Oregon

UTILITY ROUNDTABLES 2025

Oct. 15-16, 2025

Welcome and Introductions

- Thank you, Canby Utility for hosting!
- Energy Efficiency Representatives (EER), Brice Lang, Corinne Mauck, Ryan LeBaron, and Phillip Kelsven.
- Attendees, please share:
  - Name and Utility/Organization.
  - Role in Energy Efficiency (EE) and how long you've been working in EE!

Safety Moment

Think About

- What are your goals for the upcoming rate period?
- How can Bonneville Power Administration (BPA) help you reach those goals?
- What else would you like to share with us?

BPA Updates

UTILITY ROUNDTABLES 2025

Oct. 15-16, 2025

Overview

- BPA Energy Efficiency Objectives.
- Fiscal Year (FY) 2024-2025 rate period wrap up/look ahead:
  - FY 2024-2025 savings by sector.
  - BP-22 rate case vs. BP-25 rate case.
- Three-year rate period:
  - Why a three-year rate period?
  - EEI budget.
- Implementation Manual (IM):
  - Two IMs.
  - Reporting changes.

BPA Energy Efficiency Objectives

1

Acquire energy efficiency savings that provide the greatest power resource benefits for the region.

2

Meet BPA's share of the energy efficiency goals established in the 8th Power Plan and prioritize cost-effective measures.

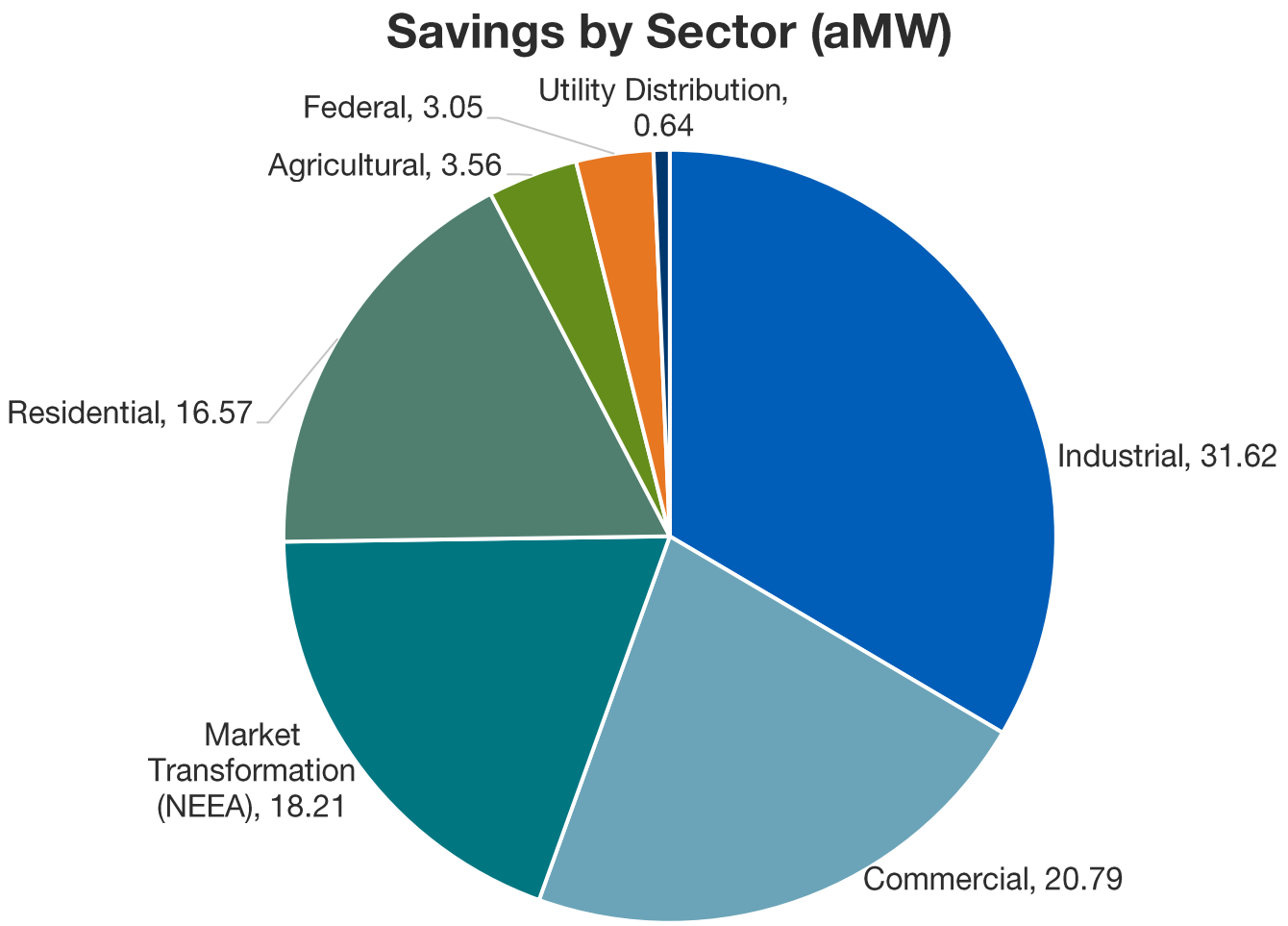
3

Offer a broad suite of measures that supports **all** BPA customers and their rate-payers in all sectors and demographics.

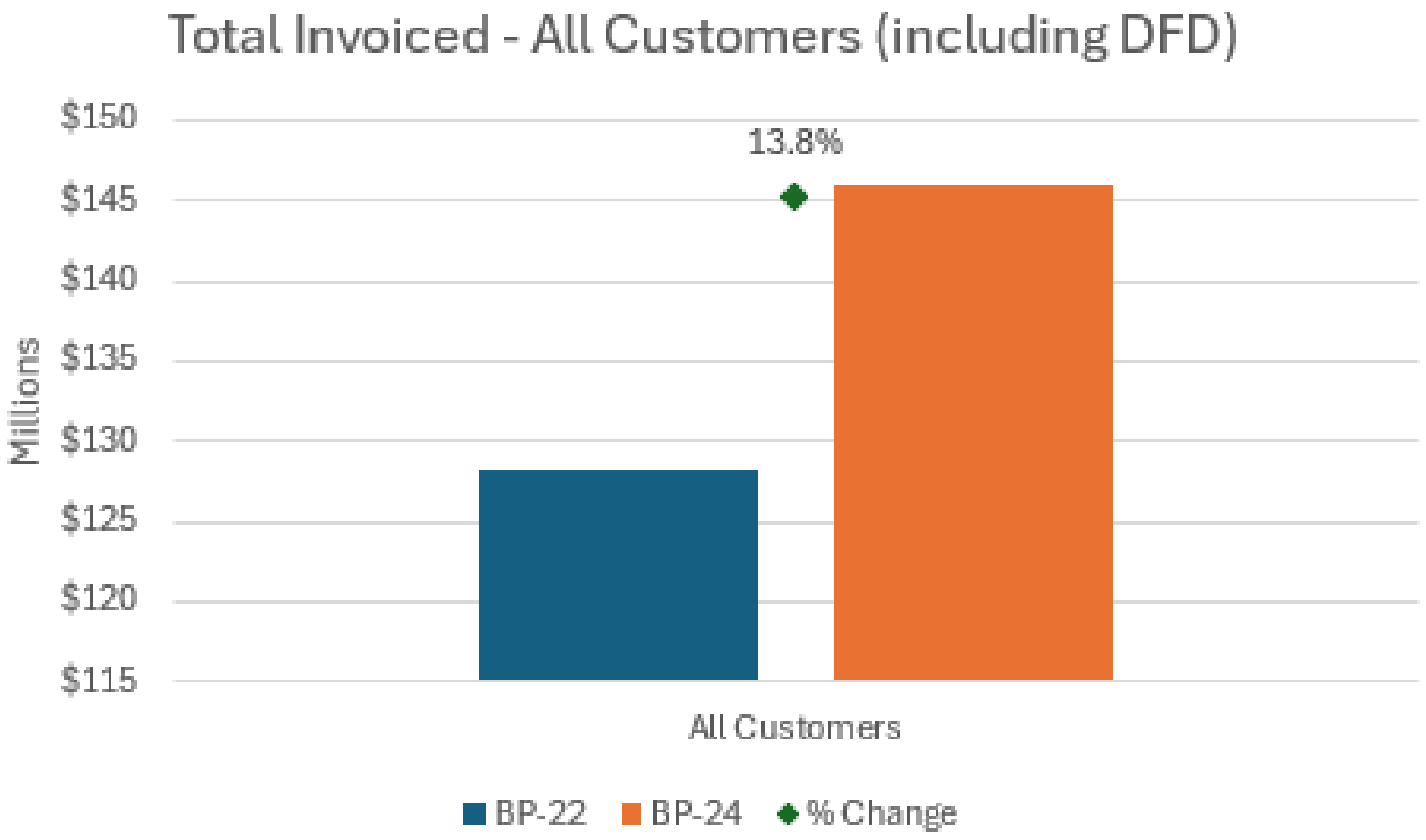
Fiscal Year 2024-2025 Wrap Up/Look Ahead

- ✓ In FY 2022-2023 (BP-22), BPA acquired 89.6 aMW.
- ✓ In FY 2024-2025 (BP-24), BPA's goal was to achieve 90 aMW. Tentatively acquired 94.44 aMW.
- ✓ FY 2026-2027, BPA's goal is 90 aMW
- ✓ BPA remains on track to meet its 300 aMW energy conservation goal!

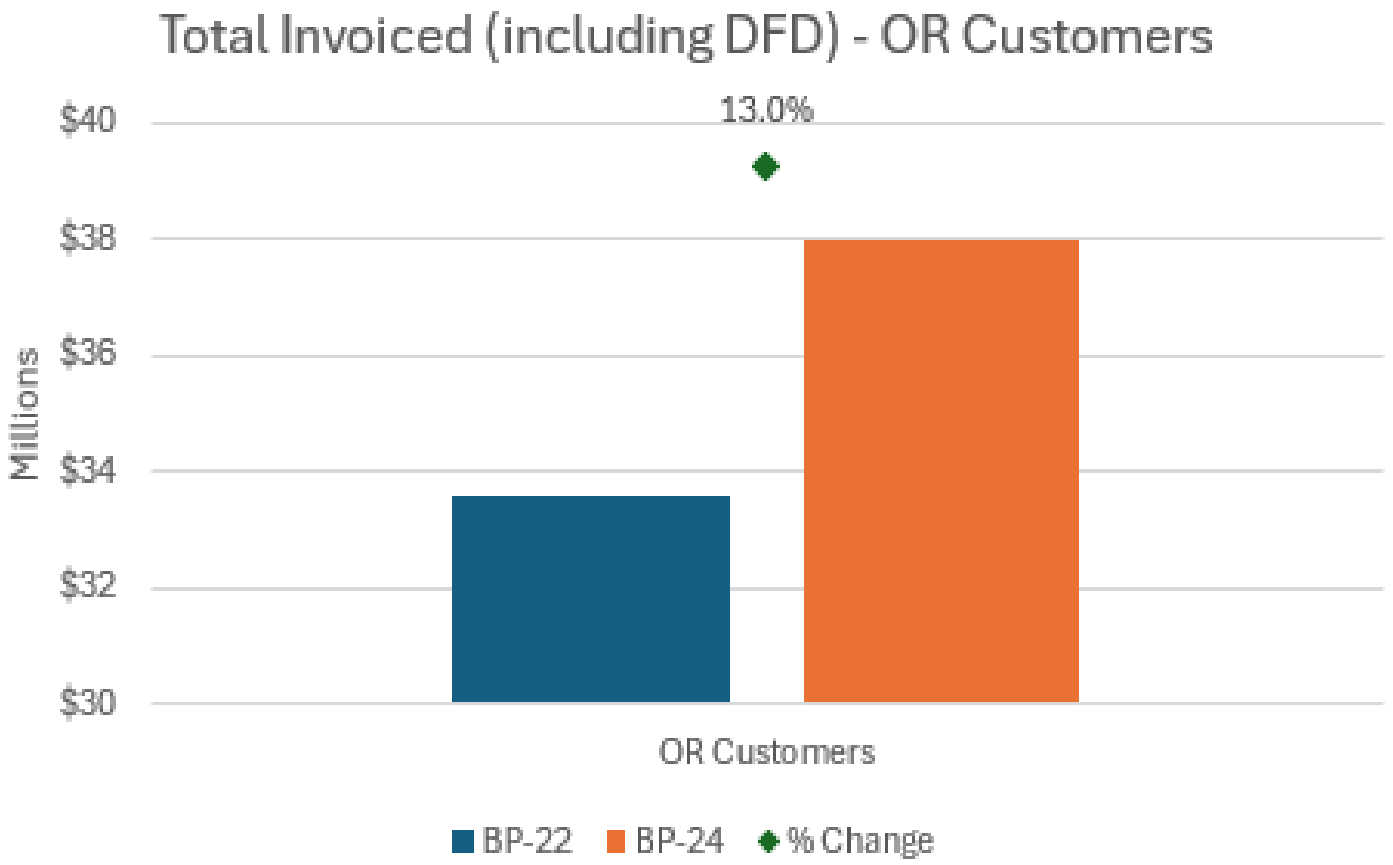
BP-24 Savings by Sector



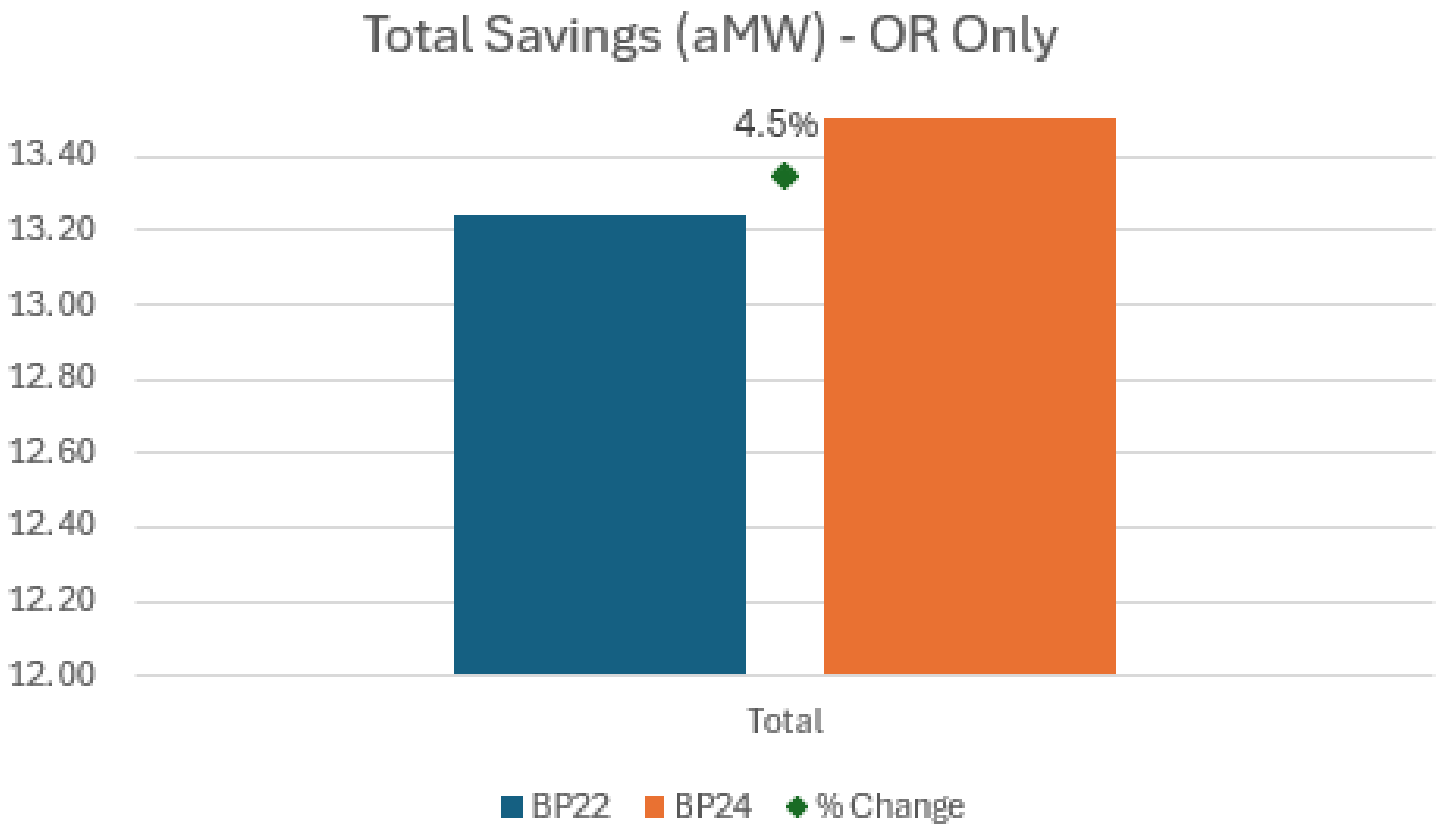
BP-22 vs. BP-24 Total Invoiced



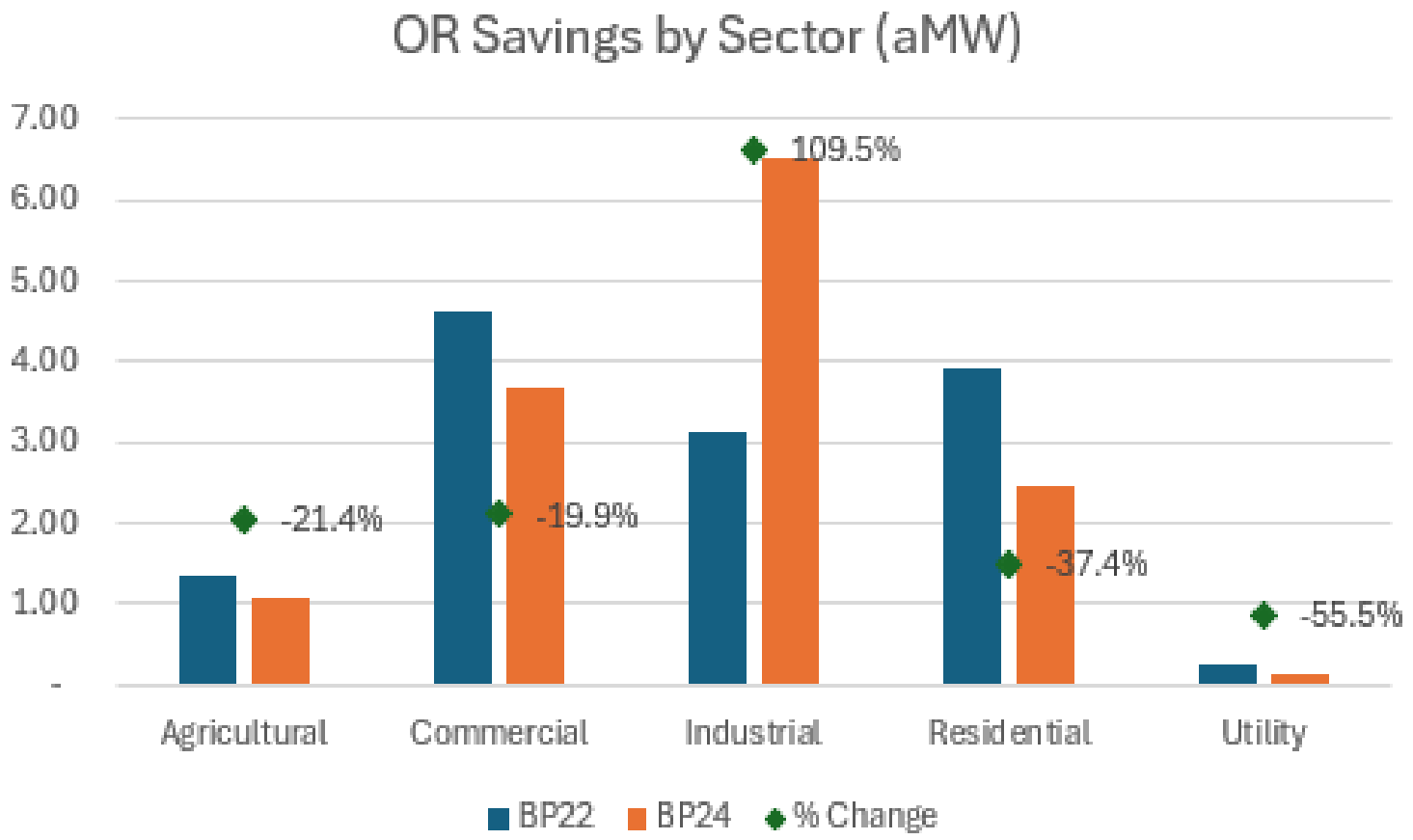
Oregon: BP-22 vs. BP-24 Invoiced



Oregon: BP-22 vs. BP-24 Savings



Oregon: BP-22 vs. BP-24 Savings by Sector



(Why) A Three-Year Rate Period?

- 20-year Regional Dialogue contracts expire at the end of FY 2028.
- BPA rate periods for EE are in two-year increments, which would leave FY 2028 stranded.

Complexities of a Three-Year Rate Period

- The 9th Power Plan will tentatively be published in 2026 – possibly changing the underlying details of many measures.
- Activity tends to cluster in the latter part of the rate periods.
- Delayed reporting creates risk that BPA may not reach savings targets.
- There may be significant measure changes from the evolving EE market landscape during three years.

Implementation Manual and Budget

- Two Implementation Manuals.
  - FY 2026-2027.
  - FY 2028 (full suite of changes).
- Access to the entire three-year rate period budget at the start of the rate period.
- Seamless budget to utilities but allocated by each FY.

Reporting Changes

- Projects to be submitted into BPA Energy Efficiency Tracking System (BEETS) within six months of completion date.
- Projects to be invoiced within 60 days of “Ready to Invoice” status.
- BPA requests utilities report activity into BEETS at least once every six months.

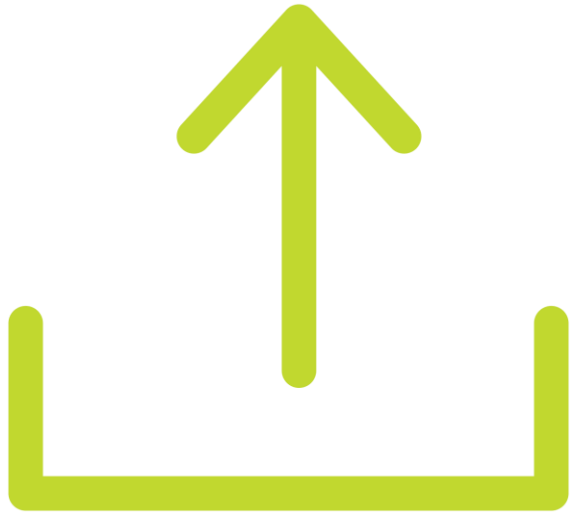
Reporting Changes

Now – As of October 1, 2025.

