

BPA's Efficiency Program



Obligations Under the Power Act

Council Shall:

Develop a regional power plan (Section 4(d)(1)) that shall :

Give priority to cost-effective resources, with conservation being the first resource (Section (4)(e)(1))

Include an conservation program to be implemented (Section 4(e)(3)(A))

Set forth a general scheme for implementing conservation to reduce or meet the Administrator's obligations Section 4(e)(2))

Bonneville Shall:

Acquire conservation resources and implement all measures that the Administrator determines to be consistent with the plan (Section 6(a)(1))

Make use of authorities to the maximum extent practicable to acquire conservation in order to effectuate the priority given to conservation (Section 6(e)(1))

What Makes a Resource Cost Effective

Total Benefits

Energy Savings
Transmission & Distribution Deferral
Non Energy Benefits

Total Cost

Capital Cost
Operations and Maintenance
Program administration

How Can Cost Effectiveness Change

Changes in the cost of other resources
Efficiency Improvements for similar technologies
Changes in the cost of a technology

Composition of BPA's Savings

BPA's Energy Efficiency Goal

Programmatic Savings

Energy Efficiency Incentive
(EEI) Funded Savings
(70%)

Market Transformation Savings (NEEA)

Self Funded
Savings
(30%)

Momentum Savings

NEEA
Momentum

Market
Momentum

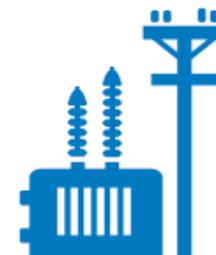
How BPA and its Customers Acquire Energy Efficiency



Utilities purchase power from BPA.



BPA develops a wide variety of efficiency incentives with utility dollars.



Utilities provide incentives to their customers and report savings to BPA.

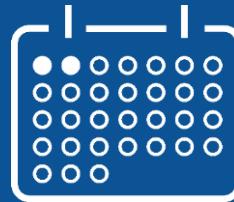


BPA verifies savings and reimburses utility.

How BPA and its Customers Acquire Energy Efficiency



Funds are collected in Tier 1 rates then made available to customer utilities to be used as Energy Efficiency Incentives (EEI). Up to 30% of this budget can be used to support program administration.

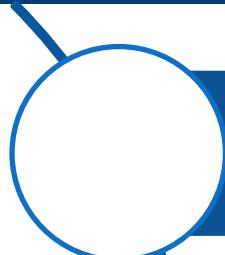


Utilities are allocated Energy Efficiency Incentive budget based on load share. EEI budgets are part of the utility's Energy Conservation Agreement, and are issued for a two-year rate period.



Utilities must submit project invoices and supporting documentation in order to receive EEI payments.

How BPA and its Customers Acquire Energy Efficiency



Utilities are not assigned individual targets and pick the measures that best fit their service territory

Utilities are expected to meet public power goal in total, as well as self-fund 30% their incentive cost.

Utilities are encouraged to spend all available EEI, or provide it to another utility through a bi-lateral transfer

The Energy Efficiency Balancing Act



The EE organization
balances the needs of
customers, stakeholders
and BPA

The Bonneville Energy Efficiency Program

Menu of Measures

- More than 2500 measures to implement based on the needs of individual service territories
- Opportunities in all sectors
- Balanced to ensure opportunity for all customers

Implementation Support

- Engineering support for complex projects
- Support for identification and facilitation of opportunities
- Available as needed for all customers

Regional Infrastructure

- Regional programs that target priority areas
- Provide expertise that would be impractical at the local utility level
- Centralize cost and create economies of scale

Key Efficiency Measures by Sector



Residential

- HVAC: Ductless heat pumps and air source heat pumps
- Weatherization: Insulation and windows
- Lighting: Bulbs and fixtures
- Water heating: Heat pump water heaters



Commercial

- Lighting: Bulbs fixtures and controls
- HVAC: Ductless heat pumps and rooftop units
- Custom: Site specific opportunities.



