indoor cooker, or grill for heating
    - Check out PSE's outage resources

Today's team

- **Annie Kilburg Smith**, Facilitator, Triangle Associates
- **Ray Outlaw**, Manager, Communications Initiatives, PSE
- **Heather Mulligan**, Manager, Customer Clean Energy Solutions, PSE
- **Tom Smith**, Supervisor, Customer Energy Management, PSE
- **Malcolm McCulloch**, Manager, New Products & Services, PSE

Agenda November 18, 2025 – 12:00 p.m.

Time	Topics	Speaker(s)
12:00 p.m.	Welcome and introductions	Annie Kilburg Smith, Triangle Associates Ray Outlaw, PSE
12:05 p.m.	Customer participation is critical to transforming to clean energy	Heather Mulligan, PSE
12:15 p.m.	Load flexibility now and in the future	Tom Smith, PSE Malcolm McCulloch, PSE
12:30 p.m.	Customer solar opportunities	Heather Mulligan, PSE
12:45 p.m.	Battery storage opportunities	Malcolm McCulloch, PSE
12:55 p.m.	Final questions and wrap-up	Annie Kilburg Smith, Triangle Associates

Agenda November 18, 2025 – 5:30 p.m.

Time	Topics	Speaker(s)
5:30 p.m.	Welcome and introductions	Annie Kilburg Smith, Triangle Associates Ray Outlaw, PSE
5:35 p.m.	Customer participation is critical to transforming to clean energy	Heather Mulligan, PSE
5:40 p.m.	Load flexibility now and in the future	Tom Smith, PSE Malcolm McCulloch, PSE
5:50 p.m.	Customer solar opportunities	Heather Mulligan, PSE
6:05 p.m.	Battery storage opportunities	Malcolm McCulloch, PSE
6:25 p.m.	Final questions and wrap-up	Annie Kilburg Smith, Triangle Associates

Refresher: How did we get here?

Ray Outlaw
Manager, Communications Initiatives, PSE

November 18, 2025

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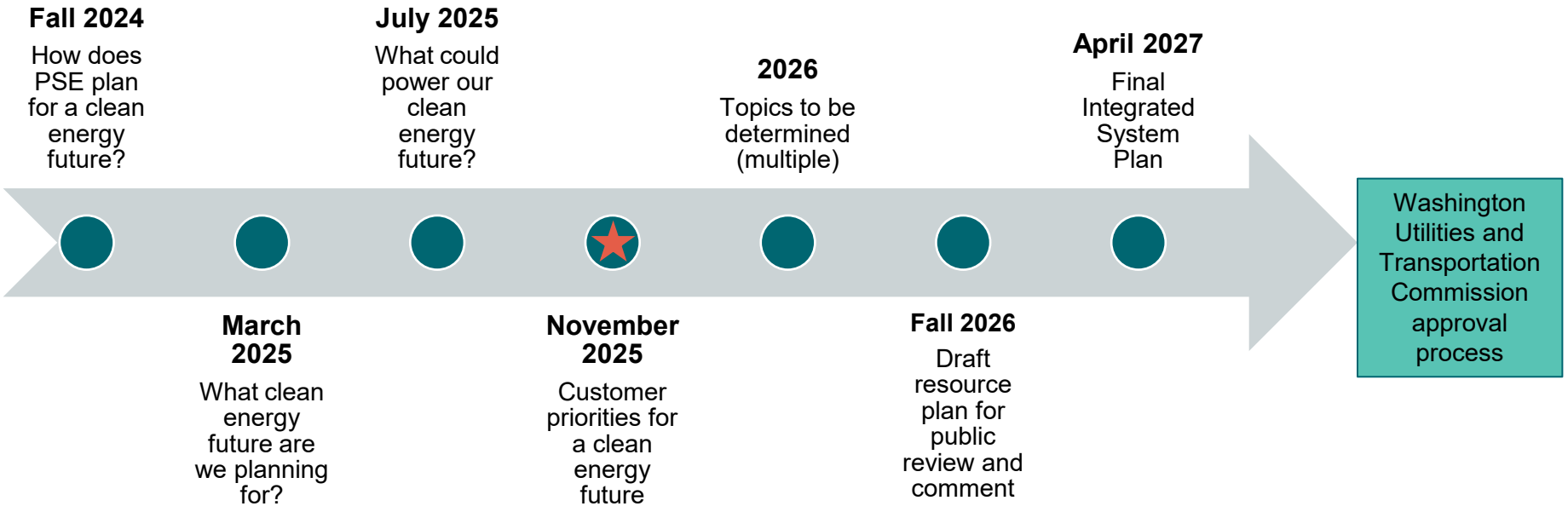
Evolving engagement timeline



Customer participation is critical to transforming to clean energy

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The road to a cleaner energy future is complex

- **Demand** for electricity is **increasing significantly**
- Customers feel uncertain about the future of **energy costs and reliability**
- **The electric grid** needs to be **expanded and modernized** to support the transition to cleaner energy
- Commercially available **renewable resources**, such as wind and solar, are **intermittent** and can lead to **reliability challenges**
  - There is significant **rooftop solar generation capacity** potential (potentially over 3 GW), but its **limited ability** to deliver power during peak times limits its contribution to PSE's portfolio

Customers will play a pivotal role in enabling the transition to cleaner energy

Flexible energy use
Demand response (DR) and building electrification

Local energy systems
Distributed energy resources (DERs) and microgrids

Electric vehicles and transit
Transportation electrification

Questions?