- Installed costs for all residential measures.
- Installed and repair costs (if applicable) for income qualified measures.
- See **Oct. 2, 2025 Webinar.**

Later – April 1, 2026.

- Upload cost documentation.
- Utility Site Inspections **are not** required; required to indicate **yes/no** if conducted.
- BPA Site Inspections on a small portion of sites.
- See **Sept. 25, 2025 Webinar.**



Questions or Comments?

Commercial and Industrial Sector

UTILITY ROUNDTABLES 2025

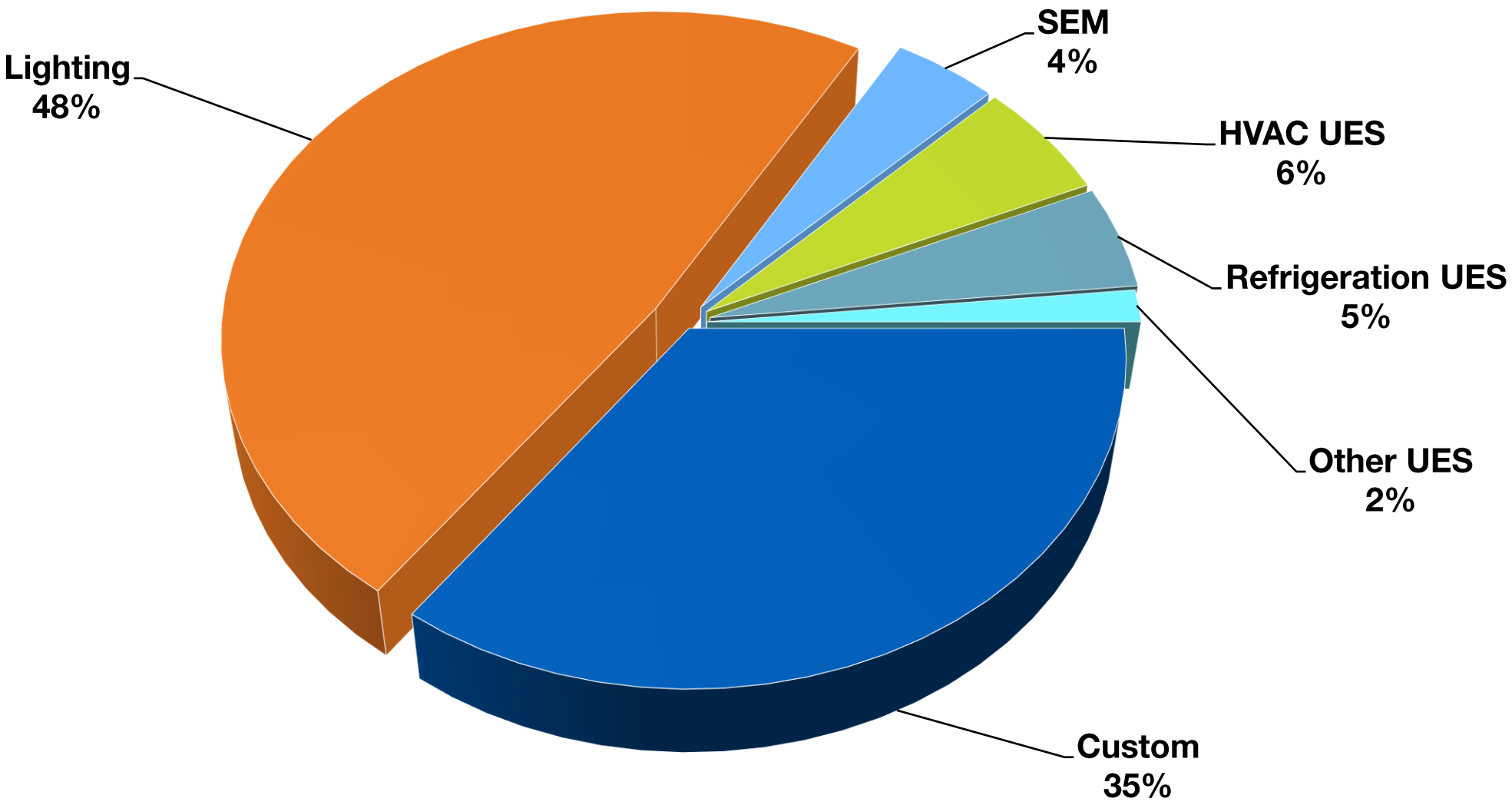
Oct. 8-9, 2025

Agenda

- FY 2024-2025 Rate Period Results.
- Nonresidential Lighting.
- Energy Management.
- UES Portfolio Highlights.

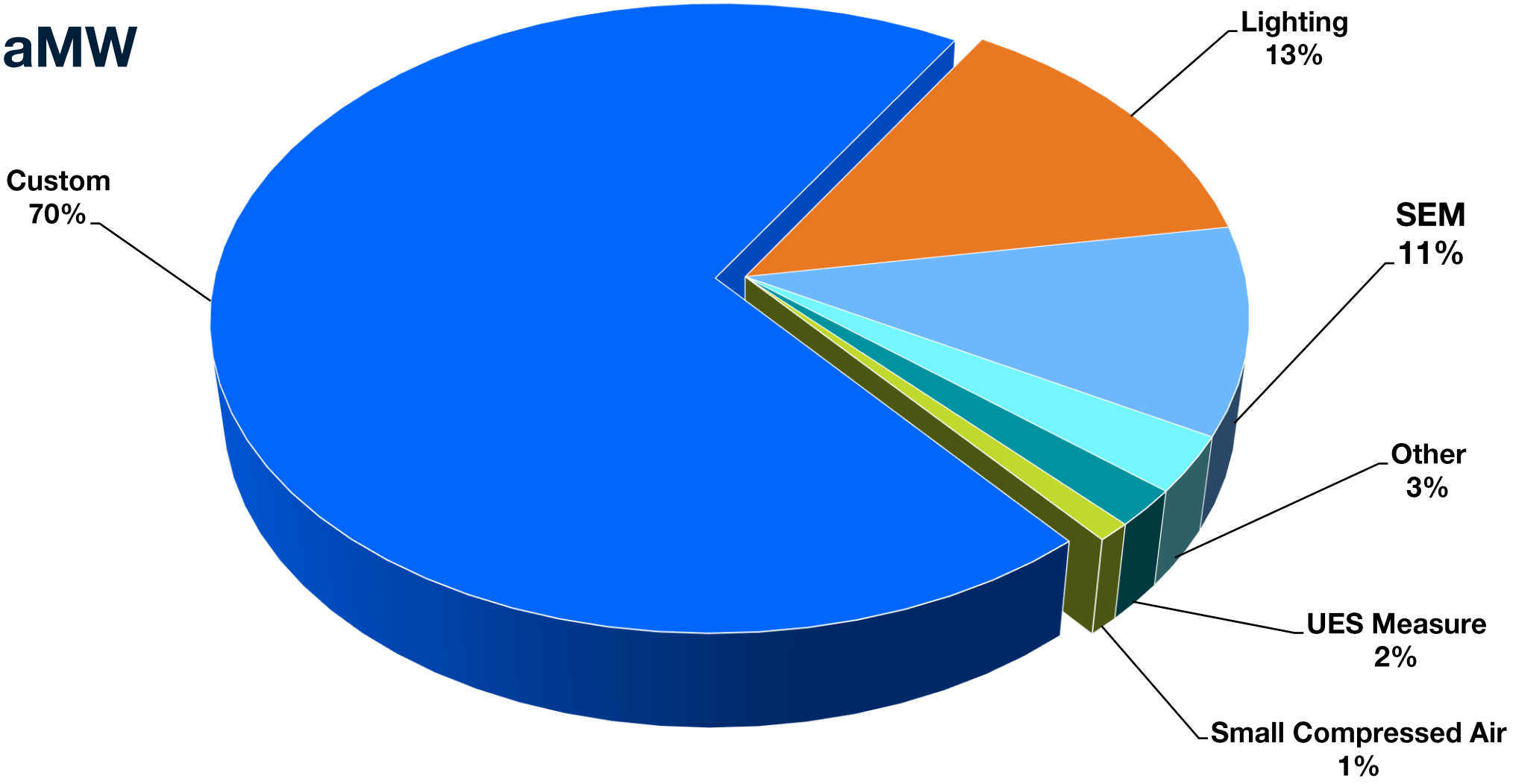
FY 2024-2025 Commercial Savings

20.8 aMW



FY 2024-2025 Industrial Savings

31.6 aMW



Nonresidential Lighting

FY 2026-2027 Incentives

Measure Series	Allocation 24-25	Allocation 26-27
Series A: Small Lamp/Fixture	$2-5	$4-10
Series B: LED Tubes (Type A)	$2	$4
Series O: LED Tubes (Type B/C)	$8	$12
Series C: LED General Indoor/Outdoor	$20-$210	$40-$280
Series D: LED High Bay	$80-$620	$160-$800
Series E: LED Exterior	$30-$500	$60-$800
Series F: HID Screw-in Replacement	$20-$150	$40-$300
Series: G: LED Linear	$0.13	$0.25
Series H: LED Exit Signs	$20	$30
Series I: Signage	$0.13	$0.25
Series J: Decommissioning	$0.13	$0.25
Series K: Non-standard Measures	$0.13	$0.25
Series L: Controls	$10-$50	$20-$200
New Construction	$0.13	$0.25

FY 2026-2027 Program Changes

Project Level Requirements

Requirement	Allocation 24-25	Allocation 26-27
Minimum B/C Ratio	0.5 for all projects	0.5 for projects >200,000 kWh
Minimum Wattage Reduction (Retro)	25%	10%
Minimum Wattage Reduction (NC)	20%	10%

Controls

- Removed Networked Lighting Controls option from “General Indoor/Outdoor” and “High Bay” fixture retrofit measures.
- Added Luminaire Level Lighting Control measure- Allows controls to qualify for deemed incentives even when fixture upgrade is non-standard or ineligible.

FY 2026-2027 Program Changes

New Baseline Eligibility Question

Are replacement lamps for existing fixtures unavailable due to federal or state restrictions (eg ban on fluorescent lamp sales in Oregon)?

Related FAQ

- What about projects started in FY 24/25? *Continue to use existing baseline.*
- What about K-12 schools? *Continue to use existing baseline.*
- How do I establish code-baseline for a retrofit project? *Trade allies unlikely to have permit paperwork with energy code compliance documentation. Comcheck offers a free platform to generate code baseline. BPA will accept either whole building or space-by-space method, but utilities should consider potential complexity of documenting square footage using space-by-space method.*
- How do I establish cost for projects using code baseline? *Two options: 1) Compare actual costs to an alternate bid, or 2) 25% of the installed lighting project materials.*
- What about sites with mix of HID and fluorescent? *BPA will accept 2 calculators, but utilities should consider potential complexity.*

Online Lighting Calculator

Recent Changes

- New Allocation (RP_FY26_FY27) is now live.
- Admin access removed for all non-BPA users.
  - Contact lighting@bpa.gov for new users and/or utility configs.
- Project Summary Report runs automatically and accessible via Cloud.
- Measure Management area in Cloud is now read-only.
- Ability to transfer projects to trade allies via “Assign to Agency” function.
- Updated Online Lighting Calculator (OLC) User Manual (v2) released.

Online Lighting Calculator

Planned Changes

- Improve formatting of the Project Summary Report.
- Move Client Report to Cloud (like Project Summary Report).
- Re-create Utility Summary Report.
- Add option for multiple default rate schedules for each utility.

Online Lighting Calculator

Available Utility Configurations in OLC

- Contact Information.
- Default Energy and Demand Rates.
- Pass-through Incentive Amounts.
- Project Level Caps (Min B/C Ratio, Max $/kWh, Max % Project Cost).

Reach out to lighting@bpa.gov for support.

Energy Management

Energy Project Manager

- More than 7 aMW worth of savings reported at 25 Energy Project Management (EPM) commercial and industrial sites in FY 2024-2025.
- Eligible for $1.24M in EPM payments on top of standard measure incentives.

An EPM can improve project outcomes, timeline, and return on investment.

Save more energy and money by maximizing energy savings

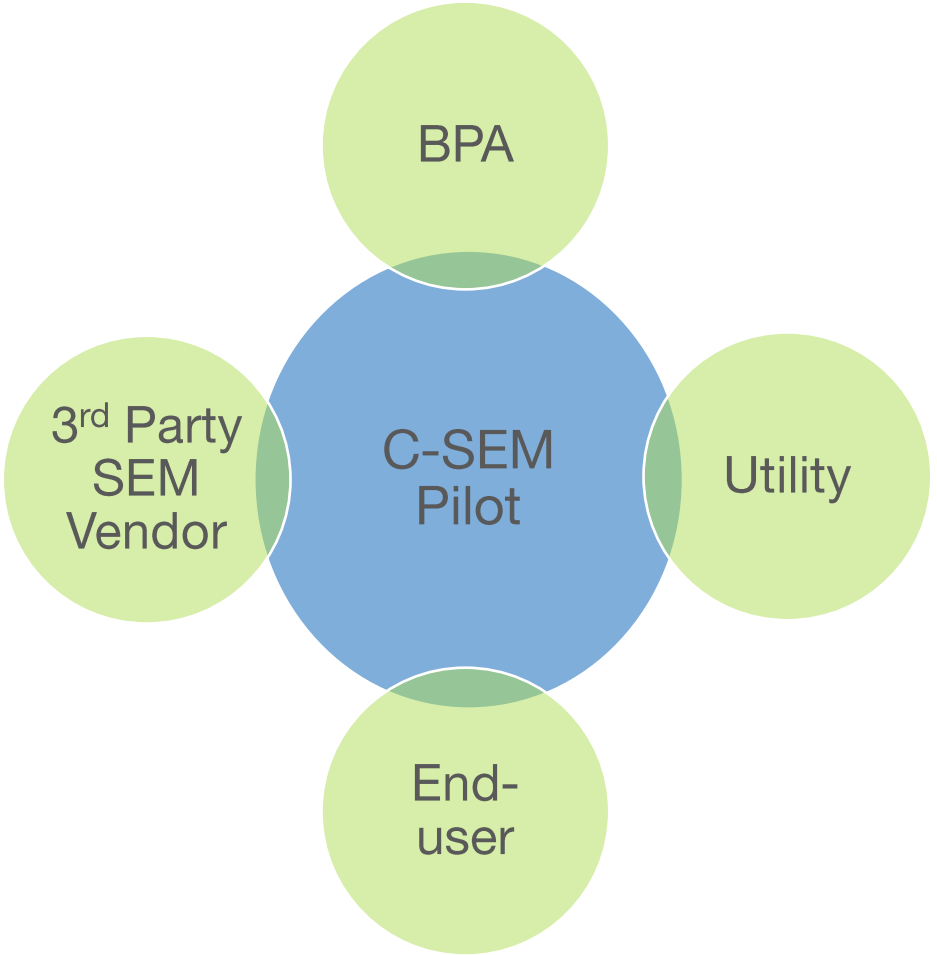
Reduce project implementation lead times

Develop a pipeline of future energy efficiency project opportunities

Earn an EPM payment in addition to energy savings incentives for completed energy efficiency projects.

Strategic Energy Management

- Strategic Energy Management (SEM) generated nearly 4 aMW in savings across 85 commercial and industrial sites in FY 2024/2025.
- First Quarter (Q1) FY 2026: BPA will be engaging USB and any interested utilities in providing feedback on a commercial SEM program pilot design.

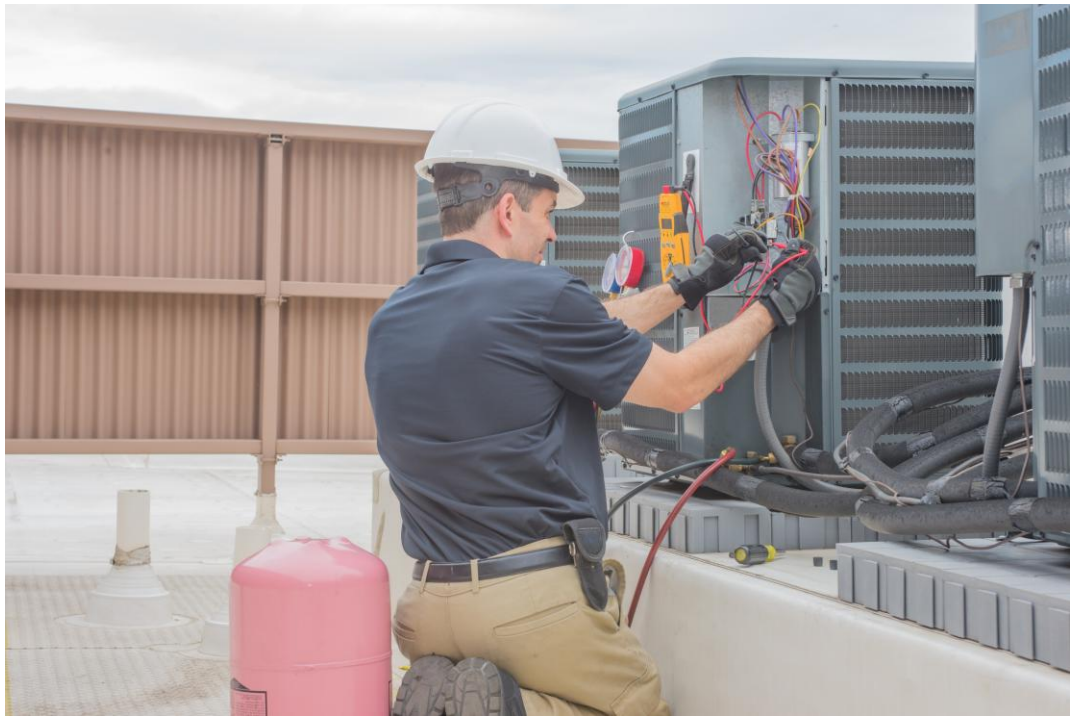


UES Portfolio Highlights

Energy Efficiency Implementation Manual 2026-2027

Commercial HVAC

1. Air-Source Heat Pumps.
2. Ductless Heat Pump (DHP).
3. Supply Air Fan Control.
   a. Variable Frequency Drive (VFD) on Air-Handler Unit.
   b. Advanced Rooftop Unit Control.
4. Heat Recovery Ventilators (HRV).
5. Package Terminal Heat Pumps (PTHP).
6. Connected Thermostats.
7. Variable Refrigerant Flow (VRF).
8. Demand Control Kitchen Ventilation.



- Equipment Measure
- Controls Measure

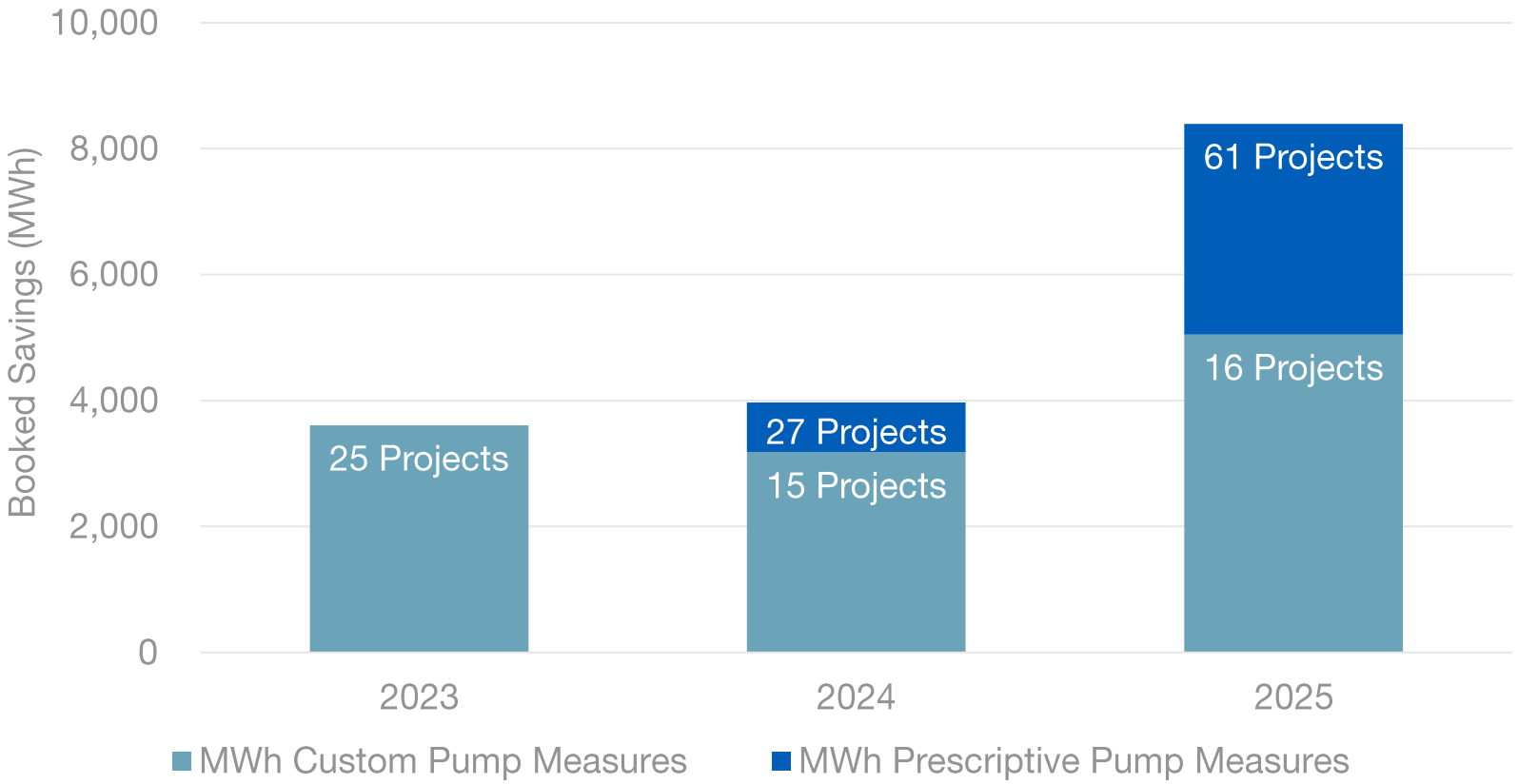
Commercial Refrigeration

1. Case Door Retrofit.
2. Floating Refrigeration Controls.
3. ECM Evaporator Fans.
4. Evaporator Fan Controls (NEW).

- Equipment Measure
- Controls Measure

Clean Water Pumps

1. VFD on Pumps.
2. Efficient Pumps.



- Equipment Measure
- Controls Measure

Questions or Comments?

Time for a break!

