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BPA ENERGY EFFICIENCY COMMERCIAL NEW OPPORTUNITIES GUIDE



2022 EDITION

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Introduction

The Bonneville Power Administration, or BPA, energy-efficiency program is continuously evolving to meet Public Power's share of energy savings targets laid out by the Northwest Power and Conservation Council's Power Plan. Strategically, BPA also uses energy efficiency to address future energyresource constraints cost effectively. To achieve these two goals, BPA periodically reviews program offerings. This Commercial New Opportunities Guide is a resource that utilities can use to help identify measures, programs and opportunities that support their energy efficiency programs. For more information on the complete suite of Commercial sector program components and offerings, please consult the <u>BPA Implementation Manual</u>.

The Commercial sector includes electrical energy used in service-providing, nonmanufacturing businesses and building facilities. These business types include federal, state and local governments, and other private and public organizations. The Commercial sector building types include: office, retail, grocery, foodservice, lodging, hospital/healthcare, assembly, residential care and educational institutions.



Commercial Measures

BPA provides a wide range of Commercial sector opportunities to assist BPA's customer utilities in serving their commercial customers with cost-effective energy savings. Sector opportunities include a comprehensive lighting program and a suite of deemed HVAC technologies for every commercial building type.

BPA's commercial portfolio is rounded out by a variety of offerings related to refrigeration, commercial kitchen equipment, building envelope, plug load and more.

For more complex projects, BPA has a team of customer service engineers, or CSE, to support customer utilities in identifying custom project opportunities for retrofit and new construction. Every utility has an assigned CSE they can count on to help address any technical questions.





Sector Offerings

HEATING, VENTILATION AND AIR CONDITIONING

Efficient HVAC technologies provide an abundant large, relatively untapped source of savings in the Commercial sector. Recognizing the critical role HVAC plays in achieving regional efficiency targets, BPA delivers a suite of HVAC offerings to support customer utilities in capturing higher volumes of HVAC energy savings.

Project information forms and qualified product lists utilities can customize for their programs are available in the <u>BPA Implementation Manual Document</u> <u>Library</u>.

CASE STUDY:

Ductless Heat Pump Strikes Chord with Music Studio

NONRESIDENTIAL LIGHTING

BPA's nonresidential lighting measures are offered via the BPA Lighting Calculator, a Microsoft Excel-based, site-specific tool. The lighting calculator offers a robust selection of deemed and calculated incentives for interior and exterior Light Emitting Diode, or LED, lighting.

The current version(s) of the lighting calculator can be found in the <u>IM Document</u> <u>Library</u> and the <u>Commercial/Industrial Lighting page</u>. The lighting calculator can be customized to include utility logos, utility-specific rates used to determine project payback/return on investment and tailored incentives.

For assistance, please contact the BPA lighting team at <u>lighting@bpa.gov</u>, or your assigned Trade Ally Network NW, or The Network, <u>Field Specialist</u>.

CASE STUDY:

Lighting By The Book

ADDITIONAL UNIT OF ENERGY SAVINGS OFFERS

BPA offers a range of other offers to assist customer utilities in serving a wide variety of commercial customers. These include:

- Shell (i.e. insulation and windows).
- Refrigeration.
- Kitchen and food-service equipment.
- Commercial clothes washers.
- Smart power strips.
- Generator engine-block heaters.
- Vehicle engine-block heater controls.

For more information about these offers, including BPA requirements, energy savings and BPA payment information, please refer to the <u>Implementation Manual</u>.







CUSTOM PROJECTS

Commercial buildings often have highly complex, unique systems with variable operations. For this reason, many commercial energy-efficiency opportunities are best approached as custom projects. BPA has a team of customer service engineers, or CSEs, on hand to support customer utilities in identifying custom project opportunities for retrofit and new construction.

The <u>Implementation Manual</u> provides a robust section on Custom Project eligibility and process. In addition, you may contact your CSE, or energy efficiency representative, or EER, to discuss custom project requirements and opportunities.

ENERGY PROJECT MANAGER

Commercial facilities with multiple contiguous buildings often lack the staffing resources to identify, develop and implement energy-saving opportunities. The Commercial Energy Project Manager, or EPM, is an assigned commercial employee or contractor who is responsible for the implementation of a portfolio of electrical energy-efficiency projects.