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Load flexibility now and in the future

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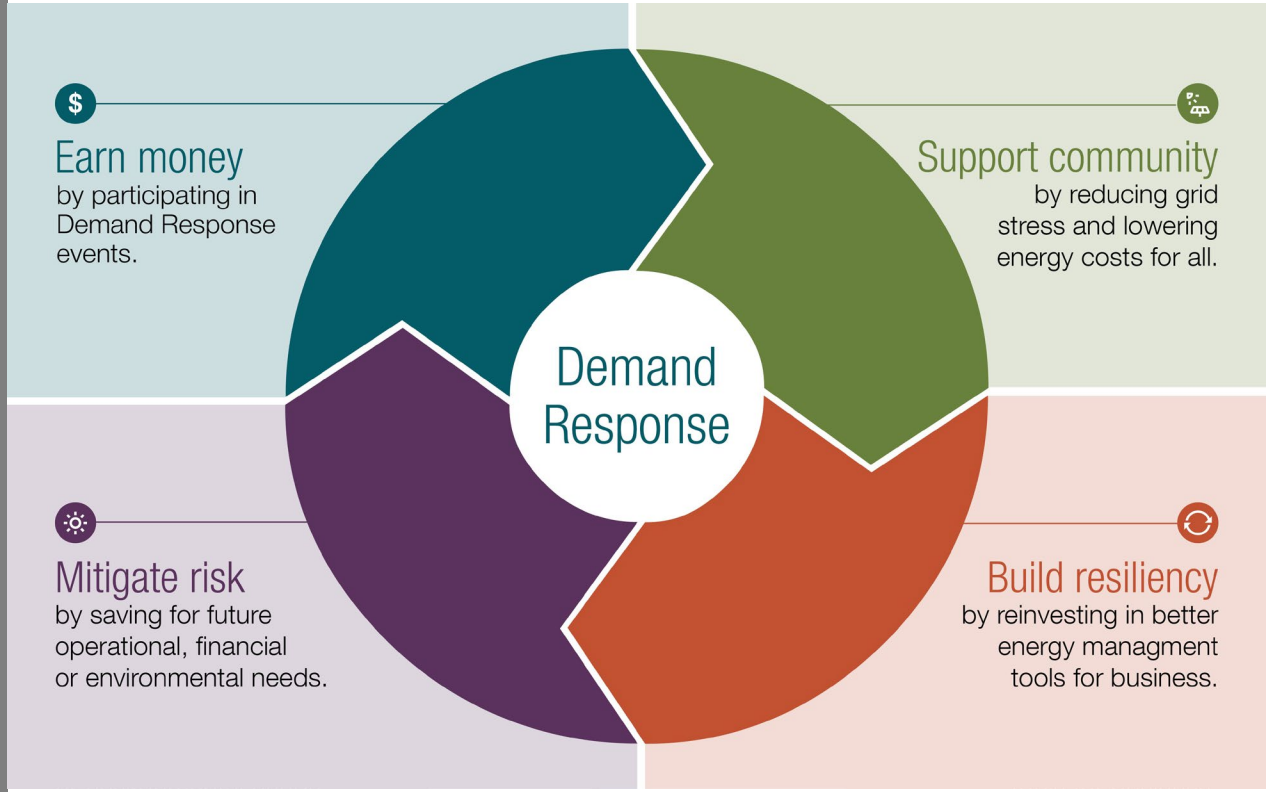
PSE PUGET SOUND ENERGY

What is PSE Flex?

PSE Flex is a demand response program to support flexible solutions to meet growing demand.



Changing how and when customers use energy to prevent spikes and ensure stable, reliable service.