Energy Smart Industrial
Program Update

Jeff Bernacki

October 15, 2025

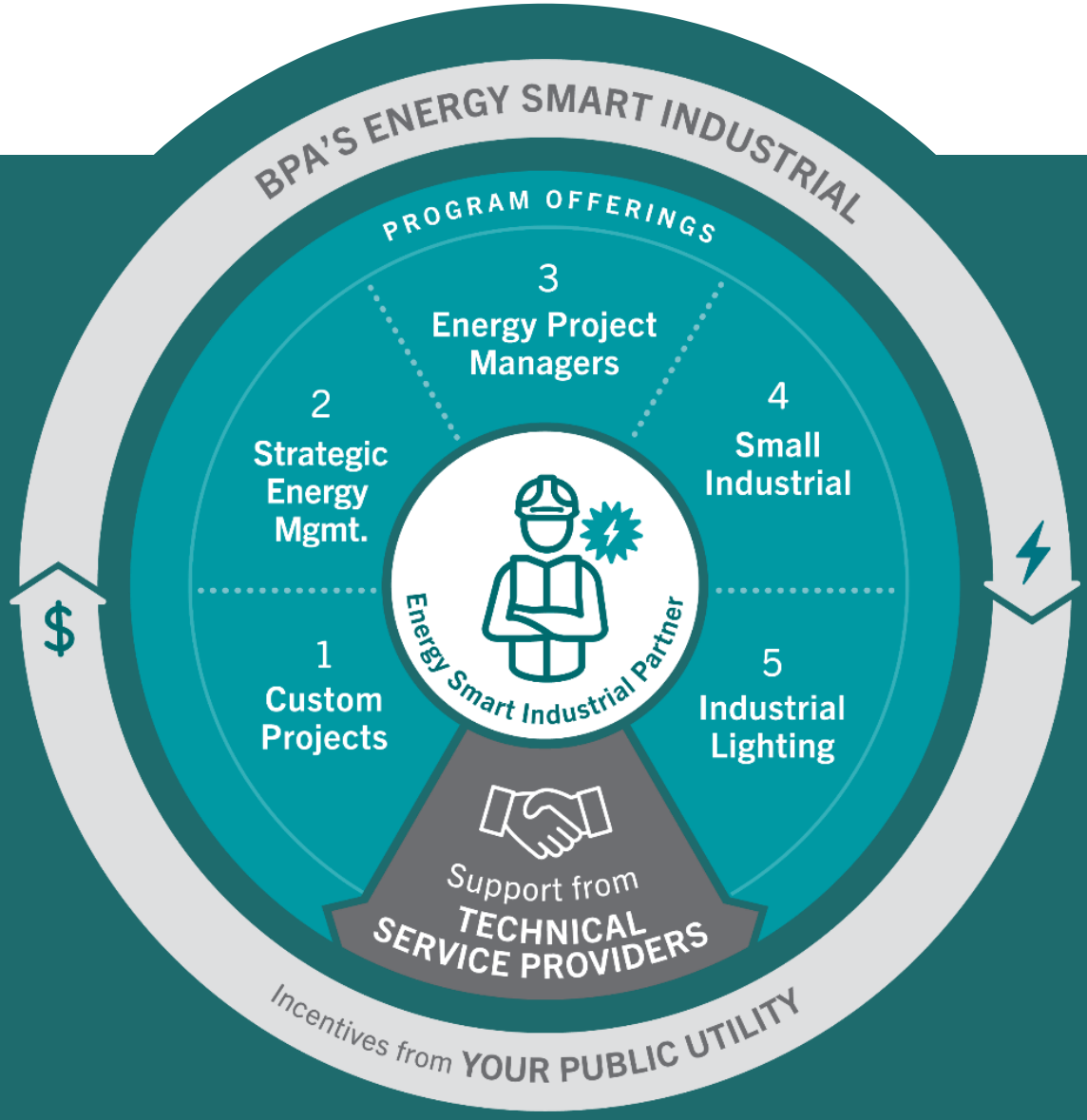
Energy Smart Industrial

What is the ESI Program?

Energy Smart Industrial

Assists the public utilities and the industries of the Pacific Northwest with ELECTRICAL energy efficiency.

- Provides technical expertise and cash incentives to implement energy efficiency projects.
- Serves industries of all types, sizes, and budgets (including wastewater).
- The ESIP serves as a single point of contact for utilities and industries.



ESIP Territories

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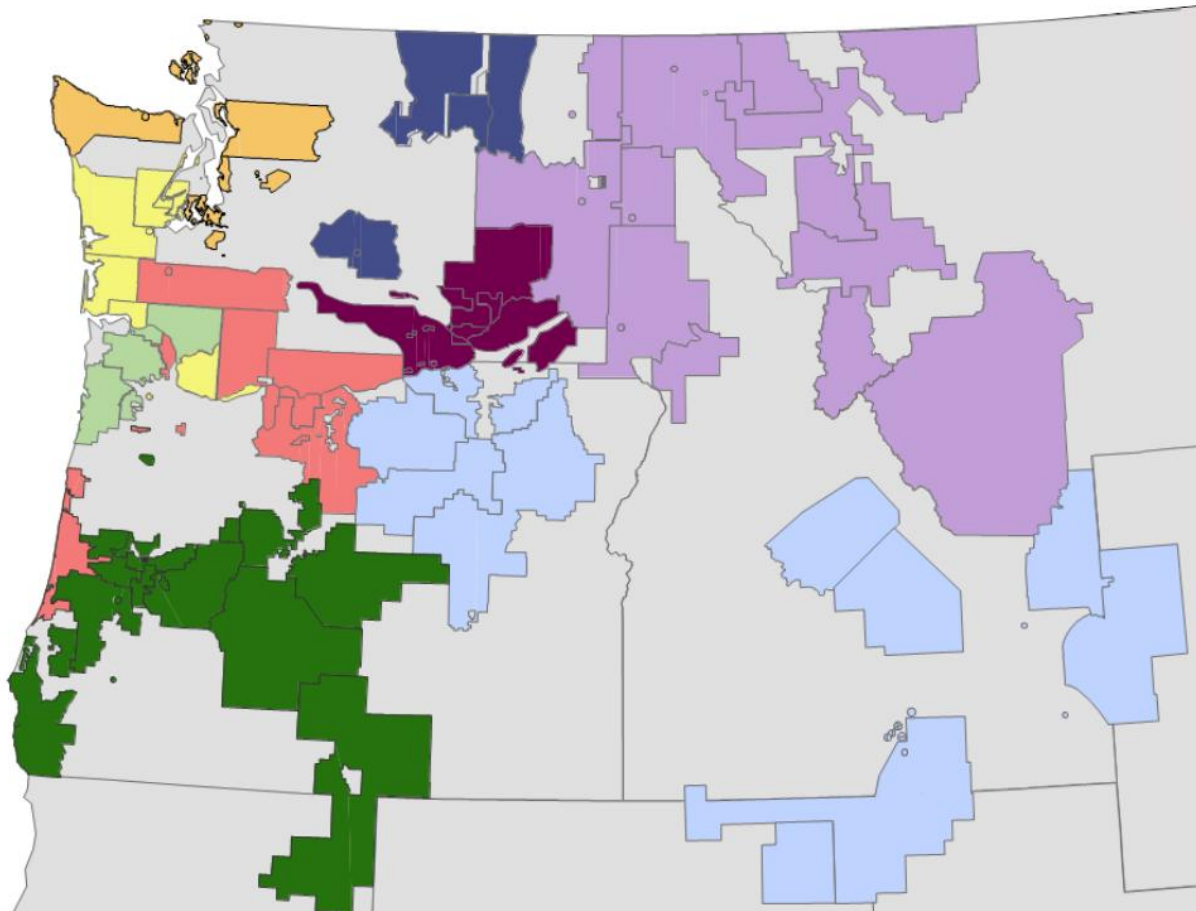
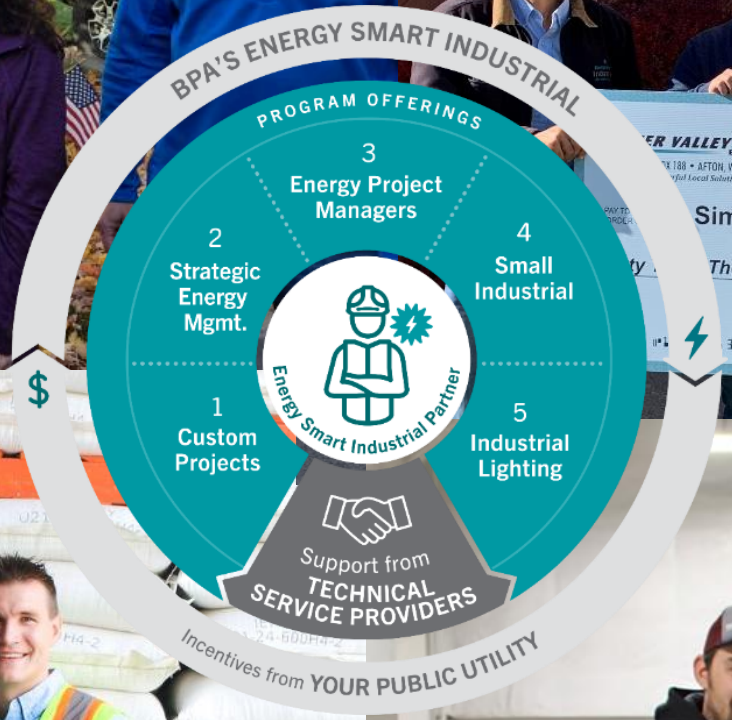


BPA'S ENERGY SMART INDUSTRIAL
PROGRAM OFFERINGS
3
Energy Project Managers
2
Strategic Energy Mgmt.
4
Small Industrial
1
Custom Projects
5
Industrial Lighting
Energy Smart Industrial Partner
Support from
TECHNICAL SERVICE PROVIDERS
Incentives from YOUR PUBLIC UTILITY


LOWER
VALLEY
DATE 10/20/21
Simplot - Smoky Canyon Mine
Thousand Seventy Three & 60/100
******$63,073.60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Industrial Lighting
Energy Smart Industrial Partner
Support from
TECHNICAL SERVICE PROVIDERS
Incentives from YOUR PUBLIC UTILITY


BENTON
RURAL ELECTRIC ASSOCIATION
DATE Sept 5, 2024
PAY TO THE ORDER OF: Columbia River Seed
$ 59,584 00
fifty-nine thousand five hundred eighty-four 00/100 DOLLARS
Benton REA
MEMO Energy Efficiency

Extending Strategic Energy Management's (SEM) Reach

Energy Smart Industrial

ESI is innovating to deliver a ***full SEM experience*** to industrial participants across a ***wide spectrum*** of scales and geographies.

Continuous Enrollment

Sites start when the time is right for them

Opportunity Identification

Multi-day tune-ups

or

One-day treasure hunts

Right-sized M&V

Engineering calculations

or

Whole-facility energy model

Flexible Learning

Peer learning webinars

and

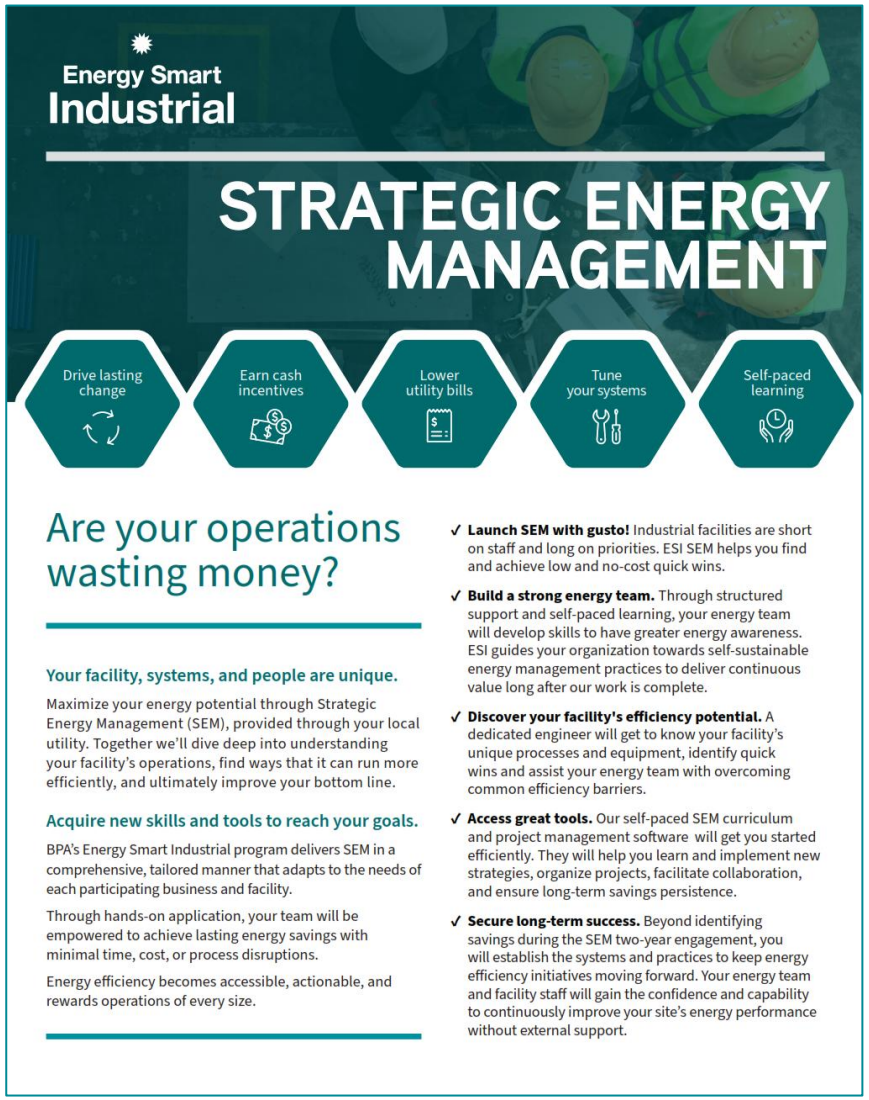
Self-paced learning

All SEM engagements include:

2-year performance period • Regular check-ins • Eligibility for Performance Tracking System

SEM Outreach Materials

Energy Smart Industrial



Data Center Resource Materials

Energy Smart Industrial

TRANSFORM YOUR DATA CENTER

Energy Savings That Power Your Bottom Line

- Earn up to $0.33/kWh of verified savings
- Achieve faster paybacks for efficient upgrades
- Reduce ongoing operational expenses
- Improve your Power Usage Effectiveness (PUE) metrics
- Strengthen your Environmental, Social, and Governance (ESG) performance

Your Partner in Data Center Excellence

Enhance your data center operations with technical support and utility rebates and incentives for qualifying new construction and retrofit energy saving projects. You can get paid to save energy while improving reliability and performance from your electric utility and the Bonneville Power Administration's Energy Smart Industrial (ESI) Program.

Contact your utility for specific eligibility details.

Energy Efficient Upgrades

Controls & Monitoring

- Airflow management systems
- Data center infrastructure management (DCIM) implementation
- Real-time monitoring solutions

Cooling Optimization

- Free cooling solutions
- High-efficiency computer room air conditioning and air handling (CRAC/CRAH) units
- Hot/cold aisle containment
- Variable speed drives for fans and pumps

IT Equipment

- Server consolidation
- Storage optimization

Power Infrastructure

- Advanced power distribution
- High-efficiency engine heaters
- High-efficiency uninterruptible power supply (UPS) systems
- Smart power distribution units (PDUs)
- Transformer upgrades

> "I was really impressed with the skills the ESI team brought to the table. They knew exactly what to monitor and check. They handled the proposal and the incentive paperwork. And they made sure the process was fast and seamless."
>
> **Regional Manufacturing Manager**

Why Act Now?

- Rising energy costs
- Growing pressure for sustainability
- Competitive advantage in your market
- Incentives are available from your public utility!

4 Easy Steps

1. **Confirm Eligibility**
   Contact your utility for eligibility and available incentives.
2. **Project Design**
   The ESI team can conduct a scoping or project assessment and report the energy efficiency measures with detailed price quotations for your experts to prepare a detailed design.
3. **Implementation**
   Once the project design is received, you choose the qualified contractor to implement the plan successfully.
4. **Verification**
   The ESI team verifies the savings based on your project's design, while your utility processes the incentive payment.

Get Started Today

Contact your utility or Energy Smart Industrial Partner.

Energy Smart Industrial

Bonneville Power Administration

Energy Smart Industrial is sponsored by Bonneville Power Administration and its Northwest Utilities.

Energy Smart Industrial

FOCUS ON FRESH TASTE, NOT ENERGY WASTE

New plant saves millions from facility-wide projects

RESER'S FINE FOODS

Project Overview

Reser's Fine Foods production plant in Pasco, Washington.

Reser's Fine Foods built a new production plant in Pasco, WA. From the early stages of design, Reser's and their consultants partnered with ESI to ensure an optimally efficient design. Since, they have continued their energy efficiency progress with a range of additional projects.

Refrigeration

Reser's included a heat recovery system and upgraded essentially every component of the refrigeration system including efficient compressors, evaporators, condensers, and chillers.

Lighting

Reser's installed efficient LED lighting throughout both office and production spaces.

Equipment

And Reser's upgraded many of the water pumps, boiler fans, and an air compressor to variable speed.

Annual Results

7,180,000 kWh
First Year Savings

$360,000
Avoided Energy Cost

3,340 Tons CO_2
Scope 2 Emission Reduction

Bonneville Power Administration | Energy Smart Industrial | Franklin PUD – The Power is Yours

What ideas do you have to save energy?

Jake Wiskerchen, Reser's Fine Foods, 509.542.2500
Maurilio Lopez, Franklin PUD, 509.546.5946
Austin Rogers, ESI Partner, 425.417.8532

A HEALTHY HARVEST OF ENERGY SAVINGS

A blend of SEM and capital projects reaps rewards

LambWeston

Project Overview

In 2023, the Lamb Weston vegetable processing plant in Paterson, WA completed several efficiency projects with Benton REA and Energy Smart Industrial. The plant completed a 2-year Strategic Energy Management (SEM) engagement, installed a VFD air compressor and cycing refrigerated dryer, installed VFDs on many pumps throughout the plant, and upgraded a pneumatic conveying system to a mechanical conveying system.

Lamb Weston received nearly $68,000 in rebate incentives from Benton REA.

Optimized Settings

The plant identified the low-cost opportunity to raise the freezer suction pressure. This allows the refrigeration compressors to use less energy without impacting the space temperature.

Upgraded Compressor System

The plant installed a VFD compressor that improved part-load efficiency and an air dryer that cycles on/off based on demand.

Added Pump VFDs

As part of plant-wide electrical upgrades, the plant installed VFDs on many pumps that had previously been throttled and ran continuously at full speed.

Annual Results

830,800 kWh
First Year Savings

$41,500
Avoided Energy Cost

386 Tons CO_2
Scope 2 Emission Reduction

Energy Smart Industrial | BENTON RURAL ELECTRIC ASSOCIATION | Bonneville Power Administration

What ideas do you have to save energy?

John Timmons, Lamb Weston, 509.875.2734
Chad Smith, Benton REA, 509.781.6727
Austin Rogers, ESI Partner, 425.417.8532

"RUN-AROUND" FOR ENERGY SAVINGS

Stategic Energy Management and Capital Projects Help Save Energy

framatome

Project Overview

The Uranium Recovery Facility's HVAC unit with exhaust heat recovery loop.

HVAC is a critical system at Framatome's new Uranium Recovery Facility, but their energy team has been committed to sustainable operation and helped drive down the operating costs through energy efficiency.

Added Exhaust Heat Recovery

The "run-around" loop uses exhaust air to pre-heat the outside air intake in the winter and to pre-cool the intake in the summer, achieving energy savings year-round. The energy team fine-tuned the heat recovery controls during an SEM cohort to maximize energy savings.

Installed Fan VFDs

Variable frequency drives (VFDs) on the facility's fans ensure that airflow and pressure requirements are met efficiently.

Annual Results

336,000 kWh
First Year Savings

$15,000
Avoided Energy Cost

156 tons CO_2
Scope 2 Emission Reduction

What ideas do you have to save energy?

Dawn Senger, City of Richland, 509.942.7436
Austin Rogers, ESI Partner, 458.212.3740

Richland | Energy Smart Industrial

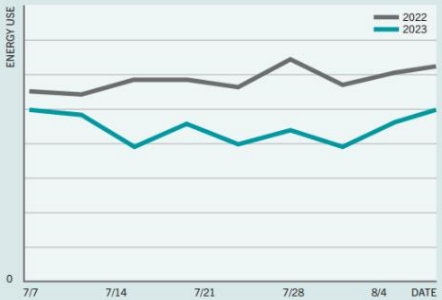
Energy Smart Industrial

A SMARTER WAY TO KEEP IT COOL

Custom refrigeration projects bring more savings than expected

FruitSmart™

Project Overview



Fruitsmart operates a fruit processing plant and a cold storage in Prosser, WA. In 2023, they implemented several projects to improve refrigeration energy efficiency. The installed measures produced a substantial drop in year-over-year energy—more than originally estimated.

Controls Upgrade

Installing a central refrigeration control system enables more efficient operation in addition to being a huge time-saver for the refrigeration team as they are able to monitor from their office and even after hours from home.

Condenser and Evaporator Fan VFDs

The VFDs allow the fans to run smoothly at lower speeds and lower power rather than cycling fans on and off. This also improves cold storage temperature control.

Annual Results

+1 Million kWh
First Year Savings

90 Avg. NW Homes Powered by Energy Saved

716 tons CO_2
Scope 2 Emission Reduction

Bonneville Power Administration | Energy Smart Industrial | BENTON PUD

What ideas do you have to save energy?

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Austin Rogers, ESI Partner, 425.417.8532

ENERGY SAVINGS REPORT

Capital Projects Improve Energy Efficiency and Future Capacity

PORT OF SUNNYSIDE

Project Overview

TOP LEFT: Recirculating pump VFDs. TOP RIGHT: Membrane skid. BOTTOM LEFT: One of the two installed turbo compressors. BOTTOM RIGHT: Incentive giant check ceremony image provided by the Sunnyside Sun.

The Port recently increased the capacity of their industrial wastewater treatment plant, investing in an energy-efficient design to lower operating costs.

Upgraded Turbocompressors

This project consisted of replacing five positive displacement lobe blowers with two more efficient Sulzer HST 350 hp turbocompressor blowers. And with the addition of variable frequency drives (VFDs) on the turbocompressors even greater efficiency was achieved.

Efficient Filtration Design

The Port was presented with several design options and ultimately invested in a system that enables the pumps to meet flow requirements with less energy than alternative designs. In addition, VFDs increase the efficiency of the pumps during operation, maximizing system energy savings.

Annual Results

+2,200,000 kWh
First Year Savings

+$110,000
Avoided Cost

+1,000 tons CO_2
Scope 2 Emission Reduction

What ideas do you have to save energy?