The Implementation Manual (see Industrial Sector, 10.3.1) provides the details on this new EPM measure that is available to qualifying commercial facilities, requirements and the process. Additionally, you may contact your CSE, or EER to discuss the (Commercial) Energy Project Manager requirements and opportunities.

STRATEGIC ENERGY MANAGEMENT

Commercial facilities can achieve significant reductions in energy consumption without the cost of major capital upgrades. The Commercial Strategic Energy Management, or SEM, measure offers to help facilities with multiple contiguous buildings reduce energy intensity using a peer, cohort-driven approach to energy management and by providing organizational training, technical support for operations and maintenance, or O&M, improvements, and energy monitoring and reporting tools.

Commercial SEM promotes the implementation of a structured, sustainable energy program that delivers consistent long-term results. Organizations successful in Commercial SEM have clear support from top management, a designated Energy Champion to lead implementation, and are willing to consider new methods and procedures to improve energy performance and reduce costs.

The Implementation Manual (see Industrial Sector, 10.3.2) provides the details on this new SEM measure that is available to qualifying commercial facilities, and all SEM participants are required to follow the BPA Commercial & Industrial SEM Measurement & Verification Reference Guide, which is based on industry best practices. Commercial facilities seeking more information should contact their serving utility to see if they have a Commercial SEM program available.







Sector Programs

TRADE ALLY NETWORK NW

Trade Ally Network NW is a third-party program, for which BPA has hired a thirdparty implementer to administer all aspects of the program. The Network serves utilities, and commercial lighting and HVAC trade allies throughout the Northwest.

PROGRAM OBJECTIVES:

- Facilitate trusted, long-term partnerships with trade allies.
- Promote greater adoption of BPA-eligible energy-efficient technologies by trade allies.
- Improve uptake of installation best practices by trade allies.
- Enhance trade ally knowledge of how to select and sell higher efficiency products.
- Improve trade ally knowledge of how to ensure the persistence of energy savings.
- Increase the uptake of nonresidential lighting and HVAC energy-efficiency measures in BPA's service area.
- Supply project support for utility program managers and trade allies.
- Provide education and training services to trade allies and utilities regarding program requirements, energy-efficient technologies and best practices for installing these technologies.

PROGRAM SERVICES

- **Program administration.** The Network management team, with oversight from the BPA Commercial & Industrial sector lead, oversees the overall implementation of the program contract, and leads the lighting and HVAC strategy.
- **Field support.** The Network utilizes a team of Field Specialists to promote and support utility programs for qualifying measures throughout BPA's service area. The team provides technical support, lighting and HVAC outreach and training, and support to key manufacturers, distributors and other key market players in the region.
- **Marketing.** This is at the core of BPA's commercial efforts to promote The Network. This includes the development of critical program resources such as the Field Guide and marketing toolkits.

The Network website offers the following tools and resources:

- <u>Online learning center</u>.
- Trade Ally Finder tool.
- <u>Case studies</u> and <u>Field Guide</u>.
- Utility marketing <u>toolkits</u>.
- Registration for annual workshops and other training opportunities.

LOCAL UTILITY PROGRAM SUPPORT

You can call on The Network to train and support your contractor community, and help identify and scope efficiency opportunities in commercial lighting and HVAC. To get started, contact your EER or reach out to your Network <u>Field Specialist</u>.









Sector Savings Overview

TOP TEN MEASURES

These measures have been utilized the most across the region, and they serve as a great starting point when developing new energy efficiency offerings for your end-use customers.

- 1. Lighting
- 2. Connected Thermostats
- 3. Ductless Heat Pumps
- 4. Advanced Rooftop Unit Controls
- 5. Air-Source Heat Pumps
- 6. Walk-in Cooler and Freezer Strip Curtains
- 7. Windows
- 8. Variable Refrigerant Flow Systems
- 9. Insulation
- 10. Anti-Sweat Heater Controls



Resources

The following resources are available to help utilities optimize their working relationships with BPA, program operations and other personnel to support utilities in their work to achieve better energy efficiency and savings.

MARKETING MATERIALS

You can access program marketing support in several ways:

<u>Trade Ally Network NW</u>. The Network has a robust marketing team and resources designed to support you in creating materials for your end-users. To access marketing support, please contact your local Field Specialist.