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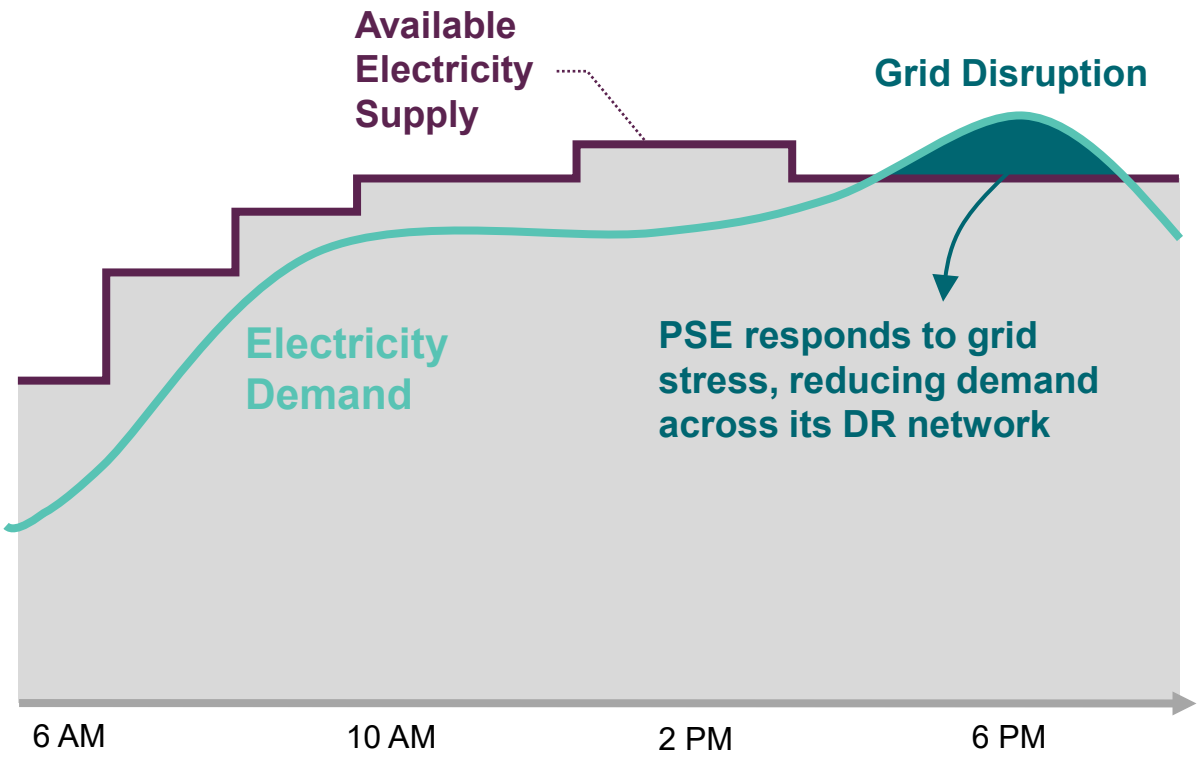
Demand response 101

Balancing supply and demand on the electricity grid is complex and costly

- Reducing usage during grid peak demand is a cost-effective alternative to building more power plants
- Grid emergencies and peak demand can be due to extreme weather, wholesale price spikes, or unexpected system issues



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What is a Flex event?

Flex events occur when energy demand is forecasted to peak, and customers are asked to voluntarily adjust their usage.

Number of events varies based on device enrolled

Summer events: May 1 to Sept. 30
Winter events: Nov. 1 to March 31

Occur between 7 a.m. to 10 p.m., 2 to 4 hours each

- PSE tries to avoid major holidays and weekends
- Notifications are typically sent the day before and method varies by which program you're enrolled in

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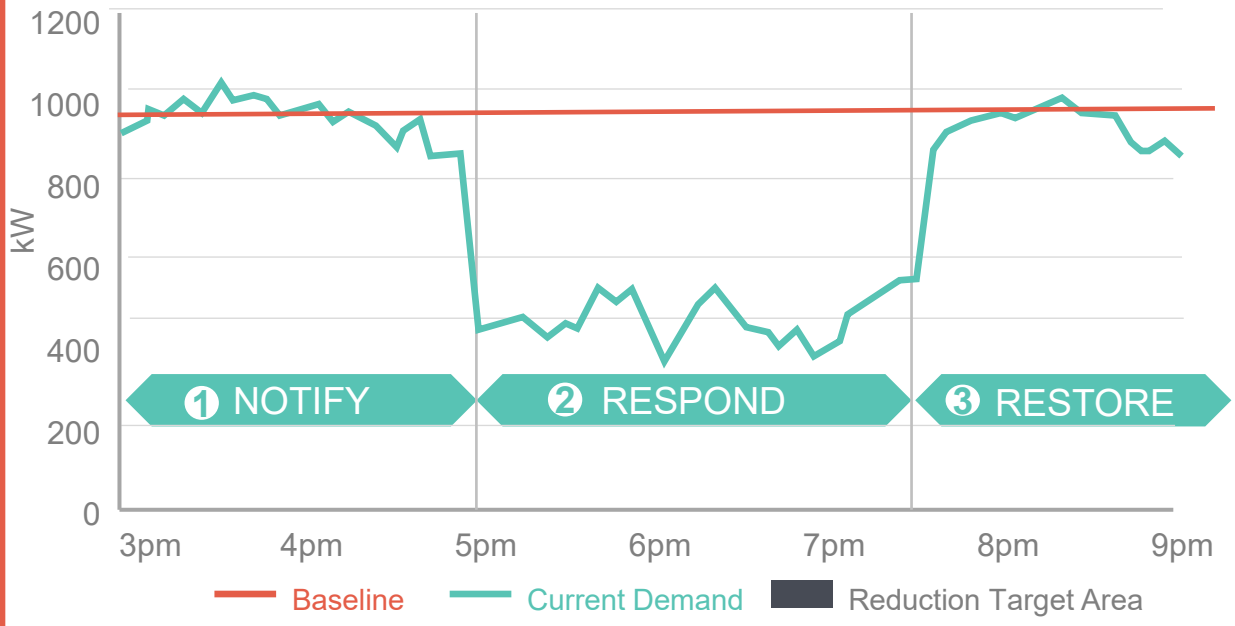
How a Flex event works