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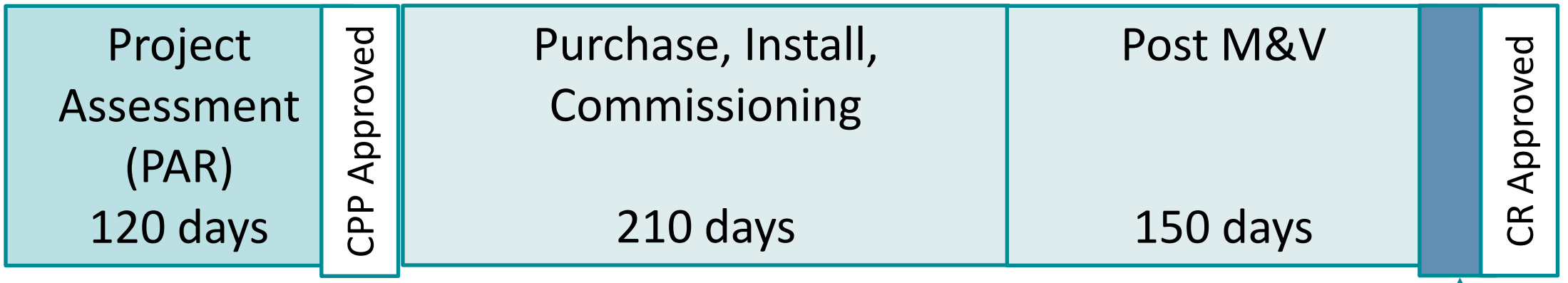
Chad Smith, Benton REA, 509.781.6727
Austin Rogers, ESI Partner, 458.212.3740

Benton REA | Energy Smart Industrial

Custom Project Lead Time

Energy Smart Industrial

Average time between CPP and CR approval
360 days



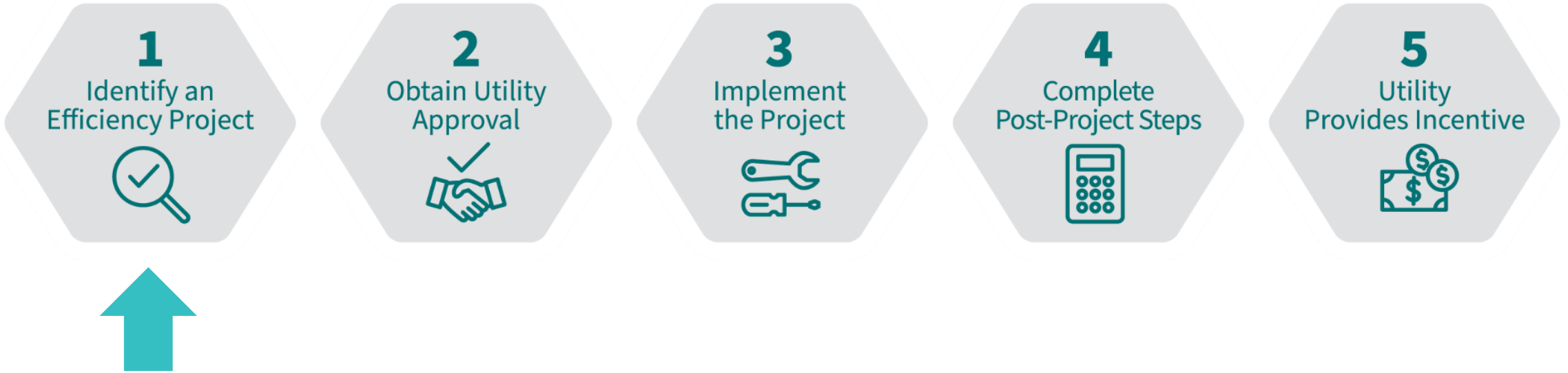
Includes data collection, analysis, and Completion Report

BEETS
BPA Energy Efficiency Tracking System

Utility review and submittal

ESI Custom Project Process

Energy Smart Industrial



#1 – Call us when you hear about an opportunity

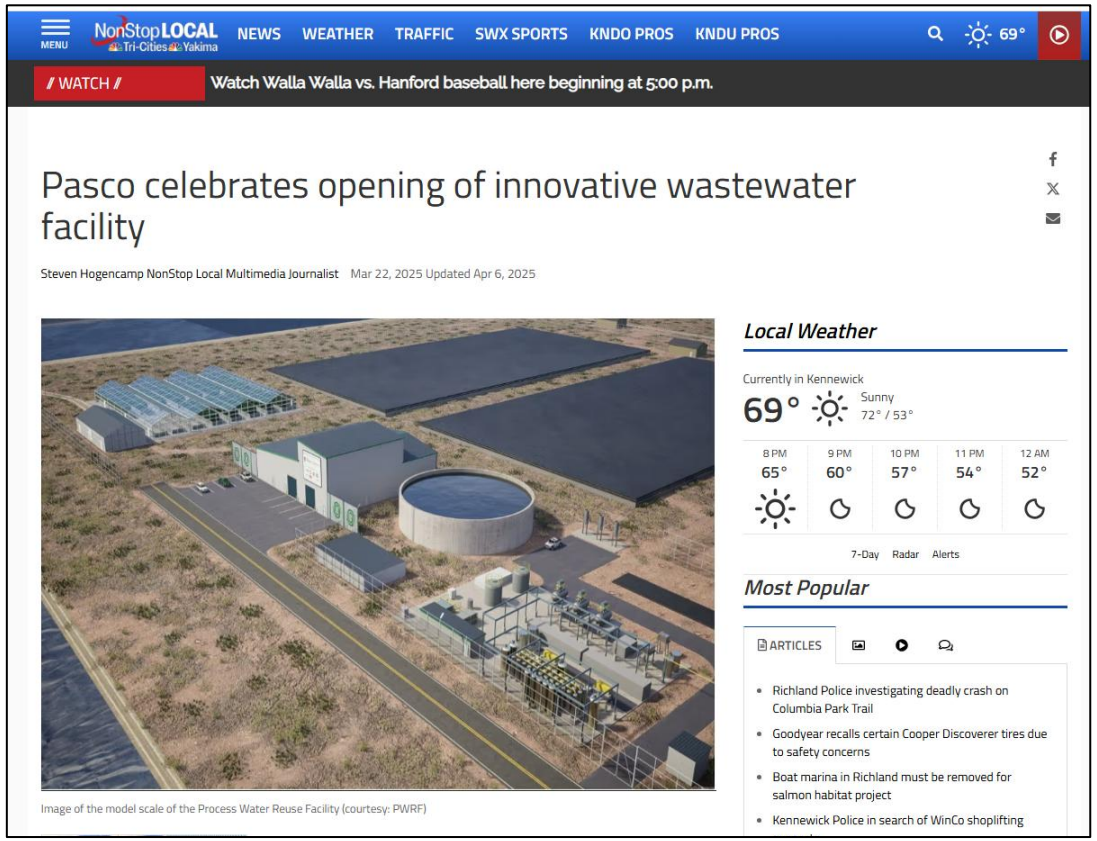
#2 – Share Customer List with ESIP

Project Lead Reminder

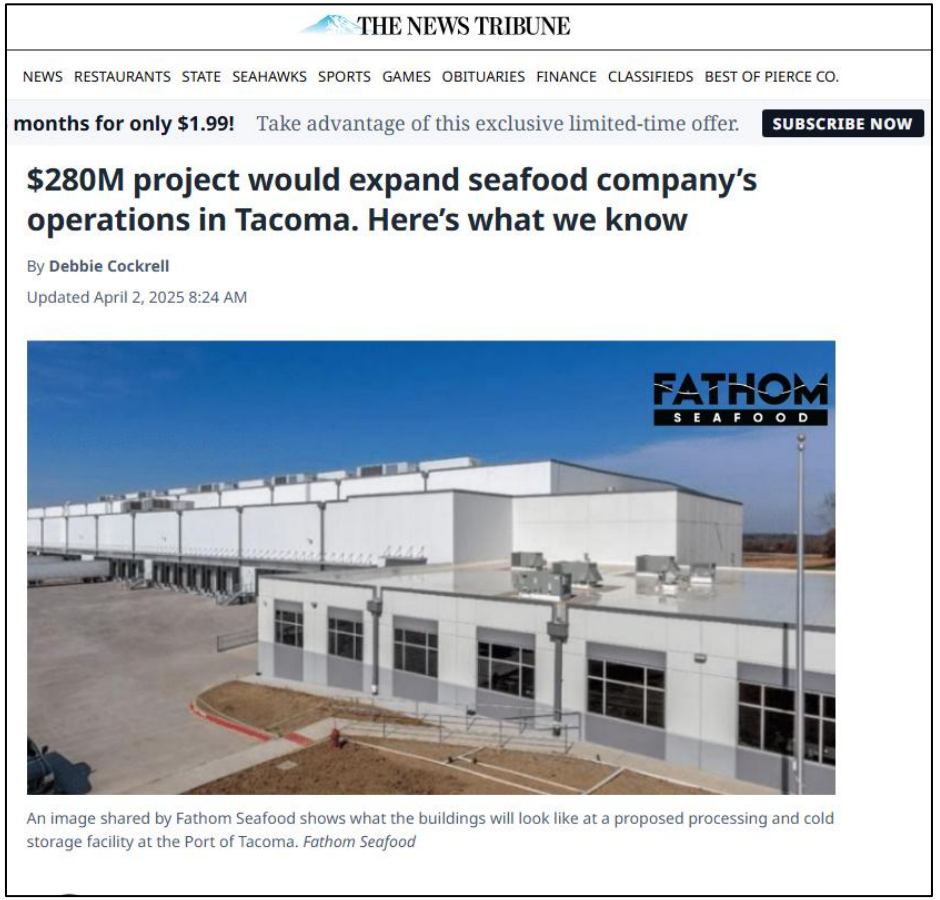
Energy Smart Industrial

Let your ESIP know about project leads: new construction, expansions, etc.

Spring 2025 M&V – 2.3M kWh



2026 – 2027



Thank you!

Energy Smart Industrial

ComfortReady HOME

Real Comfort. Real Savings. Real Smart.

Program Overview

October 2025

Bonneville POWER ADMINISTRATION

Comfort Ready Home is funded by Bonneville Power Administration and Northwest Utilities.

ComfortReady HOME

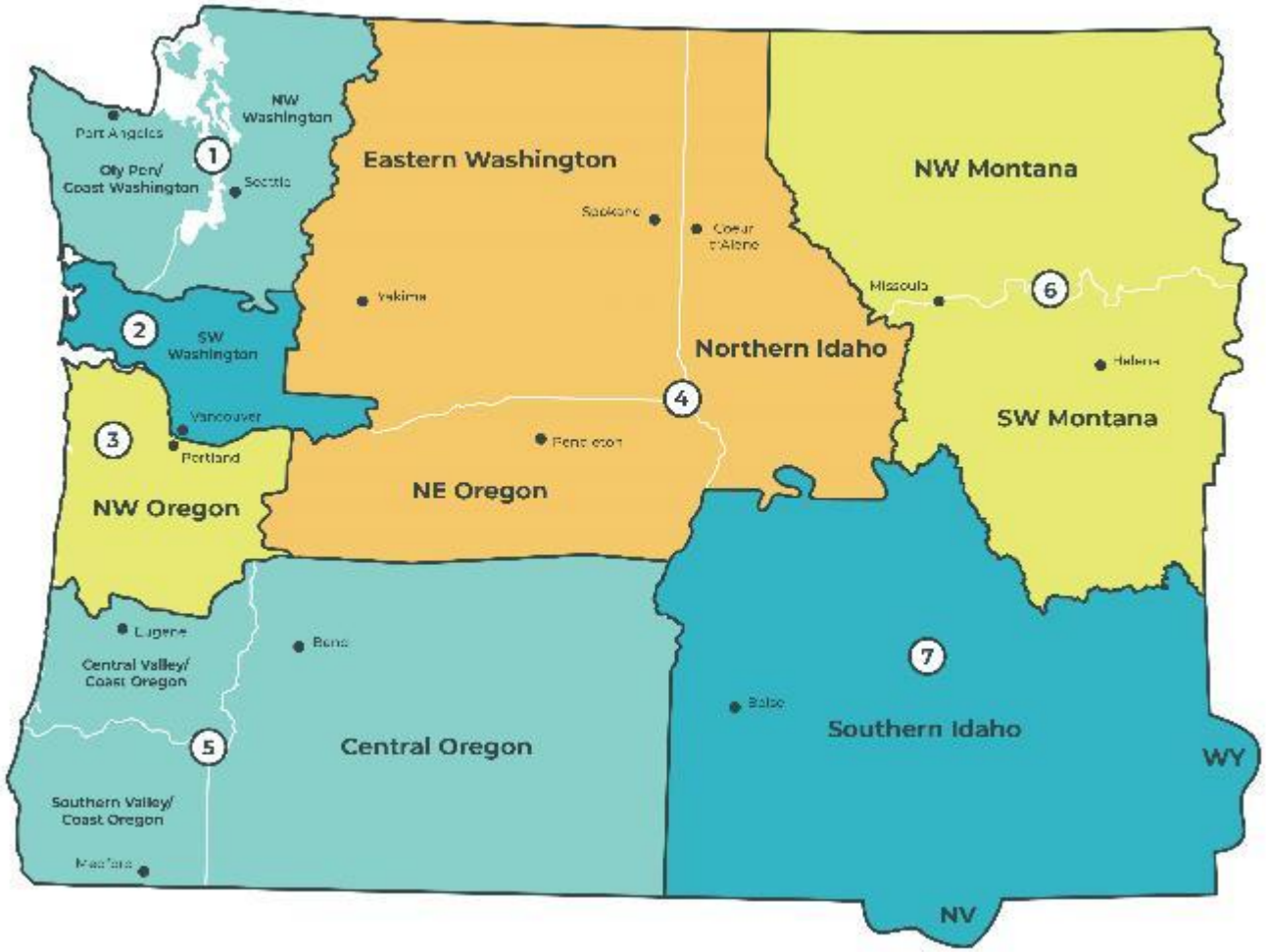
Homeowners

Contractors

Utilities

Comfort Ready Home | Field Team

ComfortReady HOME



1 **Miesha Yagle**
NW Washington
Olympic Peninsula

2 **Nick Phillips**
SW Washington

3 **John DeLance**
NW Oregon

4 **Aaron Lazelle**
NE Washington
Northern Idaho

5 **Mike Stothers**
Central Oregon
Southern Oregon
Northern California

6 **Scott Mayfield**
Montana

7 **Dean Paler**
Southern Idaho
Nevada
Wyoming

John Heflin
Outreach Specialist

Mike Hughes
Field Services Manager

Cyrus Collins
Program Manager

About the Program

Comfort Ready Home is a partnership between Bonneville Power Administration and its customer utilities.
Our goal is to increase the number of residential energy-efficient insulation, windows, HVAC, and water-heating installations in the Northwest.

We aim to achieve this by connecting homeowners, contractors and utilities and providing each with the tools, resources, and support they need to prioritize energy efficiency.

BETWEEN JULY 1, 2024, AND JUNE 30, 2025, WE:

Helped **2,300** end users find nearby qualified contractors

Received **141K** views on Youtube

91 utilities supported

64K website views

Enrolled **519** contractors

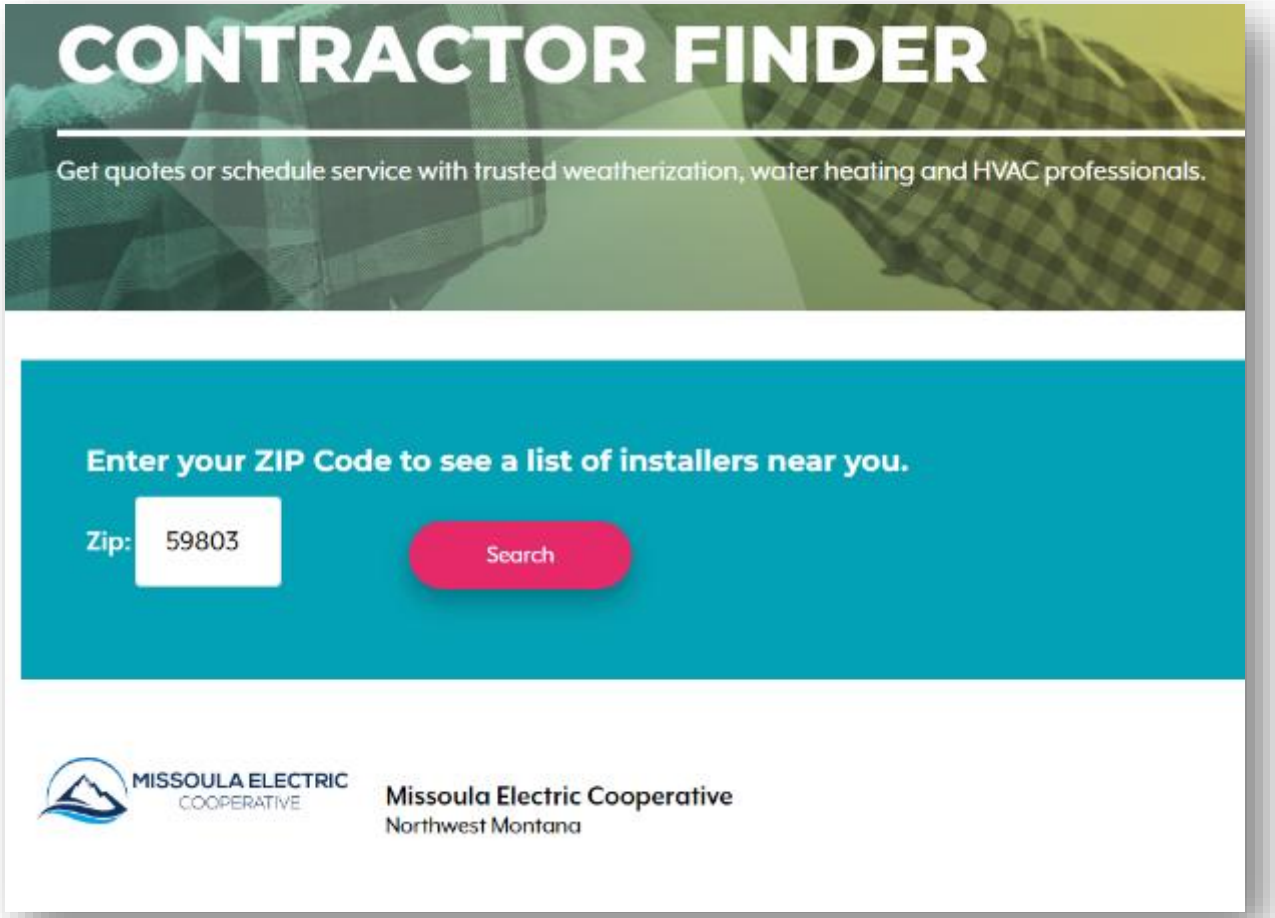
Trained **827** contractors and utility staff in person

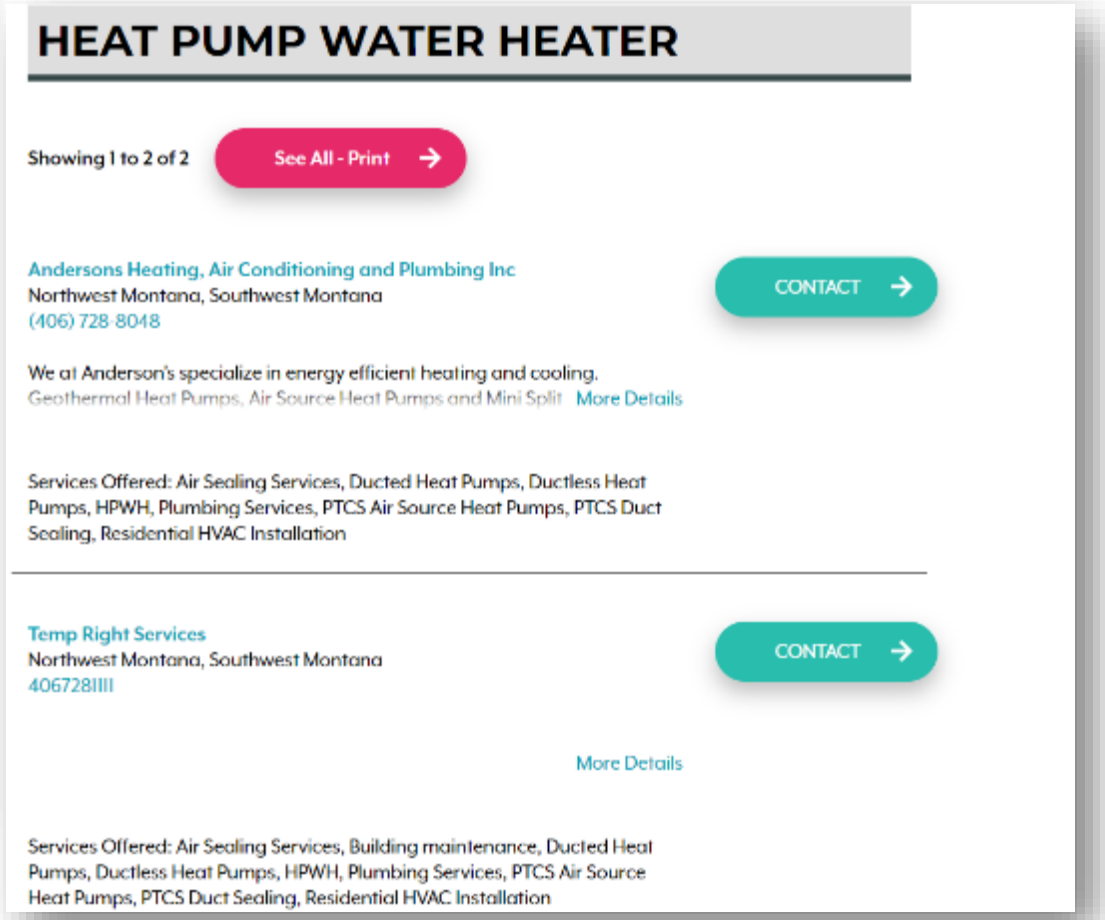
Rewarded **396** heat pump water heater installations

Hosted **13** workshops

Take Advantage of the Contractor Search

ComfortReady HOME





On-Site Workshops

ComfortReady HOME

Small group contractor trainings.

- Heat Pump Water Heaters.
- Home as a System.
- Wall Insulation.
- Heat Pump Best Practices.
- Duct Sealing Best Practices – NEW!