Industrial

- Custom: Site specific opportunities
- Energy Management



Agricultural

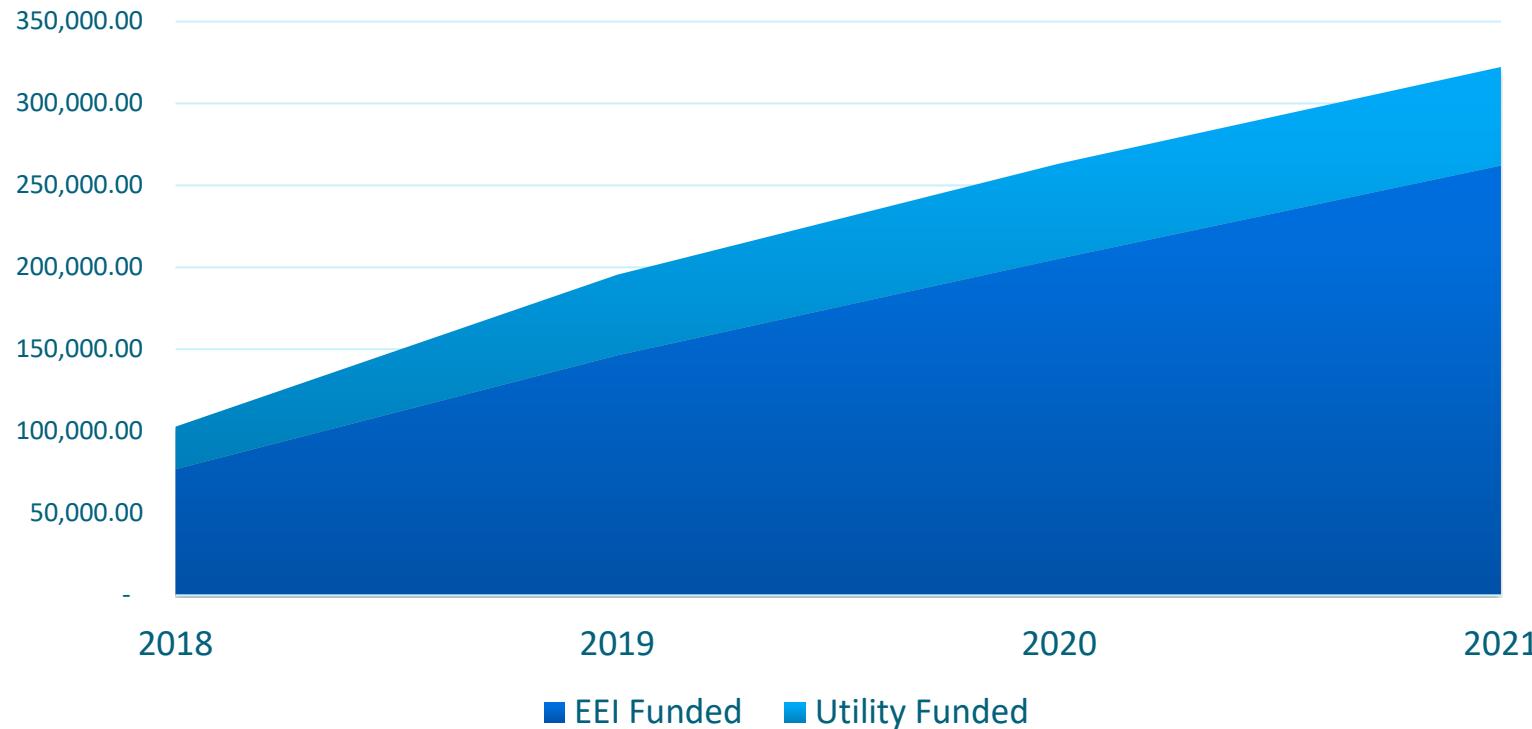
- Irrigation hardware
- Pumps and motors

Low Income and Tribal Efficiency Grant

Category	Budget
Low Income and Tribal Grant	\$6,005,000
State Total Budget	\$ 5,404,500
Tribal Total Budget	\$ 605,000
Oregon Total Budget	\$ 1,706,700

- Grants to states and tribes to support weatherization for low income and tribal communities
- Primarily weatherization, but also includes other measures like heat pump water heaters, thermostats, and ductless heat pumps.
- Typically funds the full installed cost of a measure plus necessary repair cost.