1. **Notify**
   When a dispatch is called, customers are notified through various communication methods depending on the type of program

2. **Respond**
   Customers respond by reducing load manually or automatically depending on their chosen program

3. **Restore**
   When the dispatch is over, your devices or manual reduction activity can return to normal



Example above is for a customer participating

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Which Flex programs can residential customers join?

	Flex Events	Flex Rewards	Flex Smart	Flex EV	Flex Batteries	Flex Water Heaters	ecobee Grid Resiliency
How to participate during events	Take simple energy-saving actions to conserve	Take simple energy-saving actions to conserve	Thermostat automatically adjusts its temperature setting	Electric vehicle or EV charger automatically pauses charging at home	Batteries automatically discharges to supply the home with power	Water Heaters automatically pause heating	Thermostat automatically adjusts its temperature setting
How to enroll	Customers are auto-enrolled	Link on pse.com/flexrewards	Varies by manufacturer. Link on pse.com/flexsmart	Varies by manufacturer. Link on pse.com/flexev	Varies by manufacturer. Link on pse.com/flexbatteries	Varies by manufacturer. Link on pse.com/flexwaterheaters	Link on Keep Your Home Comfortable and Community Powered | ecobee
Customer incentives	None	• $25 for enrolling • $15 each year of continued enrollment • $1 per kWh saved during Flex events	• Up to $50 per device for enrolling • Up to $20 per season, per device	• $50 for enrolling • $0.50 per kWh saved during Flex events	• $1,000 per battery for joining • Up to $500 annually for participating	• $20 for enrolling • $20 each year of continued enrollment, per device	None
How events are communicated	Email, Text, and/or Phone	Email and/or Text	In-App and/or device display	In-App and/or device display	No notifications by default	No notifications by default	In-App and/or device display

How customers enroll in demand response programs

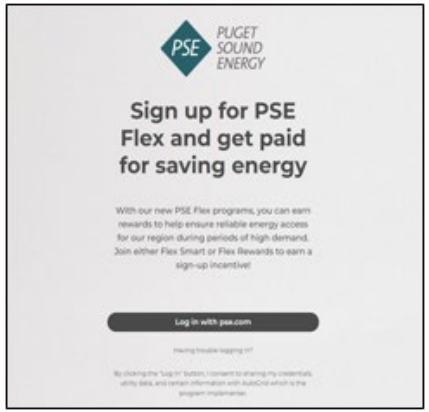
pse.com/**flexrewards**

pse.com/**flexsmart**

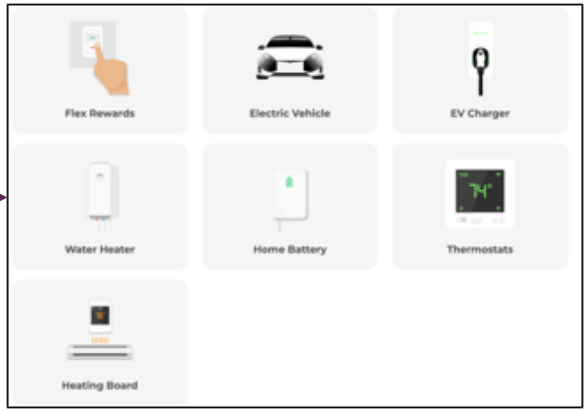
pse.com/**flexev****

pse.com/**flexbatteries**

pse.com/**flexwaterheaters**



FlexSaver
pse.autogridflexsaver.com
Or log into your MyPSE account and click the "FlexSaver" tile.



After logging into PSE's FlexSaver, follow links to OEM-specific pages

Flex events → No action needed. Customers not currently enrolled in a demand response (DR) program are automatically enrolled and notified via letter 2-weeks prior to the start of the DR season

ecobee grid resiliency → Customers can enroll directly through ecobee: Keep Your Home Comfortable and Community Powered | ecobee