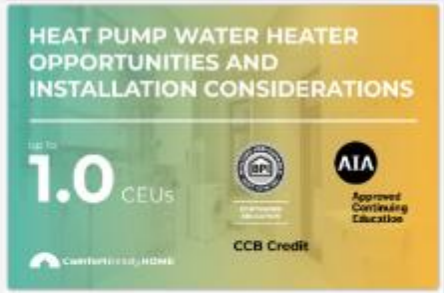
On-Demand Training

ComfortReady HOME

- Insulating Sloped Ceilings
- Attic Insulation
- Floor Insulation

- Cold Climate Heat Pumps
- Manufactured Home Insulation
- Site Built Wall Insulation

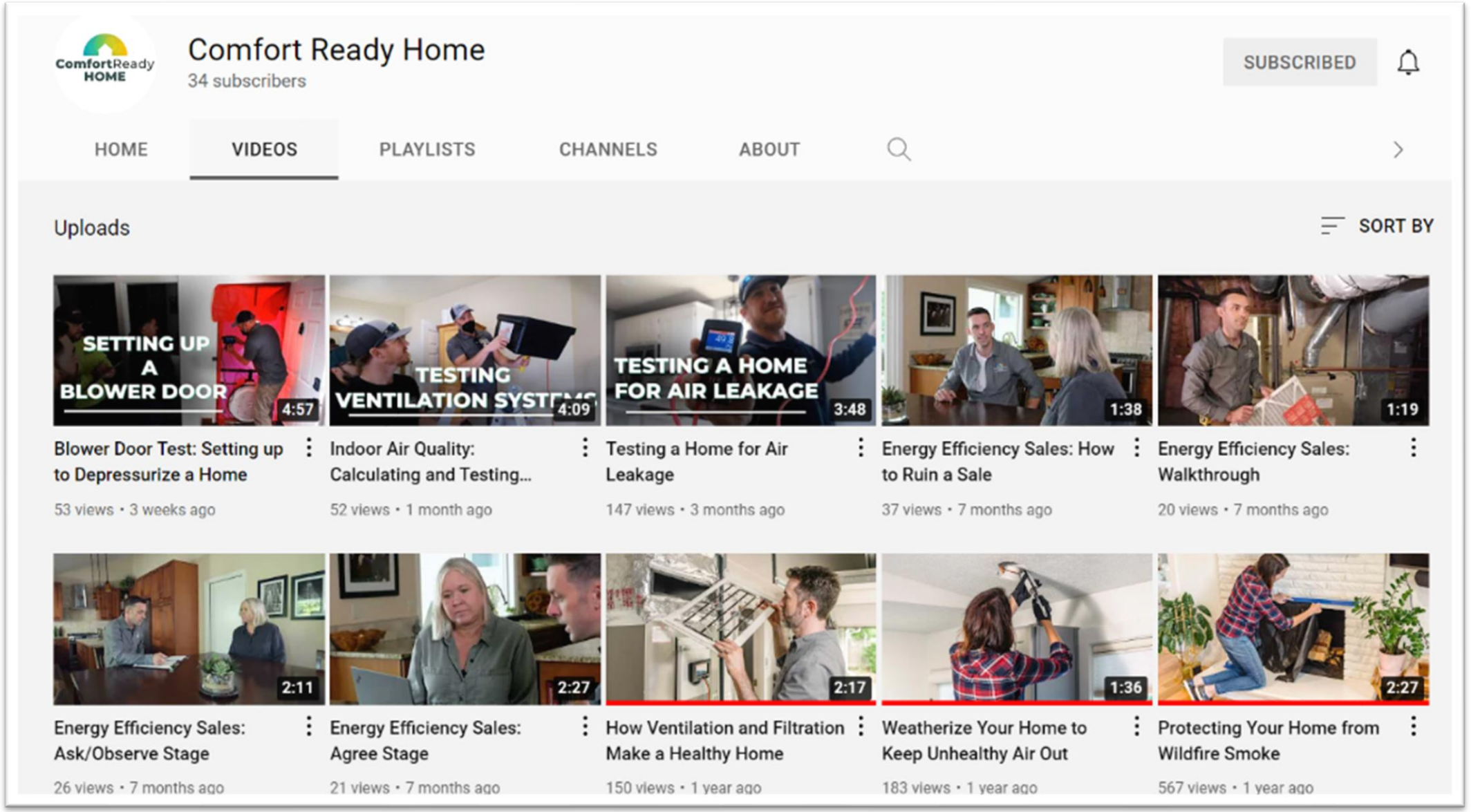
Simple and Effective Floor Insulation



Heat Pump Water Heater Opportunities + Installation Considerations (CRH-EiQ215)

Making the Most of HVAC Opportunities

Training and Educational Videos



Customizable Video – Rebate Roundup

ComfortReady HOME

Module Options

- Introduction
- Heat Pump Water Heaters
- Ductless Heat Pumps
- Air Source Heat Pumps
- Insulation
- Duct Sealing
- Windows
- Multifamily
- Outro

ComfortReady HOME

BUILDING A STRONGER PROGRAM

The 2025 Contractor Survey

- Contractors who engage with Comfort Ready Home are highly satisfied.
- Overall awareness and usage of services is around 50%.
- We need to continue building pathways that make the Program more visible.
- 97% of respondents who used the Program's training and technical resources reported a positive experience.
- 71% of participating plumbers said the Greener Water Heater Promotion helped them sell more heat pump water heaters.
- 8 contractors began offering HPWHs for the first time.
- Contractors want help reaching customers and rebate information.

LOOKING FORWARD

The Comfort Ready Home program is built upon a strong foundation of technical expertise and customer service. This has allowed us to expand and improve the support provided to utilities and contractors through the last year.

Looking ahead, we will continue to focus on providing and improving on our existing offerings, while also expanding to meet the changing needs of utilities and contractors.

Goals for 2025–2026 include:

1. **Engage 95 utilities in the Utility Program Plan process**
2. **Provide 10 trainings throughout the region**
3. **Help utilities, contractors, and end-users navigate a changing incentive landscape**
4. **Reach 150,000 users via the Program website and YouTube channel**
5. **Develop Duct Seal Best Practices small group workshop curriculum**

We’re excited to build on the progress made over the past year and to continue providing valuable resources and expertise to our utility and contractor partners.

Thank You!

Please contact your
Energy Efficiency Representative

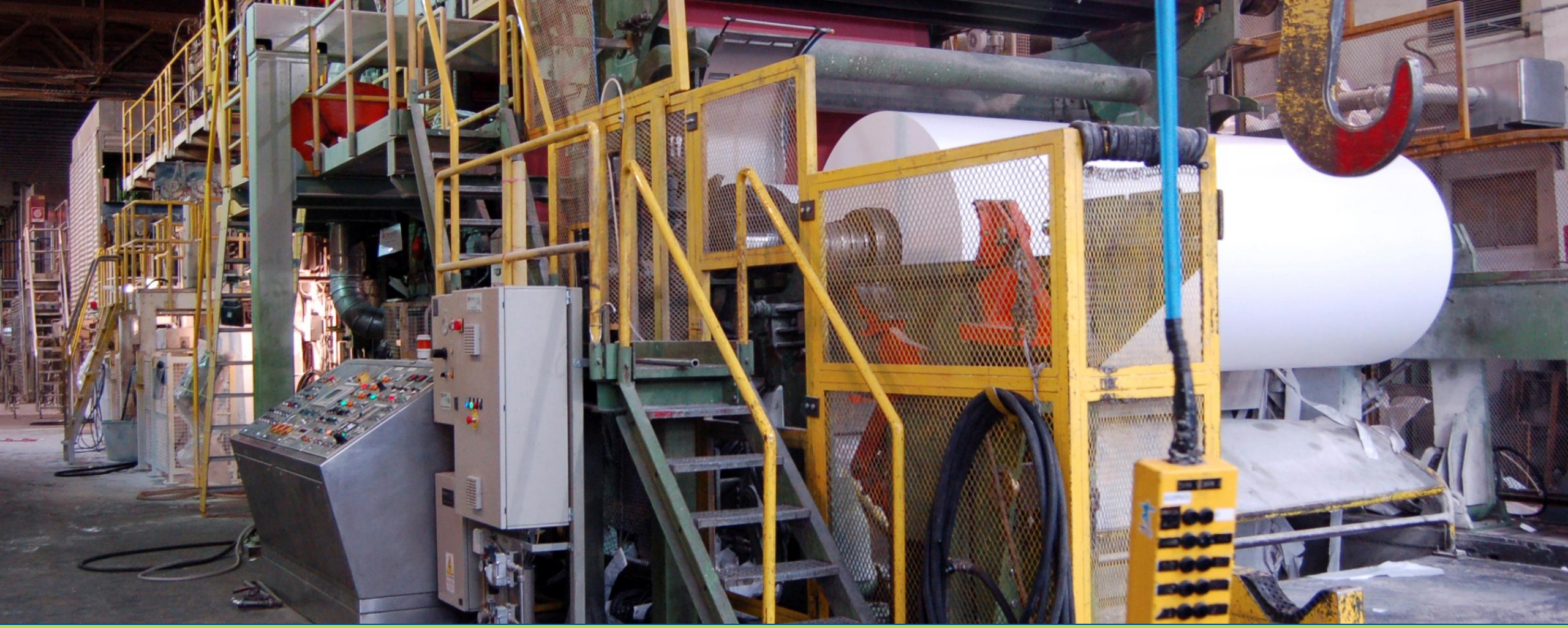
or

Cyrus Collins
Program Manager
cyrus.collins@evergreen.energy
(503) 705-7039

ComfortReady HOME

Bonneville POWER ADMINISTRATION

Comfort Ready Home is funded by Bonneville Power Administration and Northwest Utilities.



Custom Projects: Best Practices and Lessons

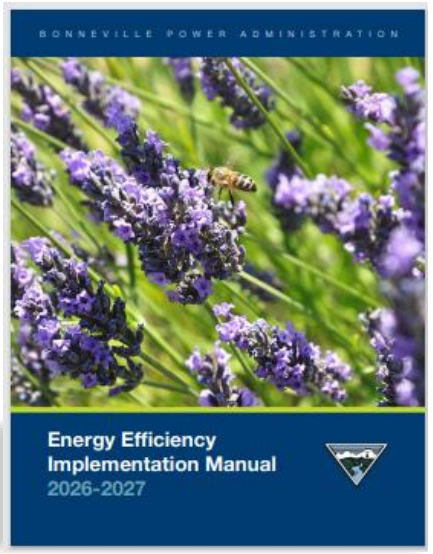
UTILITY ROUNDTABLES 2025

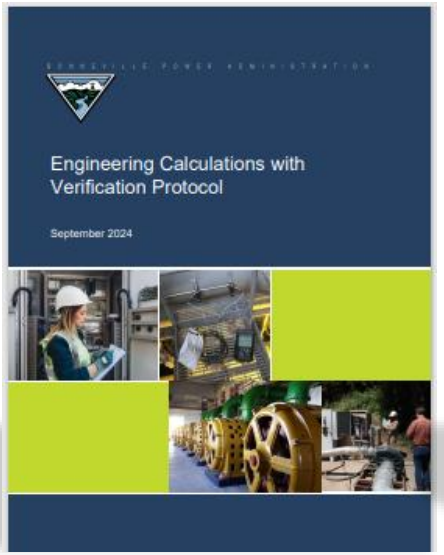
Oct. 15-16, 2025

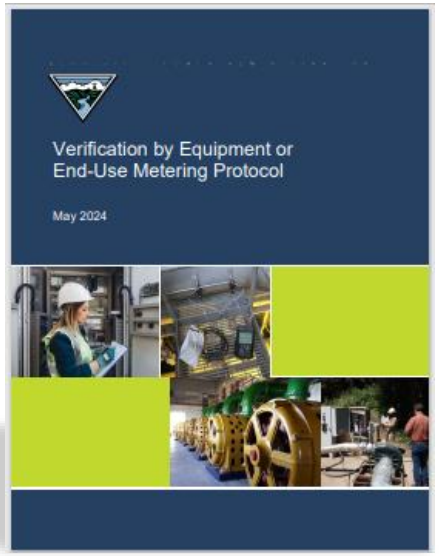
Custom Project Overview

- Unit Energy Savings (UES) vs. Custom.
- Commercial versus Industrial.
- General Requirements.
- Custom Project Process.
- Project Success Story.
- Energy Smart Industrial (ESI).

UES vs Custom







- Standalone measures – Pre-determined Savings & Incentives are on a per-unit basis.
- If eligible, UES is required instead of custom project.
- Streamlined to be quick and easy.
- BEETS bulk upload.

- Site specific savings.
- Work with BPA Customer Service Engineer or Energy Smart Industrial Partner (ESIP).
- May require energy audit and/or billing analysis.
- Entered in BEETS by CSE or ESIP.

Commercial vs Industrial

- Office, retail, and assembly.
- Grocery and food service.
- Hospital and healthcare.
- Jails and prisons.
- K-12 schools and higher education.
- Lodging, residential care, and dormitories.
- Institutional buildings (i.e., government, fire station, municipal library, etc.).
- Warehouses (except manufacturing and refrigerated process loads).

CONTACT YOUR CSE!

Energy Smart Industrial
BPA ENERGY EFFICIENCY

NOT SURE? Contact your EER!

- Manufacturing plants.
- Municipal utility services water supply and wastewater treatment.
- Wood and paper products industry.
- Food processing.
- Chemical processing.
- Data centers and some telecom facilities.
- Mining.
- Transportation and rail infrastructure.
- District Heating & Cooling systems.

CONTACT YOUR ESIP!

General Requirements

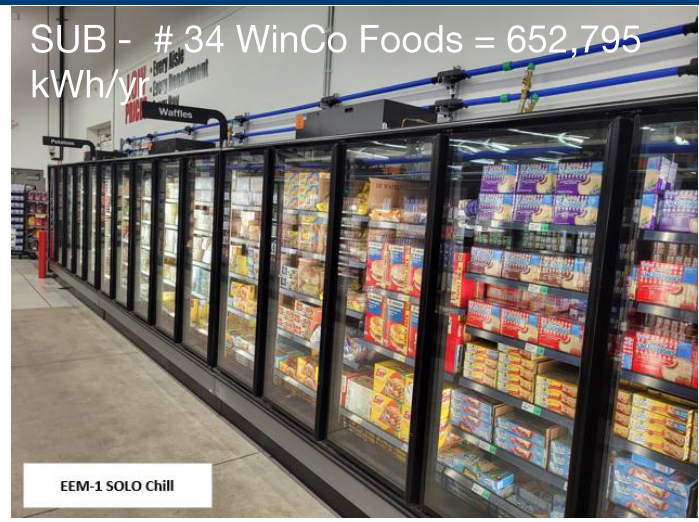
- No fuel switching, exception for major renovation projects with new all-electric baseline.
- Limited to one sector per project.
- Cost-effectiveness screen benefit/cost (B/C) ratio.
- None if ≤ 200,000 kWh (≤ 800,000 kWh for Utility Distribution).
- B/C ratio must be ≥ 0.50 if > 200,000 kWh (> 800,000 kWh for Utility Distribution).
- Provide incremental or total cost documentation.

Coos-Curry Electric: Gold Beach HS HVAC = 89,173 kWh/yr


Emerald PUD: Pleasant Hill Fire Station UES = 5.557 kWh/yr

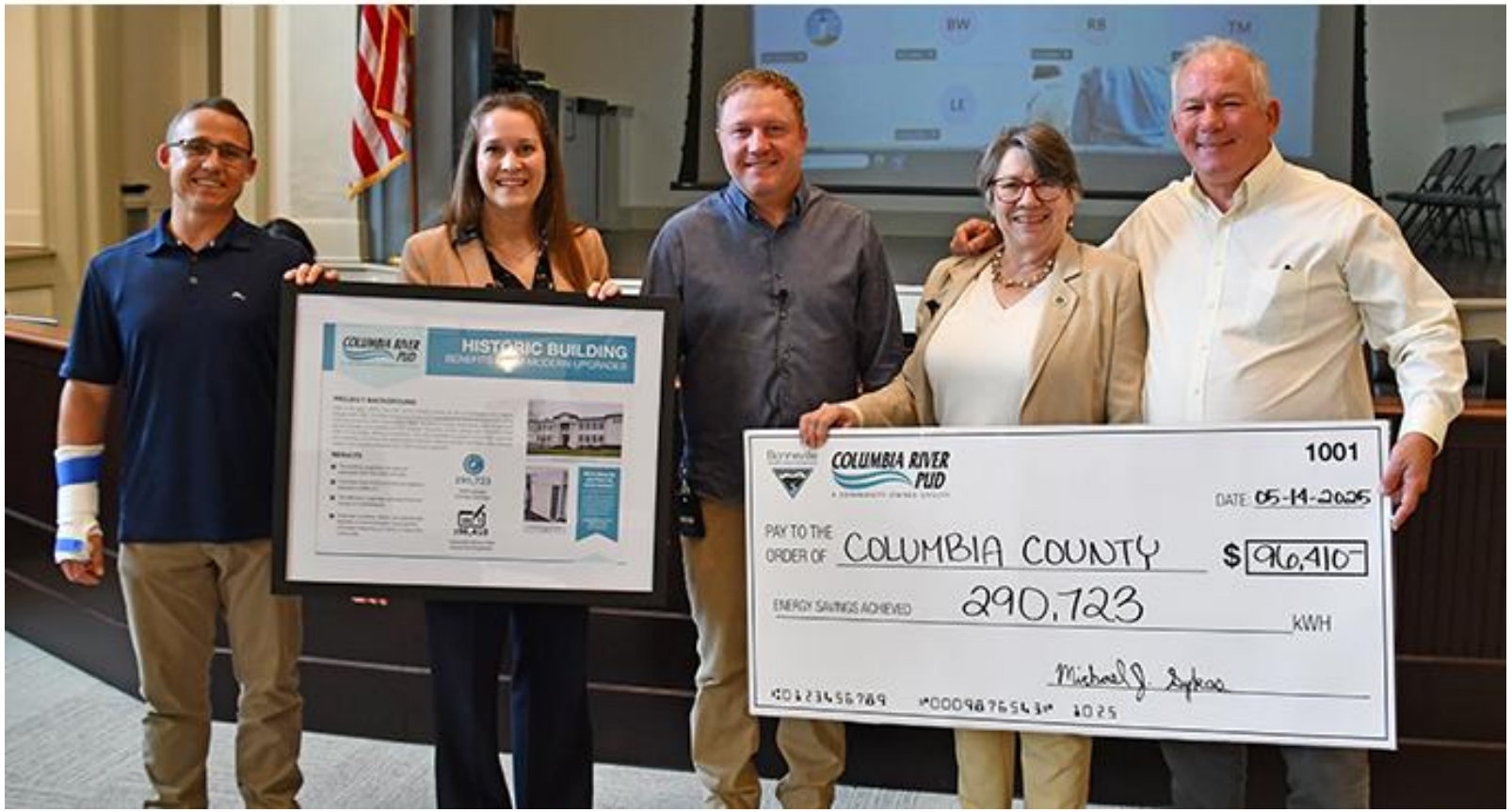
Custom Process

1. Identify the project.
2. Contact your Customer Service Engineer (CSE) with details.
   May conduct energy audit, metering, and bill analysis.
3. Obtain project cost documentation.
4. End-user determines if the project moves forward and CSE enters project proposal in BEETS.
5. Implement the project.
6. CSE enters completion report in BEETS.
   May include metering, billing analysis, and modeling of savings.
7. BEETS workflow: Utility and BPA reviews and approval.
8. Submit invoice.



Custom Project Success Story

Energy efficiency upgrades breathe new life into 106-year-old historic St. Helens building



BPA awarded CRPUD $96,410 Energy Efficiency incentive payment for the John Gumm Building Renovation project

From left to right:

Mike Arend, CRPUD Energy Services

Columbia County Commissioners: Kellie Jo Smith, Casey Garrett, and Margaret Magruder

Michael Sykes, CRPUD GM

Major Historic Renovation

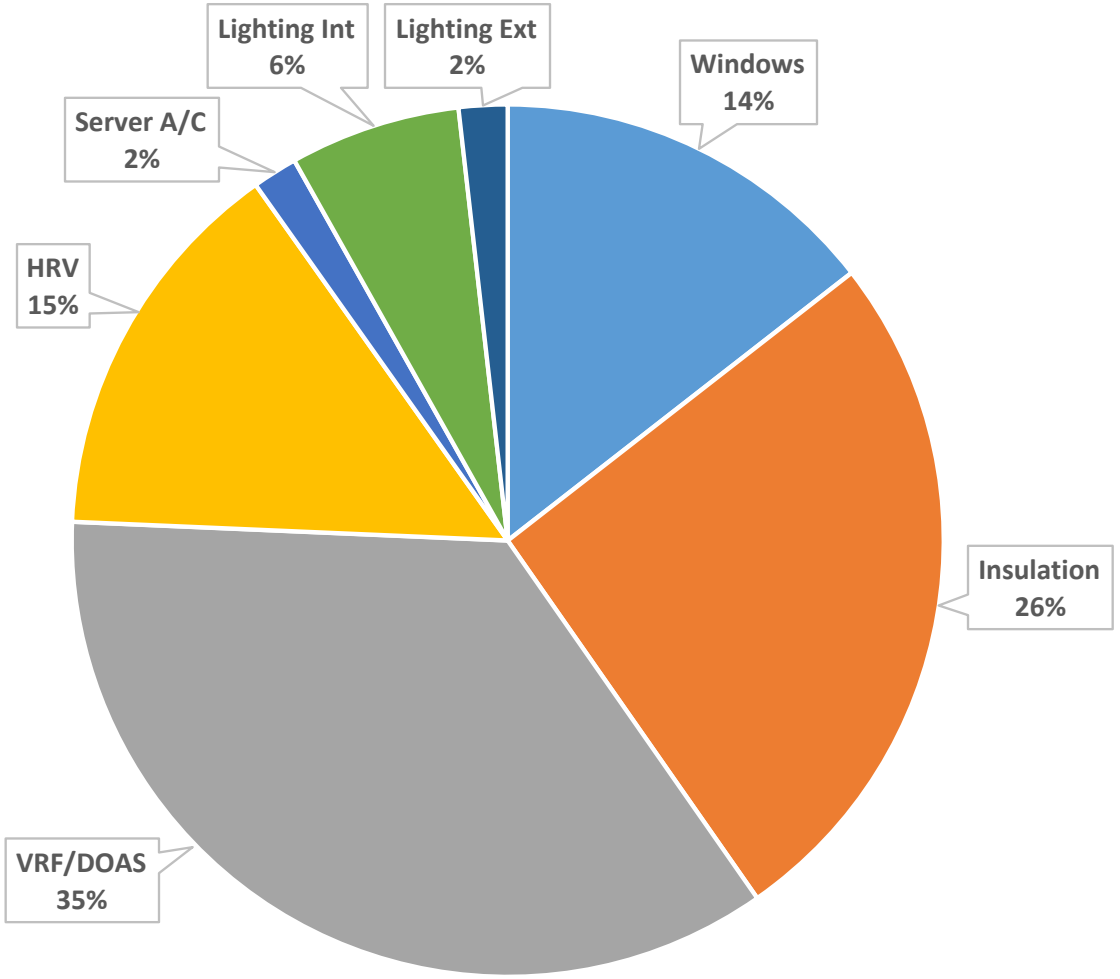
Major Historic Renovation

HIGHLIGHTS

- Built in 1919 listed in the National Register of Historic Places.
- 30,000 square feet (SF), two-stories with basement.
- $13.9 Million renovation cost.
- Ameresco Energy Services Co.
- Emerick Architects.
- Bremik Construction.
- Chosen Wood Windows.