<u>BPA Marketing Portal</u>. Access a wide range of easily customizable, ready-made marketing materials, and an image library to help utilities communicate about the benefits of energy-efficiency products and current rebate offers. Customer utilities who do not have the resources to work with the files or need customization beyond what is offered on the portal may also work directly with the Program Marketing team.

<u>Utility Toolkits</u>. The Network has developed a suite of marketing materials that make it easier for utilities to promote selected commercial energy-efficiency HVAC upgrades to customers and trade allies in your region. You can customize many of these materials, including incentive flyers, forms and documents, and marketing-outreach tools for end-users in your service territory with your logo and contact information.





GETTING STARTED WITH COMMERCIAL PROGRAMS

Access to Commercial sector resources is as easy as reaching out to your EER, local Trade Ally Network NW Field Specialist, or BPA CSE.

The Network also provides annual workshops that help you stay connected with your local contractors, receive training on new technologies, and get engaged with lighting and HVAC demonstrations.

Get started by emailing tradeallynetworknw@evergreen-efficiency.com.

You can also consult the <u>BPA Energy Efficiency Quick Start Utility Guide</u> for information including overviews, references, links to additional resources for common tasks, and activities and responses to your potential questions.

CUSTOMER SERVICE

Roles and responsibilities: EERs are accountable for building and maintaining customer relationships and act as the key means to support BPA's Energy Efficiency program communication with utilities. EERs lead the customer service team — composed of the EER, field engineer, and the contracting officer's representative — for each utility. EERs work with all BPA staff, third-party staff and contract support to provide oversight, coordination, and execution of communication to and from utilities.

How do we work together? Your EER should be your first point of contact for any questions, comments, or concerns about BPA's Energy Efficiency program. If your EER doesn't know the answer, he or she will find it and get back to you, or put you in touch with the right person.

BPA CUSTOMER SERVICE ENGINEERS

CSEs work with customer utilities to identify, plan and support custom energy-efficiency projects. Engineers often partner with utilities to work directly with end-users to facilitate large-scale technical projects. They can also make hands-on site visits, and provide remote implementation support for utilities and end-users.







PROGRAM, LIGHTING AND HVAC RESOURCES

Trade Ally Network NW

<u>Trade Ally Network NW</u> provides access to the Trade Ally Finder, Field Guide, Utility marketing toolkits, and case studies. Register for workshops, visit the online learning center and more.

TANNW Field Guide

<u>The 2022 Field Guide</u> offers both HVAC and lighting resources in one easy-to-use handbook. You'll find technical information to complement the workshop experience as well as sales tips, best practices, utility contact information and more to support you in the field.

TANNW Sales Tools

<u>From this page</u> you can find workshops, link to the online training portal, read case studies, brush up on sales skills, and download technical documents and product lists.

GENERAL RESOURCES

Better Bricks

<u>Better Bricks</u> is an initiative of the Northwest Energy Efficiency Alliance that showcases resources for commercial building owners.

LIGHTING ONLY RESOURCES

Design Lights Consortium

<u>Design Lights Consortium</u> is a nonprofit organization dedicated to accelerating the widespread adoption of high-performing commercial lighting solutions. Provider of industry-leading Qualified Products Lists for LED fixtures and networked lighting controls.









Measure Summary Table

The payment levels described in this table provide a summary only and can change. Complete, up-to-date details of the payment levels and associated requirements are in the Commercial Sector section of the <u>Implementation Manual</u>.