***All EV brands or EV chargers other than Ford, BMW, Nissan, or Honda/Acura; see appendix for details*

Commercial and industrial demand response programs

Participating in both programs can maximize value and increase earnings

	Peak demand	Emergency	Peak demand + emergency
Program Description	**Peak shaving programs** help stabilize the grid and keep energy prices lower	**Emergency program** avoids potential blackouts or brownouts of PSE grid	• **Earn more revenue** when participating in both programs • **Reduce capacity charges** • **Maximize potential** through dual enrollment
Program Rules	• Year round, **summer & winter** • **120-minute** advance notice • **Audits** once per program season	• Year round, **summer & winter** • **60-minute** advance notice • **Audits** once per program season	More dispatch events and total dispatch hours but similar timing and rules.
Payment Potential	**MEDIUM** Payments for being on stand-by and on call when an event occurs: $50/kW (base) + $20/kW (bonus)	**MEDIUM** Payments for being on stand-by and on call when an event occurs: $50/kW (base) + $10/kW (bonus)	**HIGH** Payments for being on stand-by and on call when an event occurs for both program options: **$100/kW (base) + $30/kW (bonus)**
Expected Dispatches	**MEDIUM** 6 – 10 annually, on average	**LOW** 2 – 3 annually, on average	**HIGH** 8 – 13 dispatches expected per year by participating in both programs

Demand response by the numbers

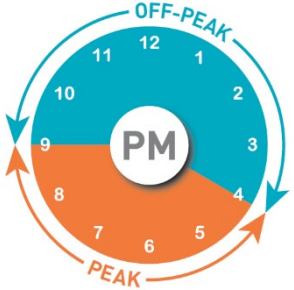
What have we accomplished together? (Residential and commercial & industrial demand response, combined)	
Total number of customers enrolled	533,195
Peak megawatt capability	107.75
Number of homes powered	~65,000
Incentives paid*	$3,869,466.00

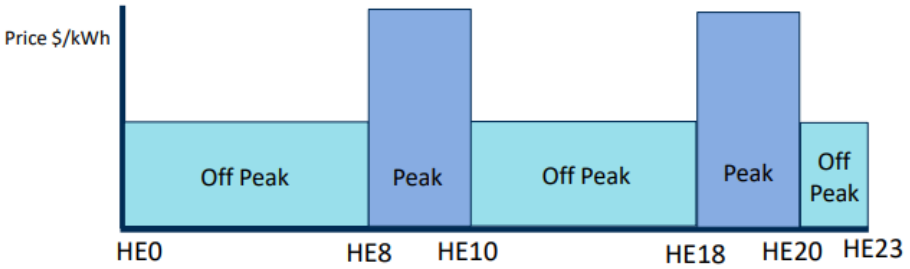
*Incentive values provided here are for incentive paid in 2025

Numbers are as of 10/01/25

Time-of-use rates

Time-of-Use Rates (TOU) encourage load flexibility using specific time durations defined as peak and off-peak periods. **Prices are higher during peak periods** to reflect the **higher cost of supplying energy**.





Customer and Electric Outcomes

- Increase customer choice by offering more rate options
- Lower system costs by influencing customer usage patterns
- Expand renewable generation integration by providing demand-side pricing tools

Personalized customer rate journeys drive ideal outcomes

CUSTOMER JOURNEY

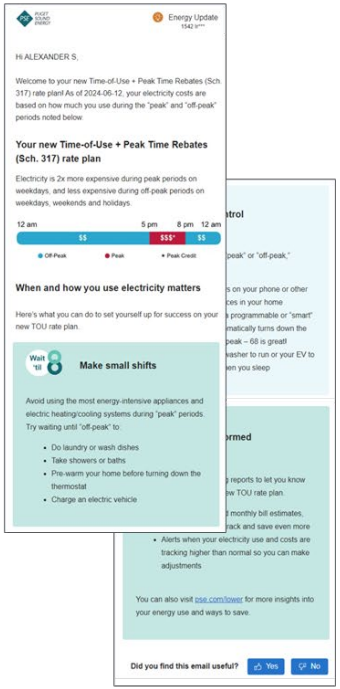
Build Awareness	Inspire Confidence	Motivate Action
Personalized Rate Education	**Rate Comparisons**	**Deepen Load Shift**
		
Rate Education Reports Print & Email Versions	**Rate Advisor Web Tool** Shadow Billing & "What-if" Analysis	**Rate Coach Emails and TOU Alerts** Weekly, Monthly, and High Bill Alerts

OUTCOMES

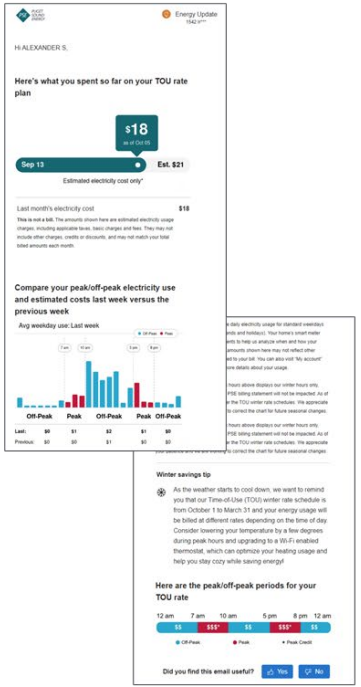
Rates Adoption **Increase participation** in opt-in Rates	**Comparison Billing** Personalized bill comparisons build rate switching confidence	**Load Shift** Support customers success on new TOU rate
5.2% Of targeted customers enrolled in a TOU rate	**94%** Of enrollees reported using the Rate Advisor Tool	**94%** Of TOU customers took action to shift usage