Energy Savings Summary

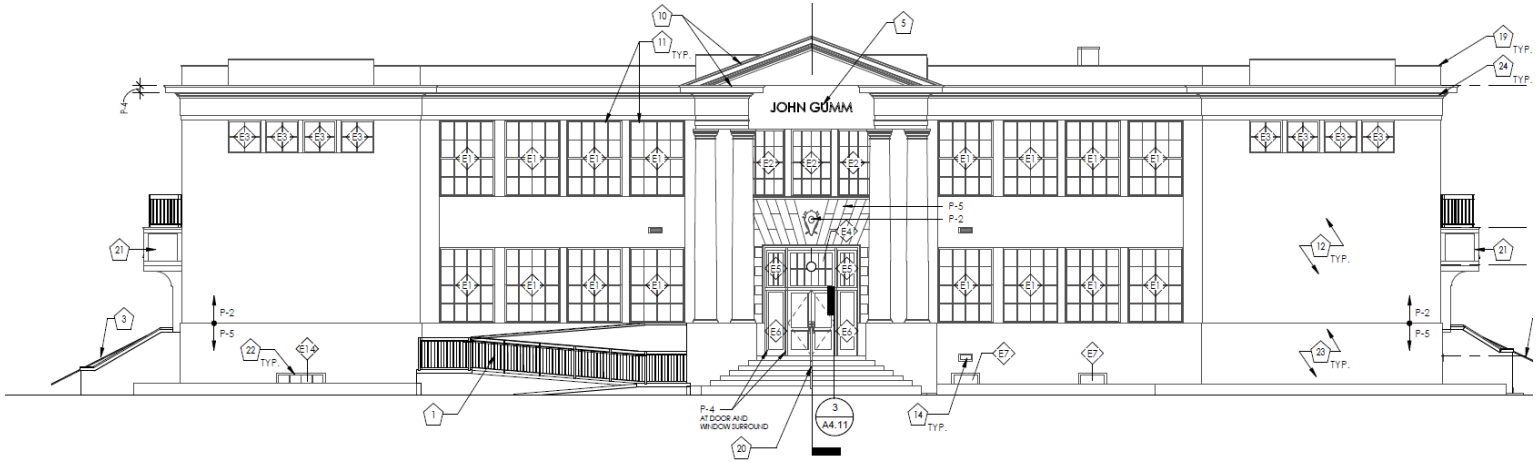
ENERGY SAVINGS	SITE	BUSBAR	INCENTIVE
EEM-1 Windows	38,578	42,072	$ 16,828.66
EEM-2 Wall & Attic Insulation	68,856	75,092	$ 30,036.77
EEM-3 VRF with DOAS	94,333	102,876	$ 31,891.44
EEM-4 HRV	38,672	42,174	$ 13,074.06
EEM-5 Server room A/C	4,448	4,851	$ 1,503.77
EEM-6a Lighting Interior	16,895	18,425	$ 2,395.25
EEM-6b Lighting Exterior	4,800	5,235	$ 680.51
TOTAL = 46.7% Reduction	**266,582**	**290,724**	**$ 96,410.46**



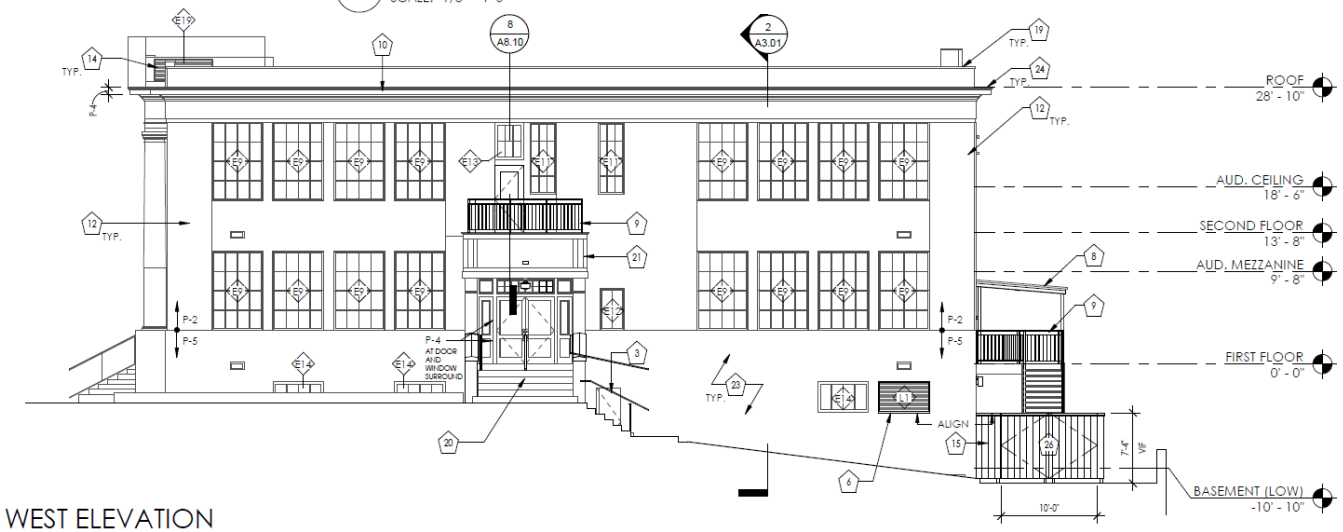
Window Secondary Glazing Units

- Existing single-pane wood windows U-Value = 1.0.
- New Interior Secondary Glazing Units U-Value = 0.19, SHGC = 0.26.
- Interior Secondary Glazing units = 2,576 SF.

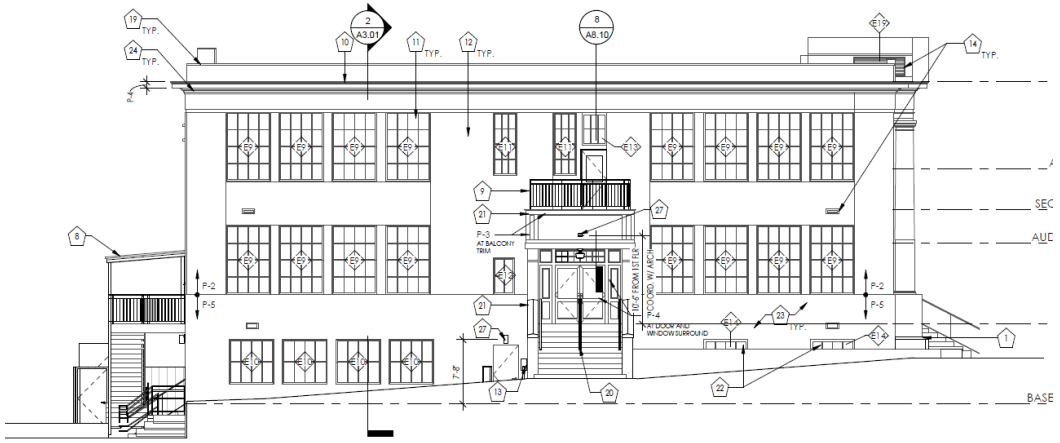
Window Secondary Glazing Units



1 NORTH ELEVATION
SCALE: 1/8" = 1'-0"

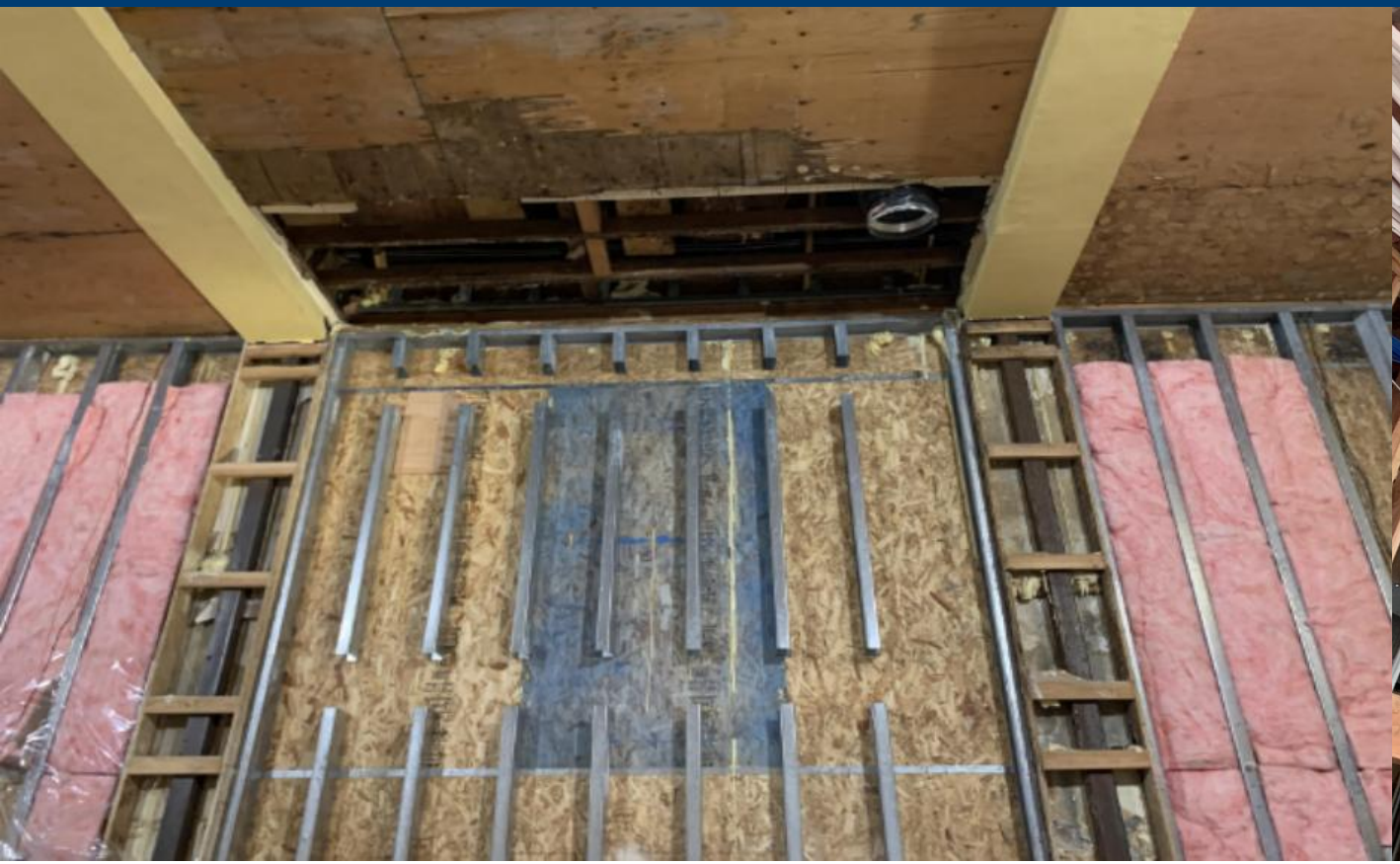


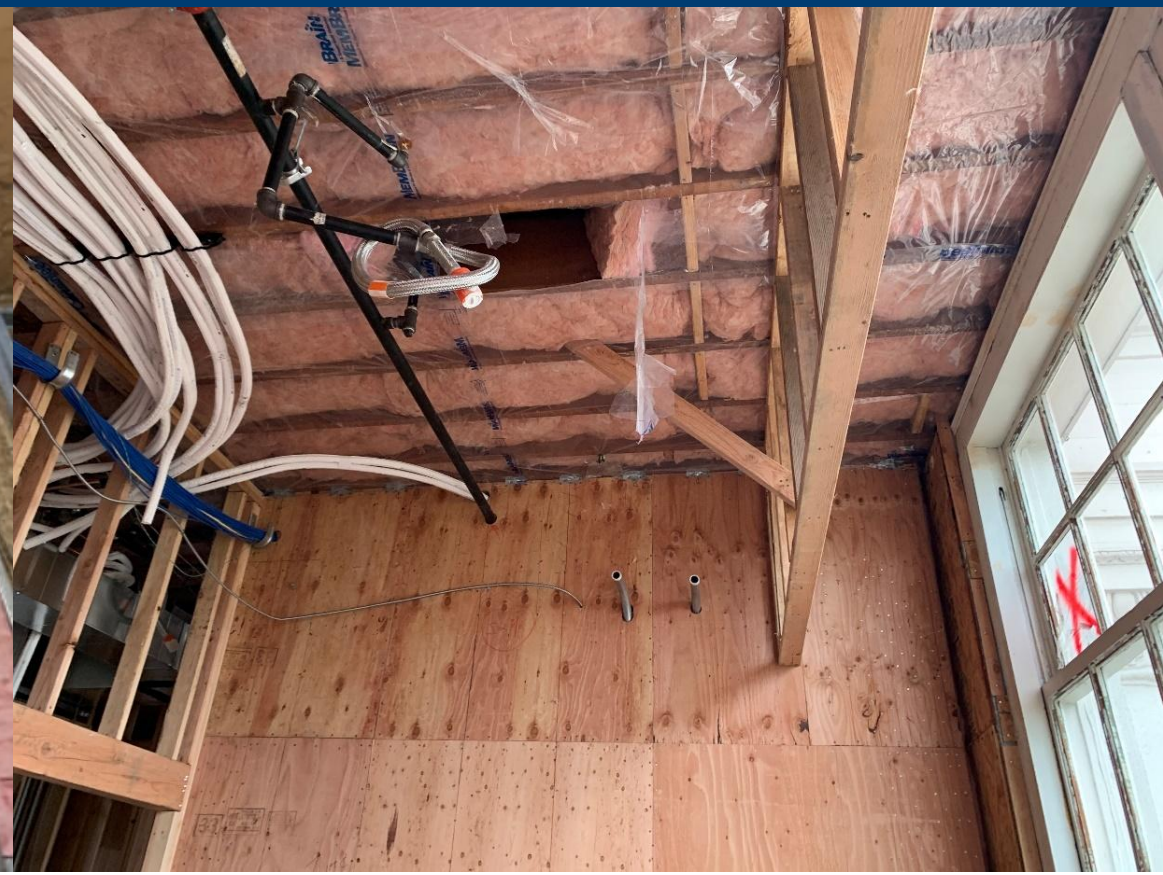
1 WEST ELEVATION
SCALE: 1/8" = 1'-0"



2 EAST ELEVATION
SCALE: 1/8" = 1'-0"

Insulation Upgrades





- Wall insulation upgraded from existing R-2.5 to R-15.6.
- Attic insulation upgraded from existing R-10 to R-49.
- Floor joist insulation upgraded from existing R-3.5 to R-30.

Variable Refrigerant Flow HVAC

- (Two each) 12-ton outdoor Variable Refrigerant Flow (VRF) units with heat recovery.
- (24 each) ducted indoor VRF fan-coil units.
- (Five each) ductless indoor VRF ceiling cassette units.

DOAS with Heat Recovery Ventilator

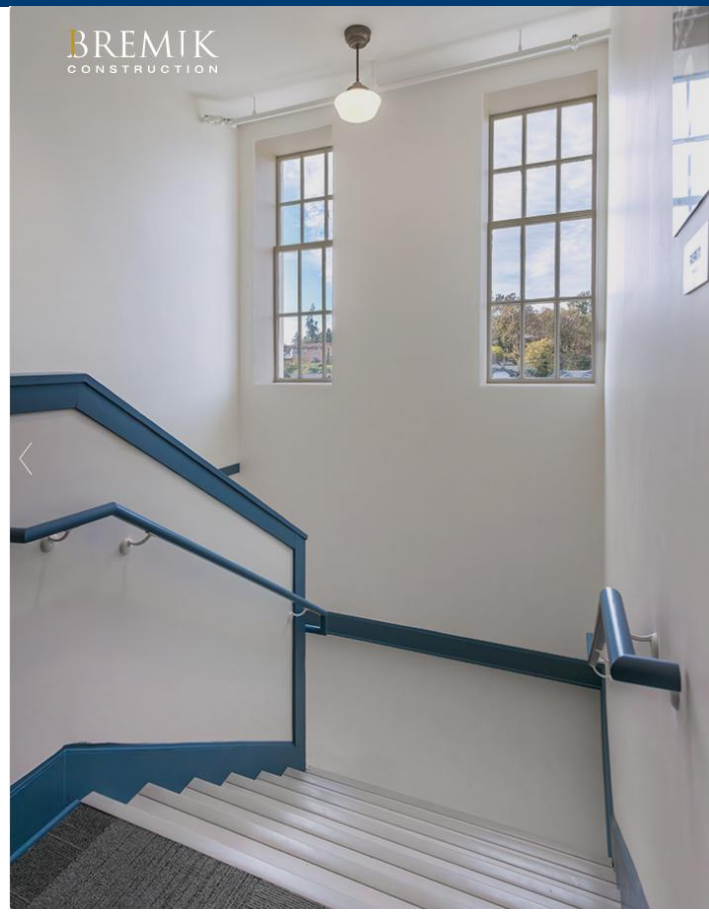
Dedicated Outdoor Air System (DOAS)

- 4,400 cfm unit with 64.1% sensible recovery effectiveness.

Server Room A/C

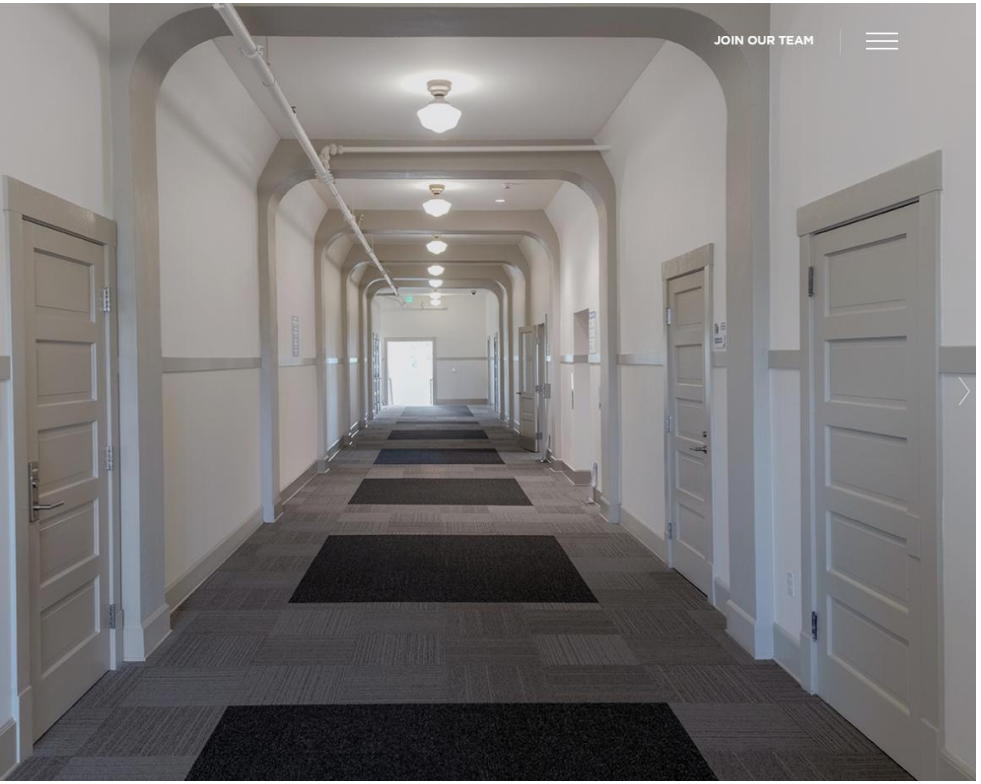
- One-ton ductless heat pump (cooling only) with SEER 22.
- Code required SEER 13.

Interior LED Lighting



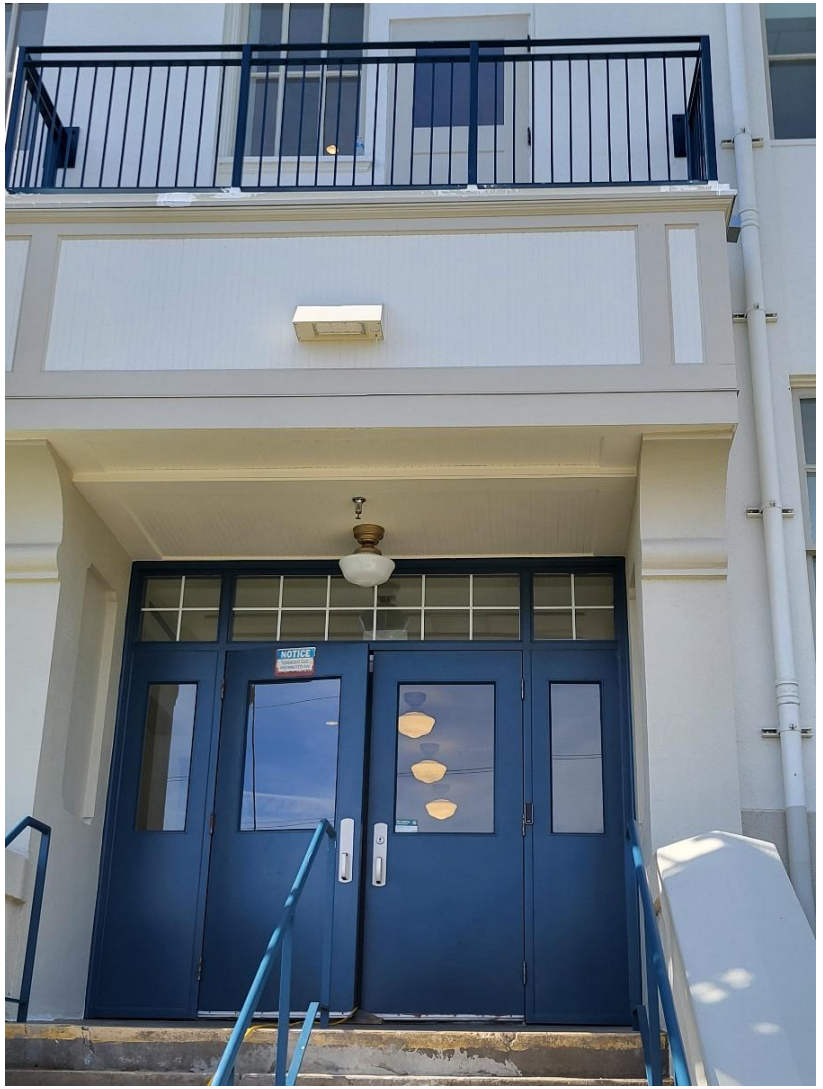
- Code Allowable Lighting Power Density = 0.64 watts/ft2.
- Proposed Lighting Power Density = 0.43 watts/ft2 33% BETTER THAN CODE.

