

Energy Efficiency & Renewable Energy



Hunter Hassig, Energy Advisor – Bellingham, WA

Topics:

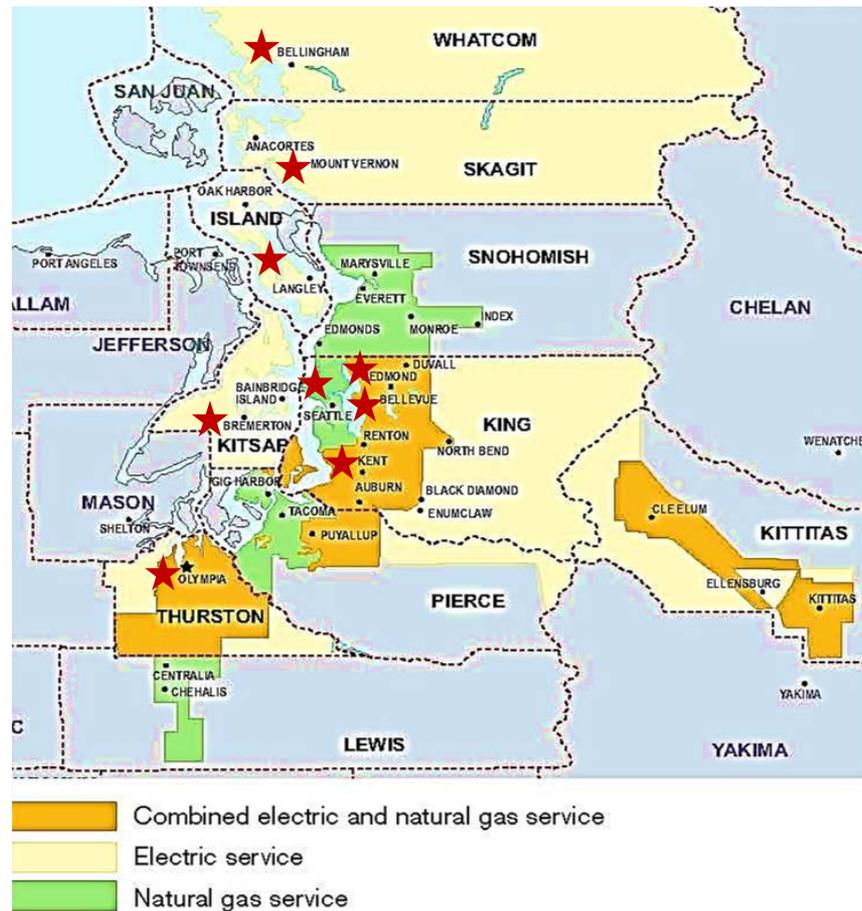
- Safety moment
- Local resources
- Efficiency programs
- Renewable programs

Safety moment: Share the road

- Ride like a driver
- Drive like a rider
- Be seen
- Be prepared and protected



Energy efficiency: Throughout our service area



Energy Management Team supports customers throughout PSE's service area

★ PSE locations with EE support:

- Energy Management Engineers (EME)
 - Community Outreach Staff
 - Energy Advisors
 - Program Managers
-
- Bellingham Service Center
 - Skagit Service Center (Burlington)
 - **Bothell Building H—EE Headquarters**
 - Bellevue, PSE Headquarters
 - North Seattle
 - South Seattle
 - South King Complex (Kent)
 - Kitsap Service Center (Bremerton)
 - Olympia Service Center
 - Whidbey Island (Freeland)

Energy advisors

- PSE customer contact for EE and renewable energy
- Contractor Alliance Network: Pre-screened, vetted contractor referrals
 - Instant rebates
- Troubleshoot “high usage” inquiries
- Event staffing
- Presentations
- EA hotline: **1-800-562-1482** (M–F, 8 a.m. – 5 p.m.)
- Local contact: Hunter Hassig
1329 N State St, Bellingham, WA
Office hours: 9 a.m. – 5 p.m., M–F



Question? Energy efficiency.

How much does PSE invest in energy efficiency every year?

- \$25 million
- \$50 million
- \$75 million
- \$100 million

Energy efficiency is our best strategy to meet PSE customers' growing needs.
Our key drivers are:

- Social responsibility
- Helping customers manage energy costs
- Balanced resource planning
- System reliability
- Least cost alternative to power purchases
- Compliance – “It’s the law”

Business Energy Management

Lighting • Resource Conservation Management
Small Business Direct Install
Utility Energy Service Contract • Laundry
Industrial System Optimization Program
Kitchen • Custom Grants • HVAC
Comprehensive Building Tune-Up
New Construction • Energy Management Tools