Customer communication

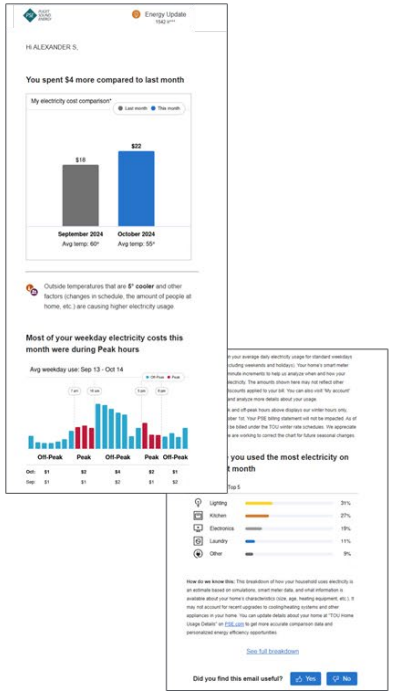
Welcome Email



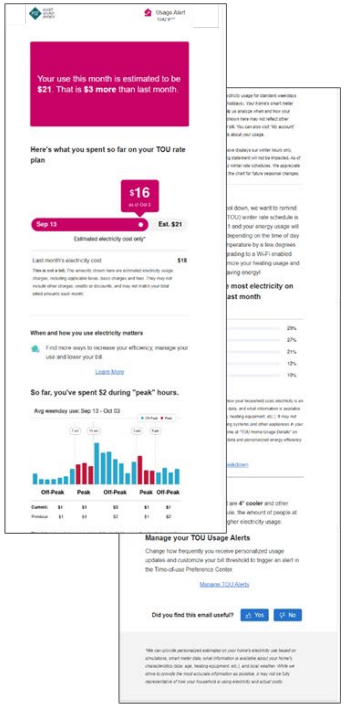
Weekly Update



Bill Summary



High Bill Alert



Questions?

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Customer solar opportunities

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Renewable energy products and services

PSE MATCH

GREEN POWER
- PNW REC purchases
- 80K residential, commercial, municipal customers

SOLAR CHOICE
- Solar RECs WA and ID
- 915K customers
- Residential, small commercial

CARBON BALANCE
- PNW third-party-verified carbon offsets
- 21K customers

PSE REPLACE

COMMUNITY SOLAR
- Expands access to new, 100% local solar
- 5 projects completed

RENEWABLE NATURAL GAS
- Replaces a portion of gas usage with local RNG supply
- ~5K customers

GREEN DIRECT
- Long-term partnership for dedicated resources
- 41 corporate/gov. customers

PSE GENERATE

NET METERING
- Up to 100 kW
- 15K+ customers; 130 MW
- All customer types

SMALL POWER PRODUCERS
- 100 kW – 5 MW
- Small renewable developers

Solar Energy Credit / Multi-Occupant Solar
- Commercial and MF Properties

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Community solar

Designed for customers who want to support and benefit from solar power with no equipment install.

- Subscribe to shares from local, community-based solar projects
- Receive bill credits for energy your shares generate
- $20 per share with zero-cost options for income-qualified customers

Olympia High School Community Solar

Income eligible community solar

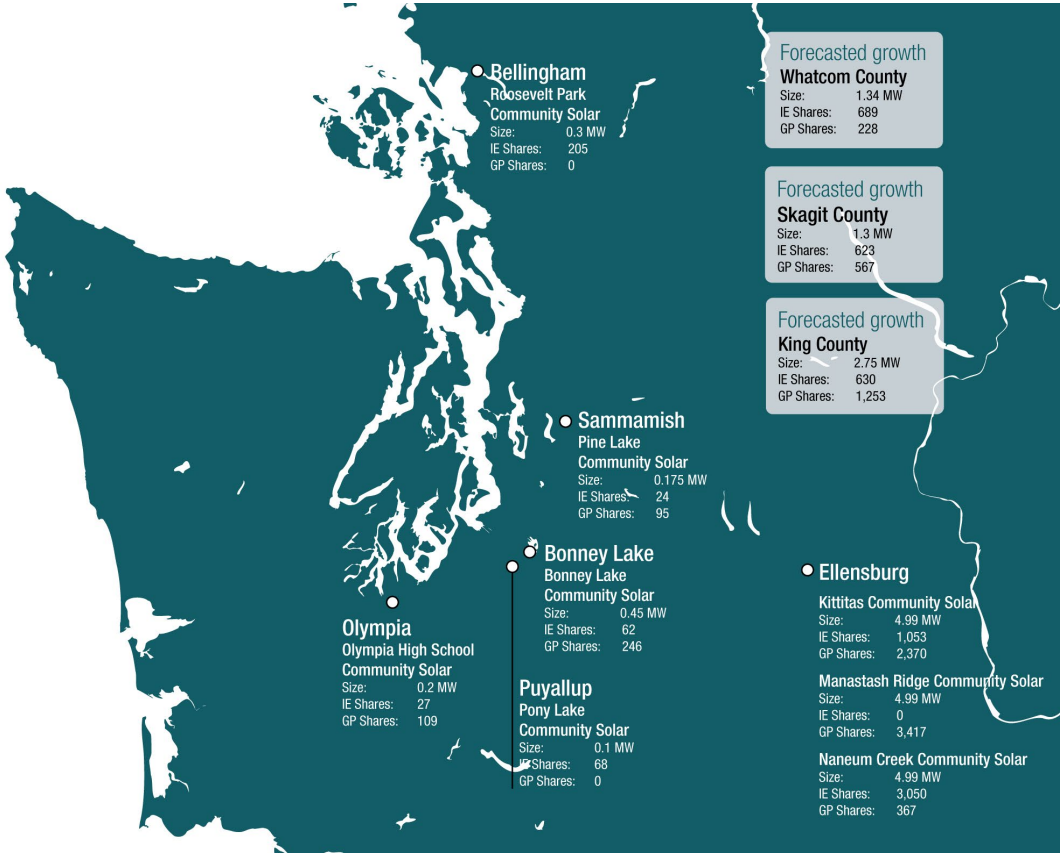
Eligible customers can save up to $240* per year on their PSE electric bill with free shares of community solar.