Interior LED Lighting



Exterior LED Lighting

- Code Allowable Lighting Power = 1,756 watts.
- Proposed Lighting Power = 767 watts.
- 56% BETTER THAN CODE.



Phase 2 - Solar PV and Battery Storage

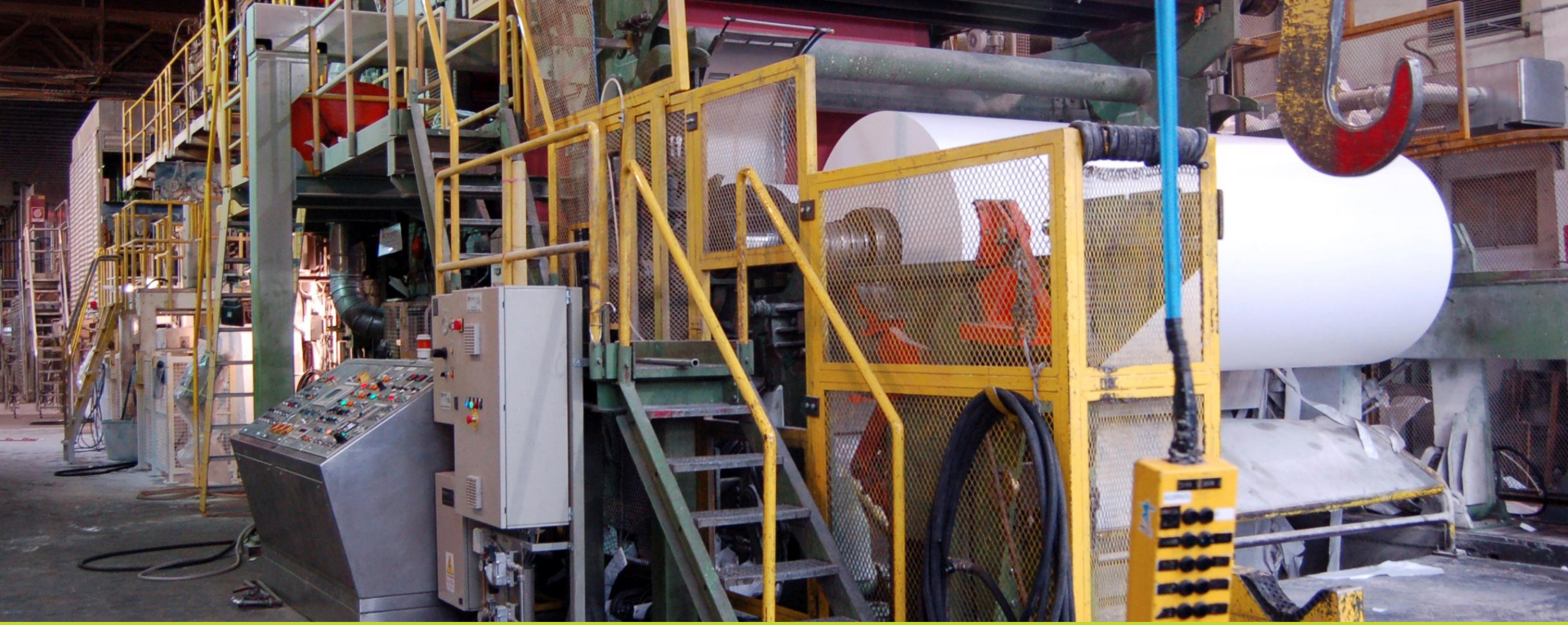
OREGON DEPARTMENT OF ENERGY GRANT PROGRAM SUPPORTS RENEWABLE ENERGY AND ENERGY RESILIENCE DEVELOPMENT ACROSS THE STATE

Columbia County | Construction Resilience | $992,116

Construction of a net-metered 32kW PV solar system with 125kW battery storage and backup power circuitry for county operations in the John Gumm building.

This project is part of a larger multi-phase effort by Columbia County to modernize its facilities. Future plans include the addition of rooftop solar panels and battery storage, reinforcing Columbia County's dedication to sustainability and climate resilience.

Questions and Discussion



Energy Smart Industrial Projects Spotlight

Jeff Bernacki, ESIP

Oct. 15-16, 2025

Overview

Project Spotlights

- Review the project details.
- Highlight the energy savings.
- Discuss ***Lessons Learned*** for future projects/opportunities.

#1 – Superior Steel Fabrication

- 2 x VFD Air Compressor Upgrade.

#2 – Rosboro Lumber Springfield

- Wood Chipper Decommissioning.

#3 – Grain Millers

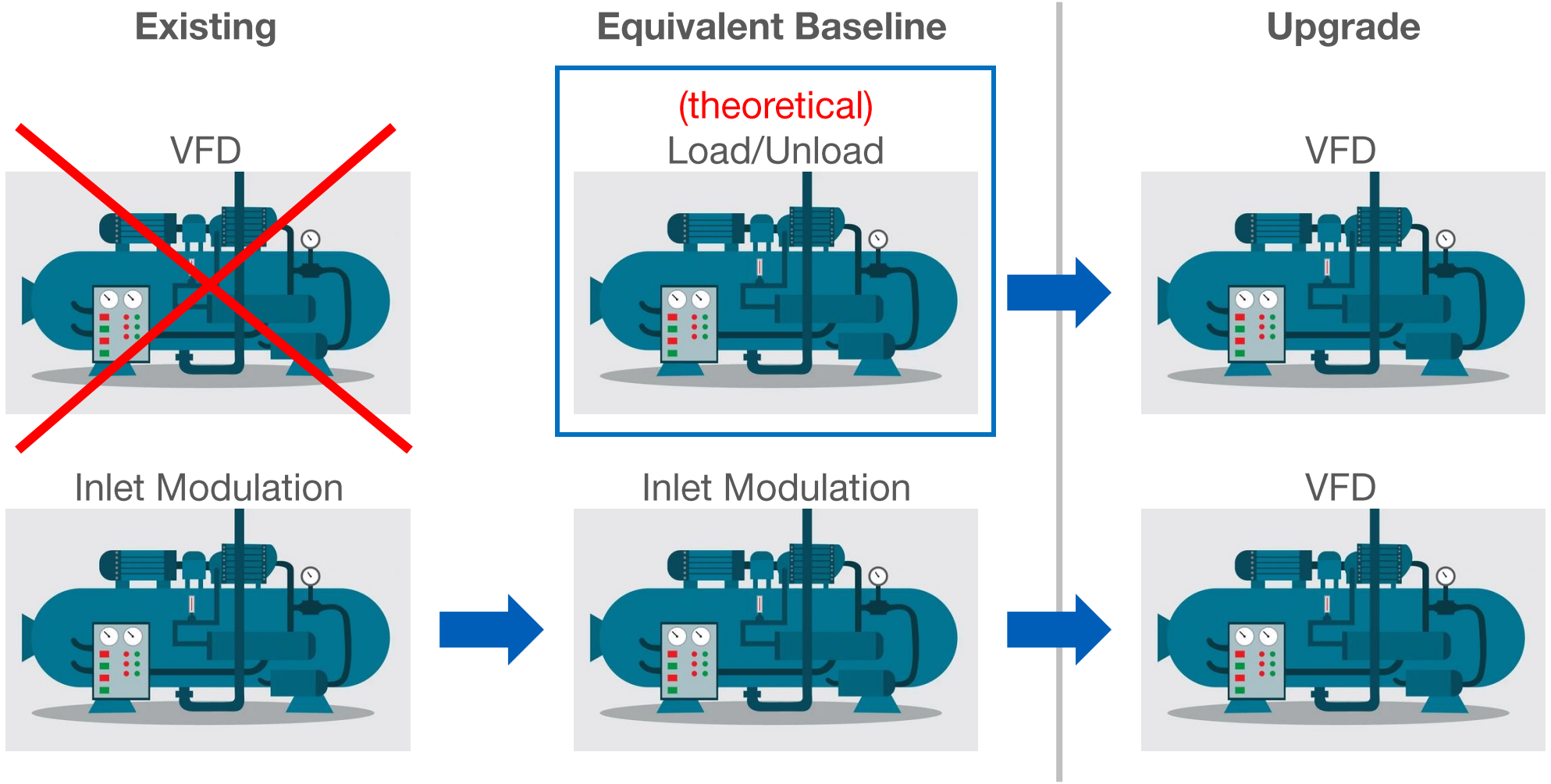
- Spiral Valve Compressor Upgrade.

#4 – City of Ashland Wastewater Treatment Plant (WWTP)

- UV Disinfection System Upgrade.

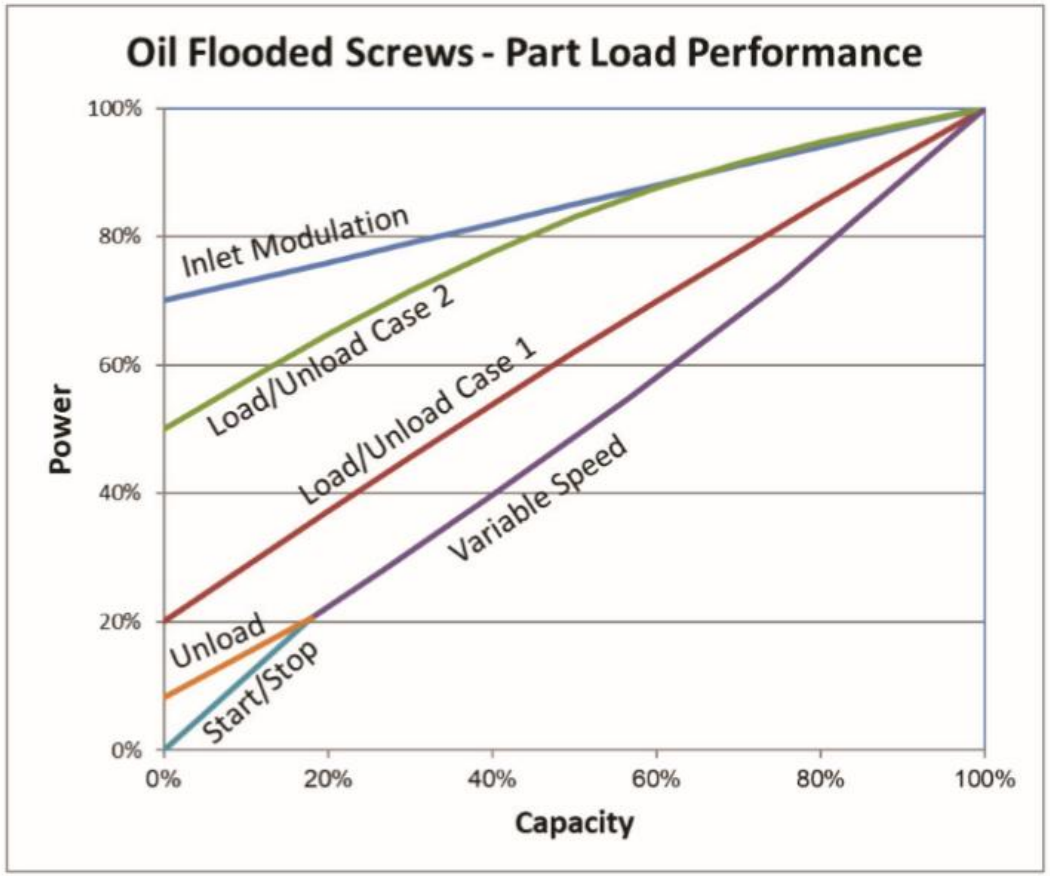
Energy Smart Industrial

#1: Superior Steel – VFD Air Compressors



EWEB

#1: Superior Steel – VFD Air Compressors



Advantage of Load/Unload Control

- These compressors are more efficient at part-load.
  - See Power graph on the left.

Efficiency Standpoint

- It makes sense to choose Load/Unload as the theoretical baseline.

Energy Savings = 262,861 kWh

EWEB

#1: Superior Steel – VFD Air Compressors

Disadvantage of Load/Unload Control

- These compressors need sufficient air receiver tanks.
  - The site did not have enough air storage.

Practical Standpoint

- It does not make sense to choose Load/Unload as the theoretical baseline.

Energy Savings = ~~262,861 kWh~~

#1: Superior Steel – VFD Air Compressors

Energy Savings (Unreasonable Baseline) = ~~262,861 kWh~~

Energy Savings (New Baseline) = 830,185 kWh

LESSONS LEARNED

- Major Renovation projects have complexity in defining a theoretical baseline.
- Choosing the correct baseline can have a significant impact in energy savings.
- Inlet modulation produced 216% more savings.
  - More accurate based on what the site would have done.

EWEB

#2: Rosboro Lumber – Chipper Decommissioning

Main Chipper

Secondary Chipper

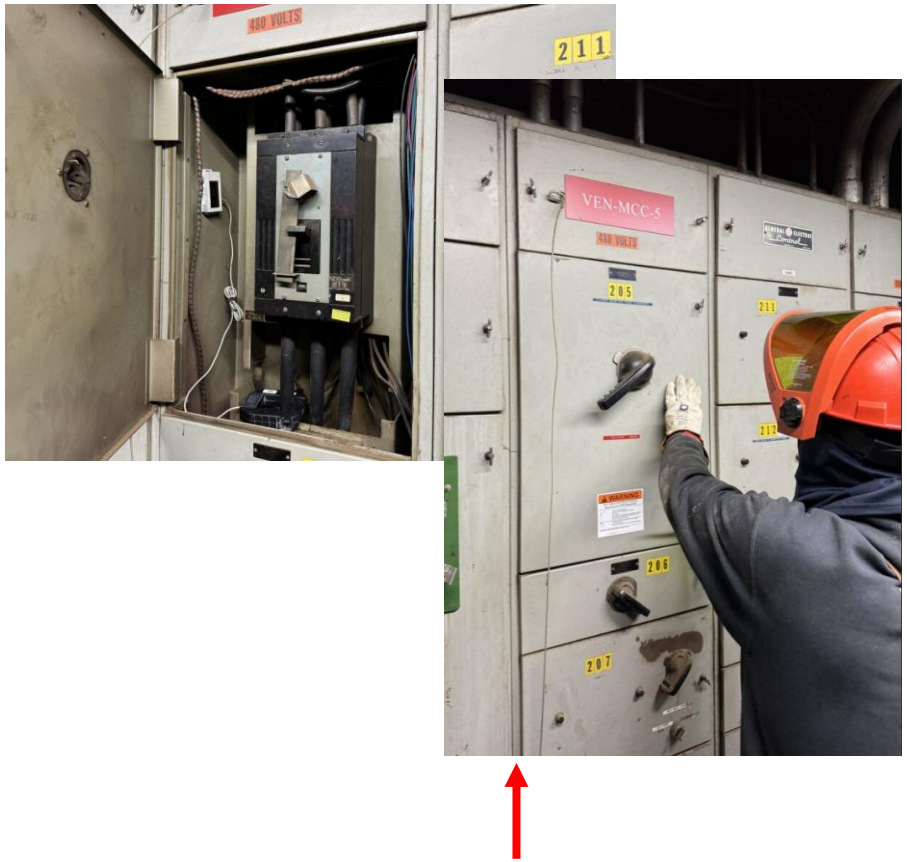
(runs at very low load)

CONSOLIDATE TO ONE CHIPPER

SAVE ENERGY!

Springfield Utility Board

#2: Rosboro Lumber – Chipper Decommissioning



ESI worked with the site's electrician to install data loggers on the chippers and analyze power data

Baseline Power (2 x Chippers) = 144 kW
Upgrade Power (1 x Chipper) = 90 kW

Energy Savings = 109,016 kWh

LESSONS LEARNED

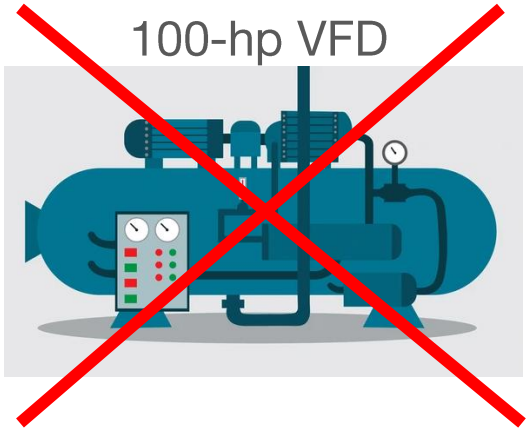
- ESI is willing and able to come on site and set up data loggers on equipment of interest.
- Energy efficiency can come in the form of removing equipment without adding anything new.
- The site will save $7,600/yr by removing the old chipper.

Springfield Utility Board

#3: Grain Millers – Spiral Valve Compressor

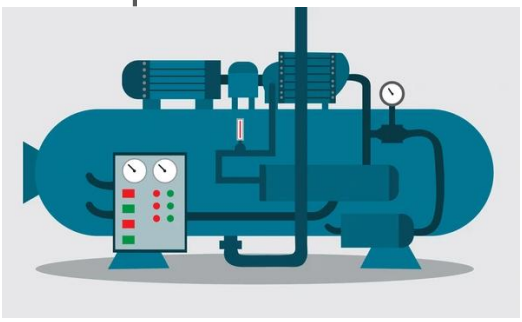
Existing

100-hp VFD



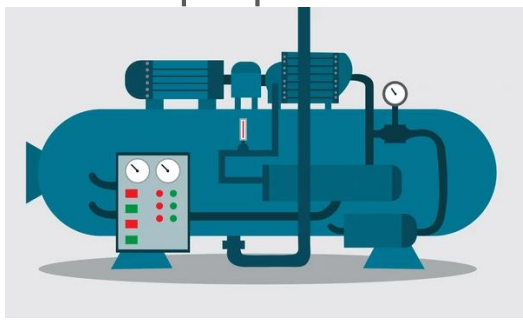
Equivalent Baseline

(theoretical)
125-hp Inlet Modulation



Upgrade

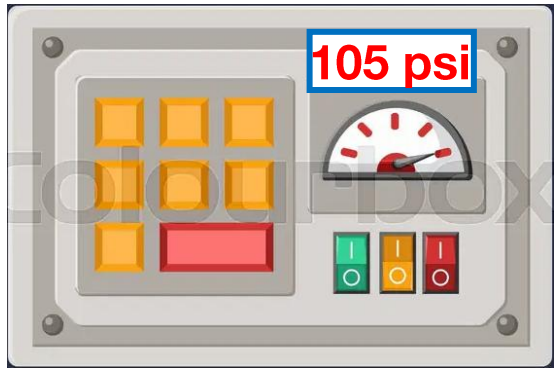
125-hp Spiral Valve

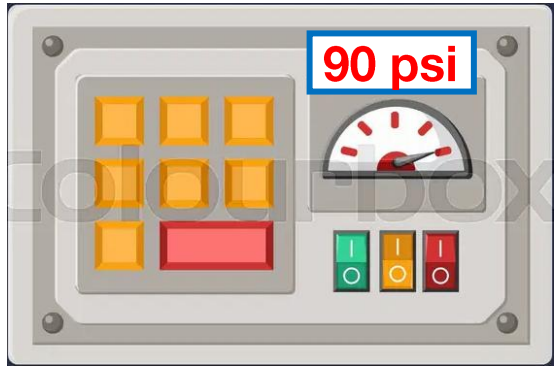


- Previously existing VFD compressor failed, not worth repairing.
- Site chose spiral valve compressor, as it is better in harsh environments.
- Vendor specified inlet modulation as the baseline compressor.

EWEB

#3: Grain Millers – Spiral Valve Compressor





Energy Savings

12,546 kWh

76,895 kWh

LESSONS LEARNED

- ESI's influence helped the site reduce its discharge pressure and save more energy.
- The site will save an additional $4,500/yr by reducing unnecessary pressure.

Lower discharge pressure means lower power:

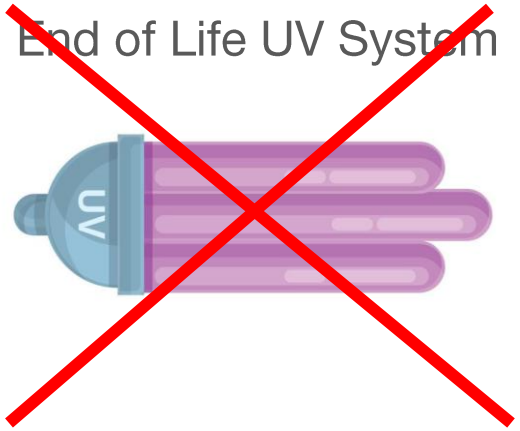
1% power per 2 psi for screw compressors

EWEB

#4: Ashland WWTP – UV Disinfection System

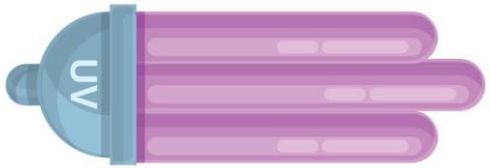
Existing

End of Life UV System



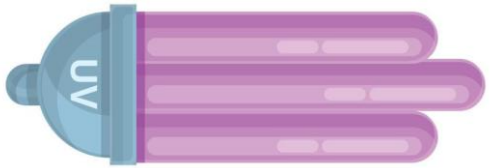
Equivalent Baseline

(theoretical)
Less efficient baseline



Upgrade

More efficient upgrade



- Previously existing UV system was at end of life, needed more capacity → Major Renovation.
- Less efficient, less expensive UV system option used as theoretical baseline.
- More efficient UV system was purchased, incremental cost above baseline is eligible.

#4: Ashland WWTP – UV Disinfection System

UV lamps (up close)

Baseline UV System Power = 45.5 kW
Upgrade UV System Power = 11.8 kW

Energy Savings = 362,222 kWh

LESSONS LEARNED

- Wastewater Treatment Plants (WWTPs) have excellent opportunities for energy efficiency.
- New construction almost always has opportunities for energy savings, using incremental cost.
- The site will save $25,000/yr by operating the more efficient UV system over the equivalent baseline.

ESI worked with the site's electrician to install data loggers on the UV system and analyze power data

Questions?

Energy Smart Industrial

Jeff Bernacki
Energy Smart Industrial Partner (ESIP)
1524 Willamette Street, Suite 203
Eugene, OR 97401
Direct: (458) 215-0800
Cell: (541) 600-0959
E-mail: Jeffrey.Bernacki@energysmartindustrial.com

Questions or Comments?

Time for a break!

Utility Roundtable Share Out

What's on your mind? Please share or ask anything you like.

- Recent successes?
- Concerns/challenges now or in the future?
- Future opportunities or areas to improve?
- What are you excited about?

Utility Roundtable Share Out

- Lessons learned from end of rate period?
- What do you wish you knew?
- Additional support you may need from BPA?

After Hours Networking

- No-host dinner and networking at **Backstop Bar & Grill** at 5:30 p.m.
- Located one mile away from our meeting at 211 N Grant St, Canby, OR 97013.

Adjourn!

Oregon Utility Roundtables 2025

Welcome to Day 2!