8.1 PAYMENT SUMMARY*		
PROGRAM COMPONENT OR MEASURE	PAYMENT	
8.2 Commercial Custom Projects—Retrofits and New Construction	See the 4.1 Custom Projects Payment Rate in the Implementation Manual	
8.3 Nonresidential Lighting	See 8.3 Nonresidential Lighting Payment Table in the Implementation Manual and Program Offerings section of Lighting Calculator	
8.4 Commercial HVAC		
8.4.1 Advanced Rooftop Unit Control (ARC)	\$100 per ton (ARC Retrofit - Lite) \$200 per ton (ARC Retrofit - Full)	
8.4.2 Connected Thermostat	\$150 per connected thermostat (Initial Install) \$50 per connected thermostat (Verification)	
8.4.3 Ductless Heat Pump Retrofit and Upgrade (BPA-Qualified)	\$1,000 per ton (Retrofit) \$300 per ton (Upgrade)	
8.4.4 Air-Source Heat Pump Retrofit and Upgrade (BPA-Qualified)	\$1,000 per ton (Retrofit) \$150 per ton (Upgrade)	
8.4.5 Variable Refrigerant Flow System Retrofit (BPA-Qualified)	\$1,000 per ton	
8.4.6 Variable Frequency Drive on Air Handling Unit Fan (BPA-Qualified)	\$300 per horsepower	
8.4.7 Commercial Packaged Terminal Heat Pump (BPA-Qualified)	\$600 per PTHP (Retrofit) \$100 per PTHP (New Construction)	
8.5 Commercial Shell Measures		
8.5.1 Commercial Insulation (BPA-Qualified)	\$0.75-\$2.10 per square foot	
8.5.2 Commercial Windows (BPA-Qualified)	\$9 per square foot of window replaced (Heating Zone 1)\$18 per square foot of window replaced (Heating Zone 2)\$18 per square foot of window replaced (Heating Zone 3)	
8.6 Commercial Refrigeration		
8.6.1 Anti-Sweat Heater (ASH) Controls	\$40 per linear foot of case	
8.6.2 Efficient Refrigeration Evaporator Fan Motor	\$55 per motor (ECM or PMSM on Display Case) \$140 per motor (ECM or PMSM on Walk-In Cooler or Freezer)	
8.6.3 Strip Curtains for Walk-In Coolers and Freezers	\$9 per square foot of doorway	
8.7 Commercial Kitchen and Food Service Equipment		
8.7.1 Demand Controlled Kitchen Ventilation (BPA-Qualified)	\$200 per fan horsepower (one control sensor) \$400 per fan horsepower (multiple control sensors)	
8.7.2 Electric Commercial Steam Cookers	\$500 per pan (6 pan)	

8.1 PAYMENT SUMMARY*		
PROGRAM COMPONENT OR MEASURE	PAYMENT	
8.7.3 Hot Food Holding Cabinets	\$250 per cabinet (Half Size) \$500 per cabinet (Full Size) \$1,000 per cabinet (Double Size)	
8.7.4 Electric Combination Ovens	\$500 per oven (5-15 pan oven or 16-20 pan oven)	
8.7.5 Electric Convection Ovens	\$200 per oven (Half size) \$400 per oven (Full size)	
8.7.6 Pre-Rinse Spray Wash Valves	\$100 per spray valve	
8.8 Additional UES Offerings		
8.8.1 Generator Engine Block Heaters (BPA-Qualified)	\$200 per unit (Size <3 kW) \$1,500 per unit (Size ≥3 kW)	
8.8.2 Smart Power Strips	\$15 per strip	
8.8.3 Vehicle Engine Block Heater Controls	\$200 per unit	
8.8.4 Commercial Heat Pump Water Headers	\$300 per HPWH (Unitary HPWH Tier 1 - Any size tank) \$600 per HPWH (Unitary HPWH Tier 2 – Any size tank) \$600 per HPWH (Unitary HPWH Tier 3 – Any size tank) \$800 per HPWH (Split-System HPWH – Any size tank)	
8.8.5 ENERGY STAR Commercial Clothes Washers	 \$25 per washer (Gas Water Heater/Gas Dryer) \$75 per washer (Gas Water Heater/Electric Dryer) \$100 per washer (Electric Water Heater/Gas Dryer) \$125 per washer (Electric Water Heater/Electric Dryer) 	
Additional Multisector Opportunities		
Some Agricultural, Industrial, or Residential measures may be applicable to Commercial projects. Measures eligible for installation in multiple sectors are identified where applicable in the body of the Implementation Manual in the primary sector.		
(Commercial) Energy Project Manager (see the Industrial Sector 10.3.1 Energy Project Manager in the Implementation Manual)	Lesser of \$0.025 per kWh of verified energy savings or \$150,000 per site, per rate period	
(Commercial) Strategic Energy Management (see the Industrial Sector 10.3.2 Strategic Energy Management in the Implementation Manual)	\$0.025 per kWh of SEM verified energy savings	
(Commercial) Performance Tracking Systems (see the Industrial Sector 10.3.3 Performance Tracking Systems in the Implementation Manual)	Lesser of PTS costs or \$15,000 (Initial installation) Lesser of PTS costs or \$10,000 per two-year performance period (Maintenance)	