- Enroll in up to two shares.
- Predictable monthly credit with annual true-up (always in customer favor)

*Household average annual income level is at or below 200% of the Federal Poverty Level (FPL)

Bonney Lake Community Solar

Current and planned community solar locations



How customer-owned solar generation works

Solar panels convert solar energy into electricity

Generated energy is used in your home or business

Energy used by your home/business from the grid

Bi-directional meter measures energy to and from you and the PSE grid

Excess solar energy generated goes back to the grid

Utility pole/distribution line

Net metering

- Your solar power is first used at home
- Additional energy generated goes out to grid to earn Net Meter Credits
- Credits earned offset energy used from grid at other times - like when sun is not shining
- You're billed for the net amount of energy
- Banked credits expire annually on March 31

Net metering: A look at the future

- PSE will continue offering net metering until the Washington Utilities and Transportation Commission approves a new rate schedule

- PSE staying engaged in state level discussions and will keep customers informed

Multi-occupant solar

Designed for commercial property owners, HOAs, and property managers where property owner installs solar and **shares the financial benefits with residents/tenants**, directly on their bill

- Supports renewable energy and reduces property's carbon footprint
- Reduces Interconnected Customer’s energy costs by allocating $ credits to designated Occupant’s monthly bills

Solar energy credit

Designed for commercial properties with larger solar installations, and ideal when solar generation matches real-time power needs of the building. **Earn $ credits per kWh as on-bill credit for excess energy production.**

- Supports renewable energy and reduces property's carbon footprint
- Credit can offset any type of charges and does not expire.

Enhanced incentives for solar

Solar grants	Multi-occupant solar	Solar energy credit
Community-based organizations, government agencies and Tribal entities serving historically marginalized communities	**Tribal entities and/or affordable housing providers** that can demonstrate at least half of the property's units are occupied by low-income residents or Tribal members	**CBOs, government agencies, and Tribal entities** serving historically marginalized communities
Up to 100% or $100,000 per project to reduce the upfront cost of installing solar.	**Up to 100% or $250,000 per multi-occupant solar or solar energy credit project** to reduce the upfront cost of installing solar. Up to $50,000 of the funding can be used toward associated interconnection costs.	

Since 2017, the solar grants have awarded over $5.3M to 75 projects totaling over 2.5 MW

County	# projects	$ awarded	KW to be installed	Example projects
Island	3	$183,576	85	• Island Senior Resources • Good Cheer Food Bank
King	13	$1,167,627	547	• El Centro de la Raza • King County Housing Authority
Kitsap	11	$769,432	244	• Boys & Girls Club • Fishline Food Bank
Kittitas	2	$193,210	100	• HopeSource • Upper Kittitas Senior Center
Pierce	2	$199,737	87	• Sumner Community Food Bank • Vadis
Skagit	12	$758,742	357	• Camp Korey • Samish Indian Nation
Thurston	16	$862,055	510	• Homes First • YWCA Olympia
Whatcom	19	$1,177,706	654	• Ferndale Food Bank • Lummi Nation

Questions?

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Battery storage opportunities

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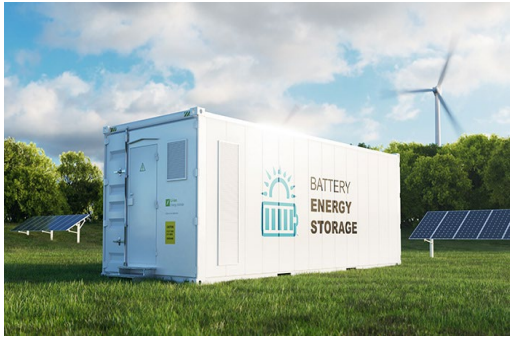
Battery energy storage systems

Battery energy storage systems (BESS) provide **customers energy resiliency** and unlock opportunities for **customers to reduce, shift and share energy capacity**.