Oregon Utility Savings MWh 2018-2021



Oregon Consumer Owned Utility Energy Efficiency Offerings and Savings

SALEM ELECTRIC, SPRINGFIELD UTILITY BOARD,
EUGENE WATER AND ELECTRIC, AND NORTHERN WASCO
PUD

Salem Electric Energy Efficiency Programs – 2021

<u>Program</u>	<u>Projects Completed</u>
Heat Pumps	95
Energy-Efficient Appliances	60
Residential Weatherization	45
Energy Smart Design (commercial)	23
*Electric Vehicle Charger Incentive	30
*Residential Photovoltaic Systems	18

Total kWh Saved – 1,237,326

*Program is self-funded by Salem Electric



Springfield Utility Board Energy Efficiency Programs – 2021

<u>Program</u>	Standard	Limited Income	Total
Air Source Heat Pumps	16		16
Ductless Heat Pumps	322	33	356
Insulation	49	12	61
Windows	80	6	86
Heat Pump Water Heater	93		93
Appliances	95		95
EV Charger Incentive	10		10
Commercial Industrial(Various)	37		37

Total kWh Saved – 2,144,647

EWEB Energy Efficiency and Electrification Programs

Jan-Dec 2021

Through Q4 2021, more than 1,500 local properties were upgraded with the help of EWEB efficiency and conservation programs. So far this year, these efforts have saved more than 10,600 megawatt-hours of energy and 2,800 metric tons of carbon.

EFFICIENCY & CONSERVATION

-Incentives-

To assist with up-front costs of upgrades, EWEB offers rebates and zero-interest loans.



\$2.4 Million Rebates

\$1.6 Million Loans



Carbon Reduction

2,841 MTCO₂e

Includes energy efficiency savings & space/water heating conversions to electric. The energy savings is roughly equivalent to taking 689 passenger vehicles off the road.

ENERGY SAVINGS



*Roughly equivalent to the power used by 550 homes in a year.
**Saving energy during peak hours, when demand is highest, is important because peak power is more expensive & can have higher greenhouse gas emissions.

EFFICIENCY & CONSERVATION

-Projects-

1,629 Total projects

189 Limited income

217 Rentals

Some Rental projects are also Limited Income. The most popular upgrades were ductless heat pumps and heat pump water heaters, followed by windows and insulation.

Transportation Electrification*

- 178 Residential Level 2 Electric Vehicle Supply Equipment (EVSE) Rebates
- 11 Commercial Level 2 EVSE Rebates
- 1 Commercial Affordable Housing Level 2 EVSE Rebate
- 1 Commercial Direct Current Fast Charging Rebate
- Sponsorship for Electric Vehicle Workshops, rEV Up

Building Electrification**

- 85 Residential Rebates
- 5 Commercial Rebates

*Programs are in part funded by the [Oregon Clean Fuels Program](#) (CFP) administered by the Oregon Department of Environmental Quality (ODEQ).

**Programs are funded by EWEB.

NWCPUD Energy Efficiency Programs – 2021

<u>Program</u>	<u>Projects Completed</u>
*IQ Heat Pumps	17
Traditional Heat Pumps	54
Thermostats	13
*Energy-Efficient Appliances	84
*IQ Residential Weatherization	62
Traditional Residential Weatherization	57
Commercial & Industrial Measures	17
**Electric Vehicle Charger Incentive	5

Total kWh Saved – 1,625,668

*Program is partially self-funded by Northern Wasco County PUD

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