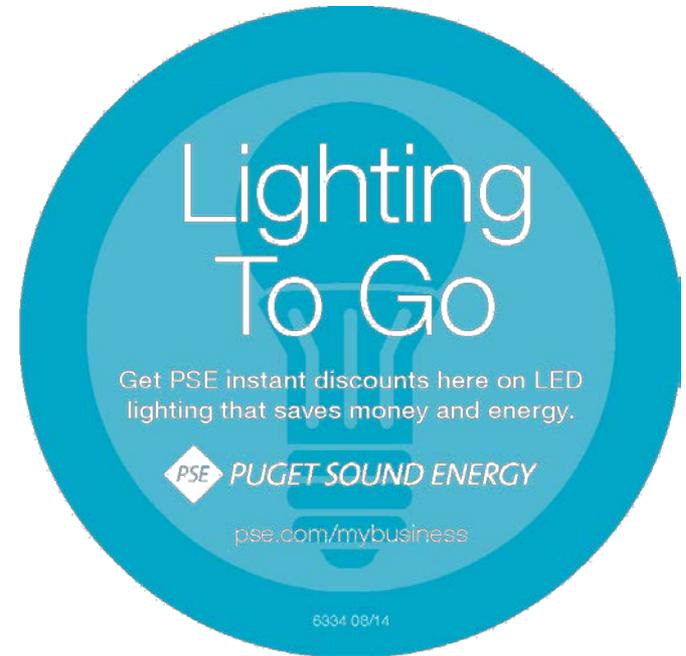
Business Lighting Program

- Custom lighting incentive applies to both equipment and installation
- Number of lighting paths now reduced and simplified
 - **Business lighting**
 - Pre-approved, custom lighting upgrades with incentives of **\$0.20 per kwh** saved up to **70 percent of the project cost**
 - Projects must be submitted for pre-approval before work starts and are subject to pre- or post-inspection
 - **Street lighting**
 - **Pre-approved, incentives** paid on a retrofit of an existing HID street lighting installation or new LED street lights
 - Express option available for projects of 20 fixtures or less

Instant lighting discounts

Lighting To Go:

- **Point of sale incentive at distributors.**
This program has expanded to include more distributors in order to provide an easy method for business customers to receive rebates.
- No pre-approval required.
- PSE instant discounts of **\$4 to \$15 on qualified LED** lighting at participating Lighting To Go vendors.
- Get a list of participating vendors at **pse.com/lightingtogo**.



New Construction Program: Overview

- Incentives help bridge the gap for developers to upgrade to energy efficient equipment which goes above code
- New construction measure incentives include:
 - Whole building energy savings—Simplified to \$/kWh
 - Lighting—**New** lighting power density approach
 - Custom—Innovative ideas
 - Condensing boilers and water heaters—DHW/space heat
 - Clothes washers
 - Showerheads
 - Bi-level stairwell fixtures with occupancy sensors
 - Commercial kitchen and laundry

Commercial New Construction

- **Lighting Power Density Approach**

- LPD approach utilizes energy code as a baseline for applicable space types
- Incentive will be based on proposed design in comparison to the code; measure cost will be assumed to be the same as the incentive amount

- **Whole building approach (>50,000 sq. ft.)**

- Energy Modeled Savings
- \$0.30/kWh or \$5/therm (non-lighting)

- **Component approach (lighting)**

- WA State Energy Code Lighting Power Allowance (LPA) baseline
- Energy savings calculated from lighting compliance forms
- \$0.20/kWh up to 100% of system cost
- Lighting must be minimum 10% more efficient than code

- **Component approach**

- \$0.30/kWh or \$5/therm (non-lighting), \$0.20/kWh (lighting), up to 100% of incremental cost

Incentive paths

Design team support!

Local brewery - VFD

Variable frequency drive – chiller system glycol pump

Total cost: \$2,060

PSE grant: \$2,060

Brewery cost: \$0

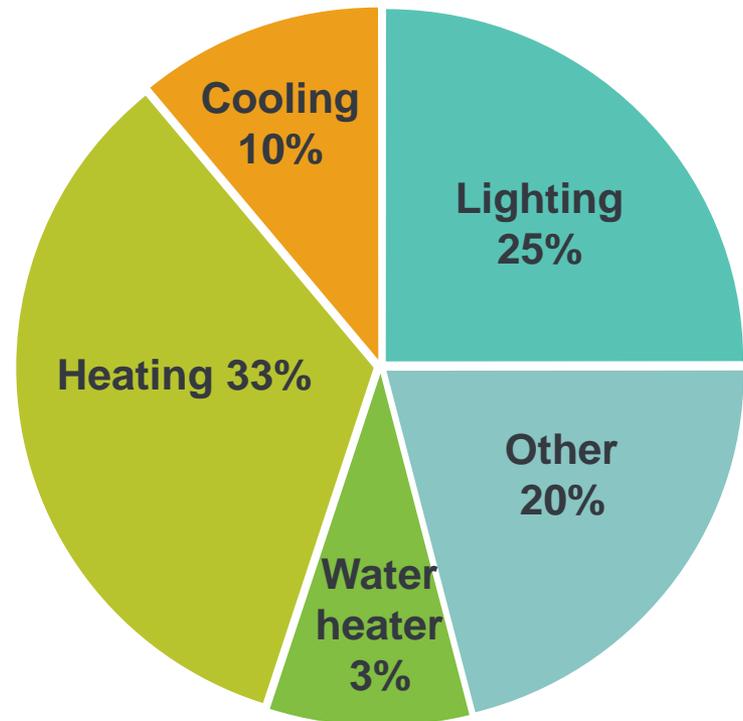
Annual energy savings: \$758 (7,580 kWh)