Customer and electric grid benefits

- Batteries can help take strain off the energy grid during high-energy use periods and create a more stable energy system.
- Backup power for homes and buildings
- Potential compensation for customers participating in load flexibility events

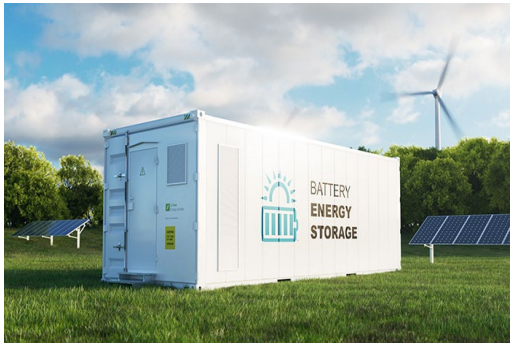
Residential flex batteries

Designed for residential customers with battery energy storage system installations. Customers **get rewarded for participating in Flex events** – periods of high-energy use which can cause stress on the grid.

- Customers can earn up to $1,000 per battery for enrolling, plus additional incentives for participating in Flex events.

Non-residential battery storage

Non-residential batteries come in all sizes and can provide temporary back-up power, store renewable energy, and help customers manage their usage.



- In 2019, PSE installed a behind-the-meter (BTM) battery at its Poulsbo Service Center to simulate the needs and load profile of a commercial customer.
- In 2023, PSE installed a community microgrid in a residential neighborhood with a high occurrence of customer-owned rooftop solar on Samish Island.
- Currently PSE is seeking proposals for energy storage projects interconnected to specific substations to contribute to local capacity needs.

Vehicle-to-everything (V2X)

Vehicle-to-everything (V2X) refers to transferring of electricity stored in the batteries of EVs to the electric grid, buildings, or homes.

- **Vehicle-to-grid (V2G)** – Energy from an EV is sent directly back to the electrical grid
- **Vehicle-to-building (V2B)** – Energy from an EV provides supplemental power to a building
- **Vehicle-to-home (V2H)** – Energy from an EV provides supplemental power to a home

V2X demonstration use cases

PSE is deploying several limited-scale V2X demonstration projects to assess new innovative technologies.

Vehicle-to-grid 6 V2G chargers installed at 2 School Districts	**Vehicle-to-building** 2 sites with compatible fleet vehicles at commercial buildings	**Vehicle-to-home** 6 V2H chargers with compatible passenger vehicles at residential homes
Construction underway with Q4 2025 completion target	Anticipated to start in 2026	3 initial sites identified with Q4 2025 completion target

Desired outcomes

- Establish technical requirements and communication protocols
- Identify qualified interoperable equipment/vehicle compatible with PSE's Virtual Power Plant
- Standardize and streamline V2X interconnection processes
- Assess peak demand reduction and dispatchable capacity potential
- Evaluate customer preferences, future compensation mechanisms, and value stacking opportunities

Questions?

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How can customers stay involved in the ISP process?

- Continue your personal clean energy journey
- 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!

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Appendix

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How Customers Enroll in DR Programs

**Flex EV Enrollment for Ford, BMW, Honda/Acura, & Nissan

Ford → Customers can enroll directly through their automaker: https://www.ford.com/fordenergyrewards

BMW → Customers can enroll directly through their automaker: https://chargeforward.bmwusa.com/pse

Honda/Acura → Customers with a Honda/Acura-branded charger** can enroll directly through their charger manufacturer: https://web.emporiaenergy.com/

**Applies only to Honda/Acura EV drivers who have a Honda/Acura-branded charger and are enrolled through their charger manufacturer.

Nissan → Nissan EV drivers (coming)

At the same time, demand for electricity is rising rapidly

- According to current forecasts, **energy consumption is likely to grow** by around **15% in the next 20 years**
- **Electric vehicle charging** forecasted to be **20-30%** of PSE's total **system load** in 20 years
- State and local **building codes** are being revised in favor of **more electrification**
- Increasing installation of **air conditioners**
- Upward trend in new, **large customer load requests**

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PSE must expand its portfolio

- PSE's current generation portfolio **may not adequately address energy demand growth**
- PSE's residential customers have seen an **average 25% increase in costs***
- Customers looking to install Distributed Energy Resources **(DERs) take 3-24 months to energize systems**
- There is significant **rooftop solar generation capacity** potential (potentially over 3 GW), but its **limited ability** to deliver power during peak times limits its contribution to PSE's portfolio***

** Based on average retail energy sales using EIA data for 2018-2023*
*** Based on national figures by the DOE and 2023 EIA data scaled using PSE's customer count and energy consumption*
**** Estimates provided from Google's Project Sunroof and respective assumptions*

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