Commercial retrofit grants

Most common projects:

- Controls upgrades
 - Full system
 - Rooftop units
 - Demand-control ventilation
- Boiler upgrades
- VFDs
- HVAC equipment
- Chillers

Typical Pacific NW building



Commercial HVAC incentives

High-efficiency Commercial HVAC Unit Replacement

- Incentives of \$100/ton to \$550/ton
- Switch from PSE electric resistance heat to heat pump or natural gas

Commercial HVAC Rooftop Unit Premium Service incentive

- Incentives range depending on size and service



Did you know that almost half of business energy bills can be attributed to heating and cooling?

Small Business Direct Install

- Any PSE customer served by electric rate schedules 8, 24, or 25, or gas rate schedule 31 will qualify for a free assessment
- <50 kW demand or under 10,000 sq ft
- No-cost installation of basic measures and low-cost customer co-pay measures

PSE will perform a FREE energy assessment for customer in order to identify and install common energy efficiency measures:

- Comprehensive projects including lighting, refrigeration and water savings measures
- For more complex measures, PSE will connect customer to contractors and offer incentives through other programs



No- and low-cost measures

Lighting	Refrigeration	HVAC	Water saving	Other
<ul style="list-style-type: none"> • LED lamps • LED Recessed Cans • T12 to T8 retrofits 	<ul style="list-style-type: none"> • Strip curtains • Gaskets • Vending cooler miser • Suction-line insulation • Auto closers • Night covers • Case lighting controls • Anti-sweat heater controls 	<ul style="list-style-type: none"> • Programmable thermostats • Refrigerant charge (small pkg AC) • Premium HVAC tune-up measures 	<ul style="list-style-type: none"> • Aerators • Showerheads • Pre-rinse spray heads 	<ul style="list-style-type: none"> • Open and Exit signs • Smart strips • Water heating line insulation (LDI)



Commercial kitchen equipment incentives

Cooking, refrigeration, water heating, and sanitation equipment

- Must be served by PSE electricity or natural gas
- PSE will incentivize high-efficiency equipment
- Customers can receive incentives by completing application
- Or from purchasing at an approved kitchen distributor
- Incentives range from \$100 to \$2,000/unit, depending on the equipment
- Current qualifying equipment include:
 - Fryers
 - Steamers
 - Convection, combi, conveyer, rack Ovens
 - Ice makers
 - Water heaters & boilers
 - Dish washers
- More equipment categories possibly coming in 2016!
 - Such as DCV for kitchens



Did you know that more than 50 percent of the energy used in most restaurants is from cooking and sanitation?

Commercial kitchen equipment incentives

- ISOP will continue to serve PSE Industrial customers
- Natural gas incentives + SEM offering coming soon:
 - Still must be a PSE electric customer
- Provides **no- and low-cost** operation and management improvements to your facility
- Includes **engineering support at no cost** to the customer
- Provides **in-depth action plan** to achieve energy savings
- Incentive is **\$0.05/kWh up to 70%** of the implementation cost

Eligibility guidelines:

Typical use at least 1 million kWh

Building should have industrial processes

(fans, pumps, blowers, refrigeration, compressed air, etc.)



Facility energy savings: 5-15 %
Average payback period: < 1 year

Green Power Program

- Allows customers to support renewable energy development by matching a portion or all of their electricity with renewable energy.
- Supports independent, renewable energy producers
- Focused in the Pacific Northwest
- Cost: as little as \$20 additional per month



Green power resource supply

- Wind - 68%
- Solar - 1%
- Livestock methane 15%
- Landfill Gas - 9%
- Qualified Small Hydro - 5%
- Geothermal - 2%

Help win Bellingham Green Power Challenge and PSE will donate up to \$50,000 for a city Solar PV array!



Renewable energy for your business

Incentives:

- Net Metering
- REAP



Business Energy Management



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- Rebates & offers ▶
- Tips, Tools & Ideas ▶
- Business Incentives ▼**
 - Energy Management
 - HVAC
 - Kitchen
 - Laundry
 - Lighting
 - New construction
 - Retrofit grants
 - Generators
 - Tools & resources
- For Communities ▶
- For Condos & Apts ▶
- For Schools ▶
- Green Power ▶
- Carbon Balance ▶
- Renewables ▶
- New Construction ▶
- For Trade Allies ▶
- Alt Fuel Vehicles ▶
- About Efficiency ▶



Make energy efficiency your business's best asset

When you're looking to bump up your business's bottom line through energy efficiency improvements, use PSE's commercial incentives to save on energy-efficient equipment and waste-reducing services. For personalized advice, call an [Energy Advisor](#) at 1-800-562-1482, Monday through Friday from 8 a.m. to 5 p.m.

Ask an Energy Advisor

Phone
1-800-562-1482

Email
EnergyAdvisor@pse.com

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Questions?

Thank you

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1-800-562-1482