Oct. 15-16, 2025

Residential and Income Qualified Sector

UTILITY ROUNDTABLES 2025

Oct. 15-16, 2025

Agenda

- **Residential Sector Updates:**
  - Residential Accomplishments.
  - Rate Period IM Updates.
  - CRH Updates.
  - Residential Pipeline.
- **Income Qualified Updates.**
- **Discussion.**

Residential Accomplishments

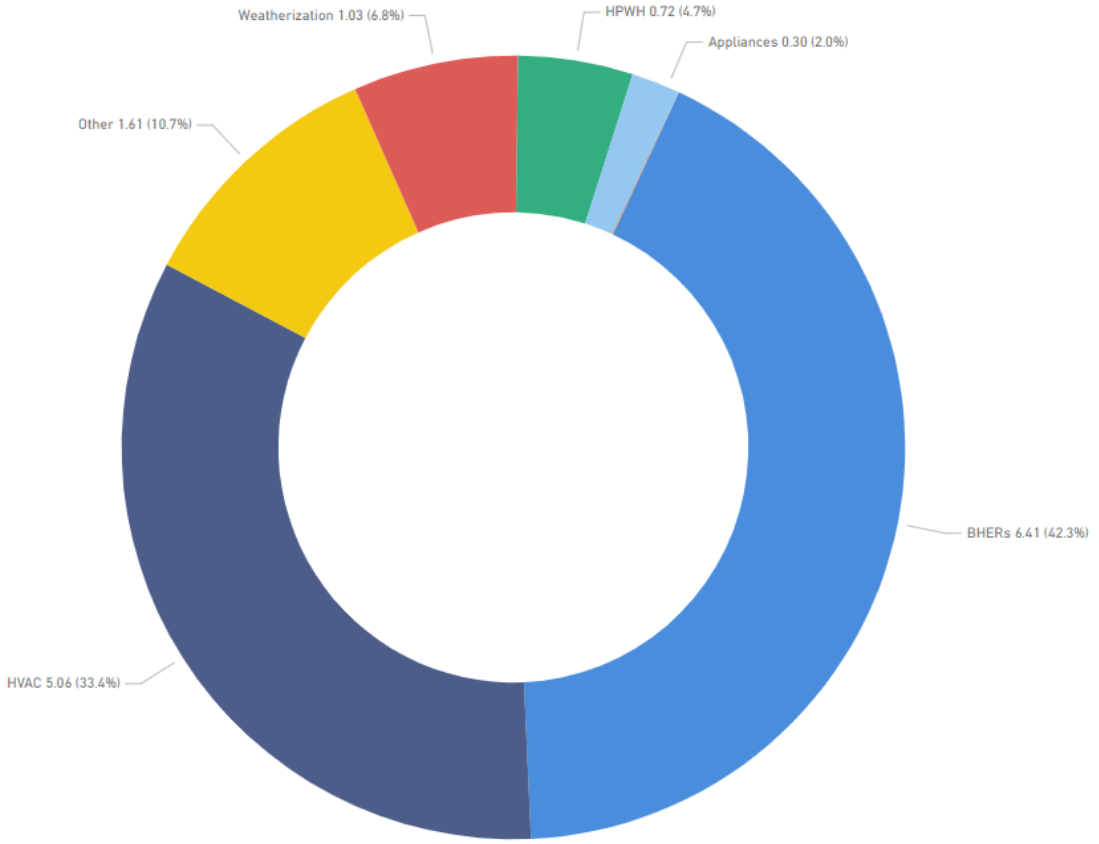
	Savings (aMW)			Reimbursement		
	BP22	BP24	% Change	BP22	BP24	% Change
Total Residential	**17.63**	**15.14**	**-14.1%**	**$61,254,291**	**$73,919,012**	**20.7%**
EEI Only	*17.41*	*14.29*	*-17.9%*	*$50,072,291*	*$60,405,896*	*20.6%*
DFD	*0.01*	*0.29*	*2800.0%*	*$75,486*	*$2,787,602*	*3592.9%*
Low Income	**0.87**	**1.98**	**128.2%**	**$22,699,020**	**$47,573,891**	**109.6%**
EEI Only	*0.65*	*1.33*	*104.6%*	*$11,577,456*	*$34,695,062*	*199.7%*
DFD	*0.0041*	*0.09*	*2086.5%*	*$15,050*	*$2,153,315*	*14207.7%*

Residential Accomplishments continued

Total Residential Savings FY 2024-2025

- Behavioral Home Energy Report (HER) = 42.3%
- Heating, ventilation, air conditioning (HVAC) = 33.4%
- Other* = 10.7%
- Weatherization = 6.8%
- Heat Pump Water Heaters (HPWH) = 4.7%
- Appliances = 2.0%

***Other** includes electric vehicles (EV) chargers, thermostats, new construction, and custom projects.



Rate Period IM Updates

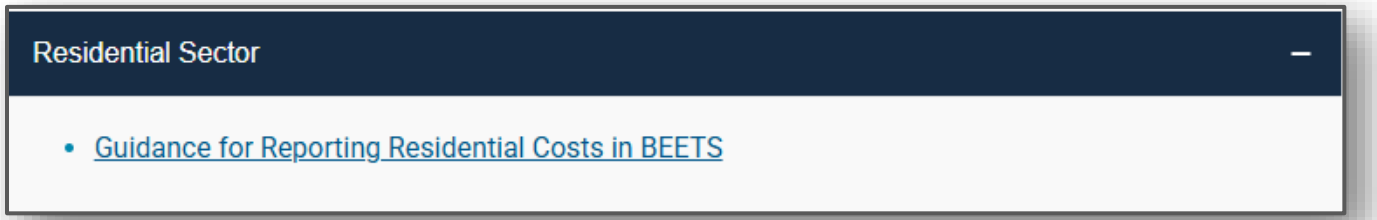
- Installed Cost requirement.
- *By Request* Distribution Channel removal.
- Energy Savings & Incentive Payments.
- Multifamily New Construction Qualified Programs List (QPL) update* (*coming soon*).
- Unitary HPWHs– New Construction.
- Prime Window and Patio Door Replacement.
- Residential Custom Projects.

Webinar on Reporting Residential Costs in BEETS

Webinar hosted on Oct. 2 covering guidance on reporting cost data and eligibility of income qualified repair costs will be posted on the [BPA Energy Efficiency's Presentation and Webinars homepage] soon.

New Guidance Document: Reporting Costs in BEETS

Posted in the
BPA Document Library under
"Residential"



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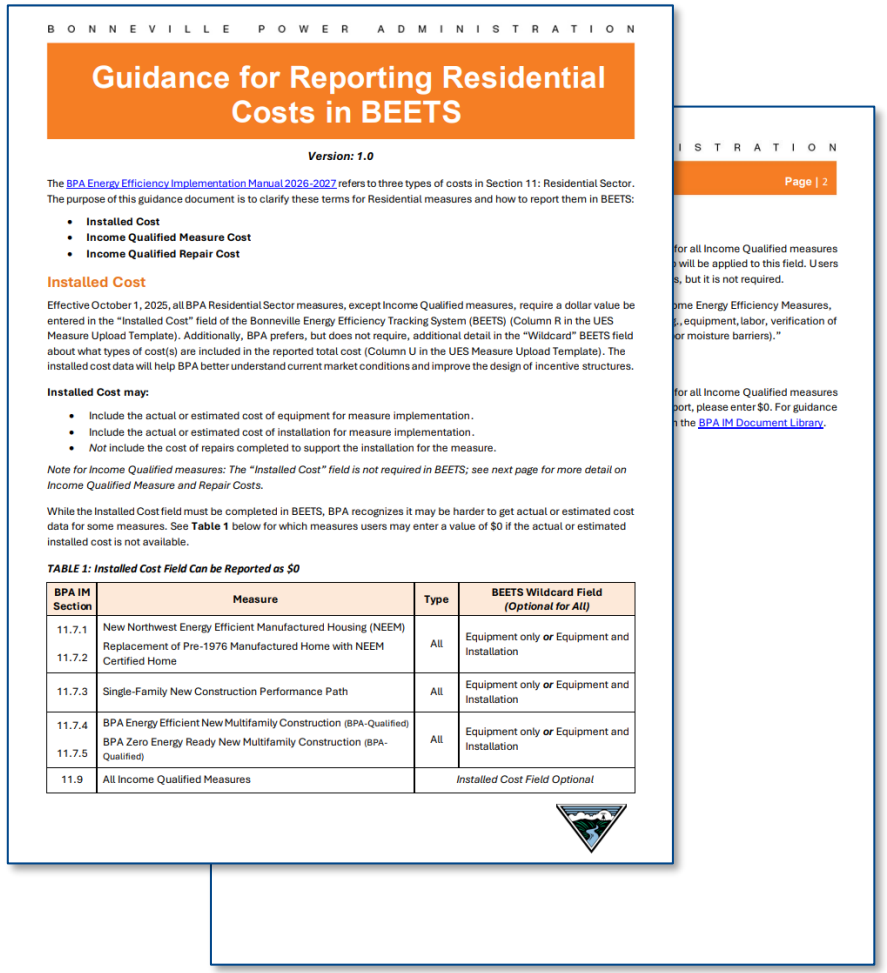


BONNEVILLE POWER ADMINISTRATION

Guidance for Reporting Residential Costs in BEETS

Version: 1.0

The BPA Energy Efficiency Implementation Manual 2026-2027 refers to three types of costs in Section 11: Residential Sector. The purpose of this guidance document is to clarify these terms for Residential measures and how to report them in BEETS:

- **Installed Cost**
- **Income Qualified Measure Cost**
- **Income Qualified Repair Cost**

Installed Cost

Effective October 1, 2025, all BPA Residential Sector measures, except Income Qualified measures, require a dollar value be entered in the "Installed Cost" field of the Bonneville Energy Efficiency Tracking System (BEETS) (Column R in the UES Measure Upload Template). Additionally, BPA prefers, but does not require, additional detail in the "Wildcard" BEETS field about what types of cost(s) are included in the reported total cost (Column U in the UES Measure Upload Template). The installed cost data will help BPA better understand current market conditions and improve the design of incentive structures.

Installed Cost may:

- Include the actual or estimated cost of equipment for measure implementation.
- Include the actual or estimated cost of installation for measure implementation.
- *Not* include the cost of repairs completed to support the installation for the measure.

Note for Income Qualified measures: The "Installed Cost" field is not required in BEETS; see next page for more detail on Income Qualified Measure and Repair Costs.

While the Installed Cost field must be completed in BEETS, BPA recognizes it may be harder to get actual or estimated cost data for some measures. See **Table 1** below for which measures users may enter a value of $0 if the actual or estimated installed cost is not available.

TABLE 1: Installed Cost Field Can be Reported as $0

BPA IM Section	Measure	Type	BEETS Wildcard Field *(Optional for All)*
11.7.1 11.7.2	New Northwest Energy Efficient Manufactured Housing (NEEM) Replacement of Pre-1976 Manufactured Home with NEEM Certified Home	All	Equipment only **or** Equipment and Installation
11.7.3	Single-Family New Construction Performance Path	All	Equipment only **or** Equipment and Installation
11.7.4 11.7.5	BPA Energy Efficient New Multifamily Construction (BPA-Qualified) BPA Zero Energy Ready New Multifamily Construction (BPA-Qualified)	All	Equipment only **or** Equipment and Installation
11.9	All Income Qualified Measures	*Installed Cost Field Optional*	

By Request Distribution Channel

- **Removed "By Request" Measure Distribution Channel.**
  - 11.3.1 ENERGY STAR Level 2 Networked Electric Vehicle Chargers.
  - 11.4.1 Thermostatic Shut-Off Valves (TSV).
  - 11.6.3 Advanced Smart Thermostats.
  - 11.8.7 Door Sweeps.

Energy Savings and Incentive Payments

Measure #	Measure Name	Previous Payments	New Payments
11.2.1	Clothes Washers	$25-$100/unit	$36-$125/unit
11.4.2	Unitary Heat Pump Water Heater – 40 gallon (BPA-Qualified)	$700/unit	$1400/unit
11.4.3	Unitary Heat Pump Water Heater – 50 gallon (BPA-Qualified)	$800-$900/unit	$1600-$1800/unit
11.4.4	Split-System Heat Pump Water Heater	$1100/unit	$2200/unit
11.5.1	Ductless and Ducted Mini-Split Heat Pumps	$800/unit	$920/unit
11.5.2	Air-Source Heat Pump Conversion from Electric Forced-Air Furnace to Air-Source Heat Pump	$1000/unit	$1250/unit
11.5.3	Air-Source Heat Pump Conversion from Electric Forced-Air Furnace to Variable-Speed Air-Source Heat Pump	$1200/unit	$1560/unit
11.5.4	Variable-Speed Air-Source Heat Pump Upgrade	$200/unit	$600/unit
11.8.2	Prime Window and Patio Door Replacement	$6-$16/sf	$8-$20/sf

Energy Savings and Incentive Payments

Measure #	Measure Name	Previous Busbar Savings	New Busbar Savings
11.2.1	Clothes Dryers	191.13 kWh – 517.09 kWh	253.03 kWh - 569.29 kWh
11.4.3	Unitary Heat Pump Water Heater – 50 gallon (BPA-Qualified)	1470.72 kWh – 1856.62 kWh	1528.92 kWh – 2063.51 kWh
11.5.1	Ductless and Ducted Mini-Split Heat Pumps	953.83 kWh – 3251.30 kWh	545.28 kWh - 3248.14 kWh
11.5.9	Duct Insulation	1.53 kWh – 1.58 kWh	2.46 kWh - 3.53kWh
11.6.2	Communicating Line Voltage Thermostats	80.00 kWh	79.52 kWh - 80.43 kWh
11.8.1	Insulation *(Including Exterior Insulated Doors)*	0.06 kWh – 4.54 kWh	0.06 kWh - 4.07 kWh
11.8.2	Prime Window and Patio Door Replacement	7.72 kWh – 18.16 kWh	8.00 kWh - 23.4 kWh
11.8.3	Low-E Storm Windows	6.94 kWh – 16.29 kWh	8.42 kWh – 21.48 kWh
11.8.5	Air Sealing	0.26 kWh – 0.27 kWh	0.37 kWh

Multifamily New Construction QPL Update

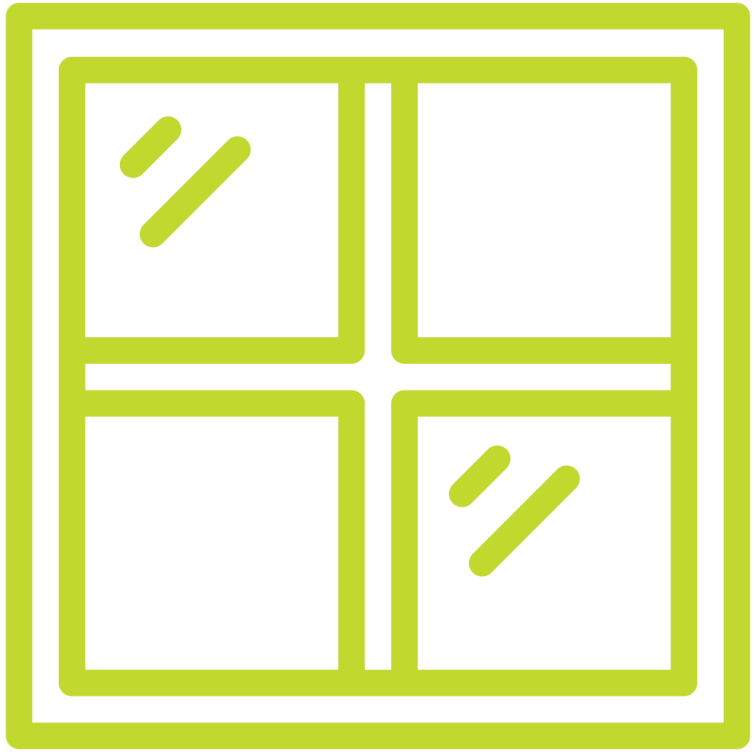
- **Updated Qualified Programs List.**
  - 11.7.4 BPA Energy Efficient New Multifamily Construction (BPA-Qualified).
  - 11.7.5 BPA Zero Energy Ready New Multifamily Construction (BPA-Qualified).
- **Based on updated analysis on state codes and voluntary new construction certification program requirements.**
- **New Approach to "locking-in" qualified program.**
  - Building Construction Permit Date.

Unitary Heat Pump Water Heaters – New Construction

- **HPWH in new construction now <u>allowed</u> in Montana, Wyoming, Idaho, California, Utah, and Nevada.**
  - 11.4.2 Unitary Heat Pump Water Heater – 40 gallon (BPA-Qualified).
  - 11.4.3 Unitary Heat Pump Water Heater – 50 gallon (BPA-Qualified).
- **<u>Not available</u> in Oregon or Washington.**

Prime Window and Patio Door Replacement

- **Removes Double-Pane Pre-condition "metal frame only."**
  - 11.8.2 Prime Window and Patio Door Replacement.



Residential Custom Projects

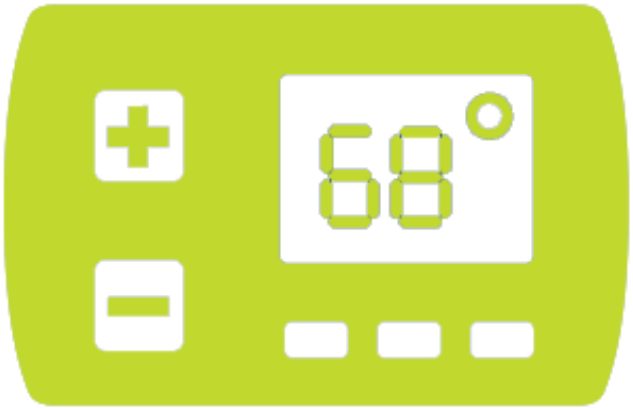
- **BPA does not develop energy savings estimates** for new multifamily construction custom projects that address multiple end uses or whole building measures.

- **BPA may develop energy savings estimates** for custom projects that address a single targeted end use, (e.g., central heat pump water heaters).

- **For the whole-building analyses**, customers may either leverage the UES measure BPA Energy Efficient New Multifamily Construction or develop and submit a custom project per Section 4 of the Implementation Manual using their own resources.

Residential Pipeline

- High-Performance High-Capacity Heat Pump Research.
- Room Heat Pumps.
- Cold Climate Heat Pumps.
- Combination (Combi) Systems.
- Central Heat Pump Water Heaters.
- Low Profile (Low Boy) Heat Pump Water Heaters.
- Heat Recovery Ventilation (HRV).
- Behavioral Home Energy Reports (alternative approaches).



Questions or Comments?

Income Qualified Offerings

Income Qualified Updates

- Snapshot of increased uptake.
- Name change is official.
- Income qualifying multifamily units.
- Workgroup.
- Income qualified repair cost reference table.
- Updated resources.

Increased Uptake!

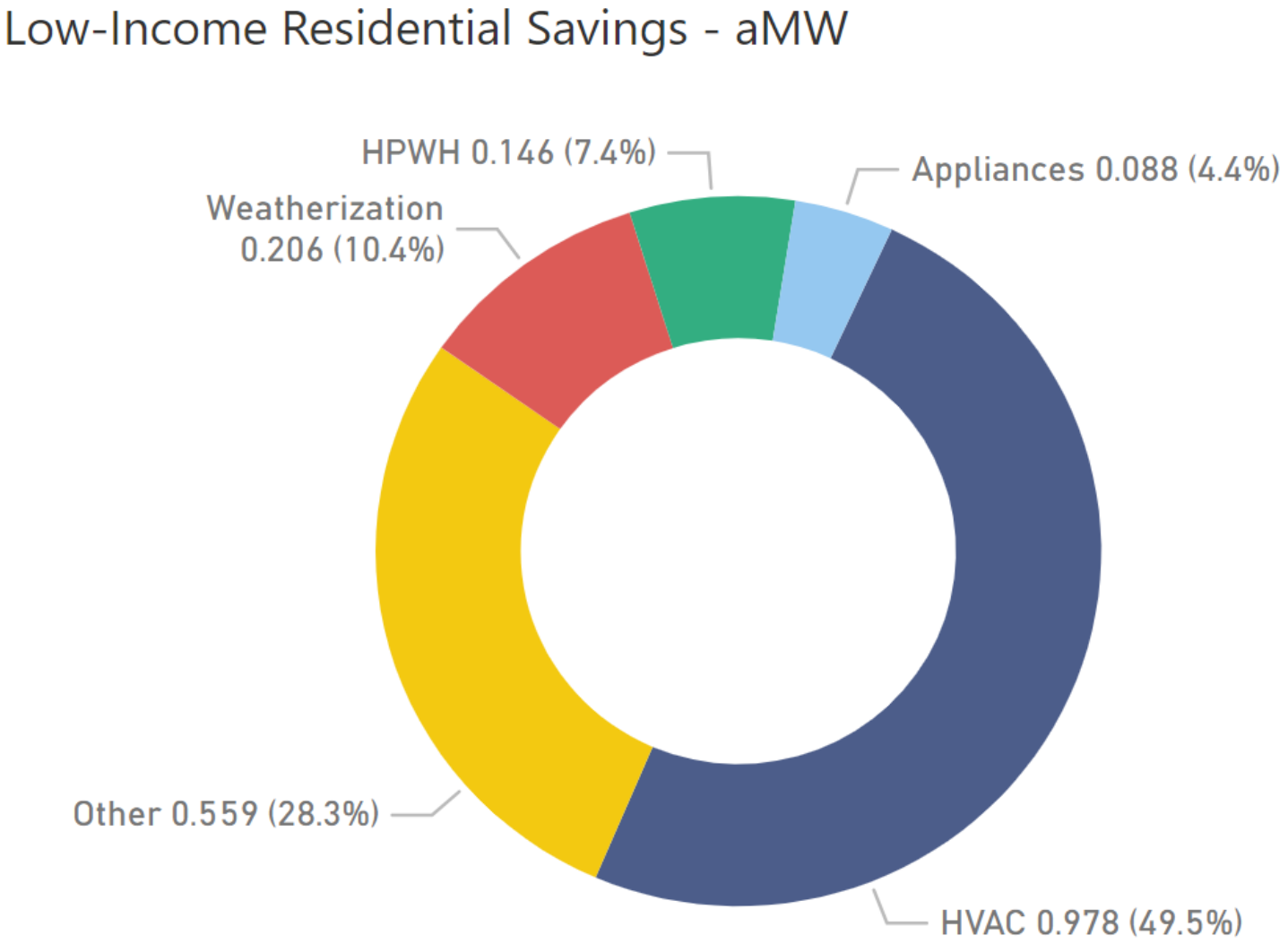
FY 2024 had the highest number of utilities that have claimed Low Income measures within the last three rate periods!

Fiscal Year	# of Utilities
FY 2018	46
FY 2019	42
FY 2020	37
FY 2021	39
FY 2022	37
FY 2023	42
FY 2024	50
On Average:	42

Increased Uptake!

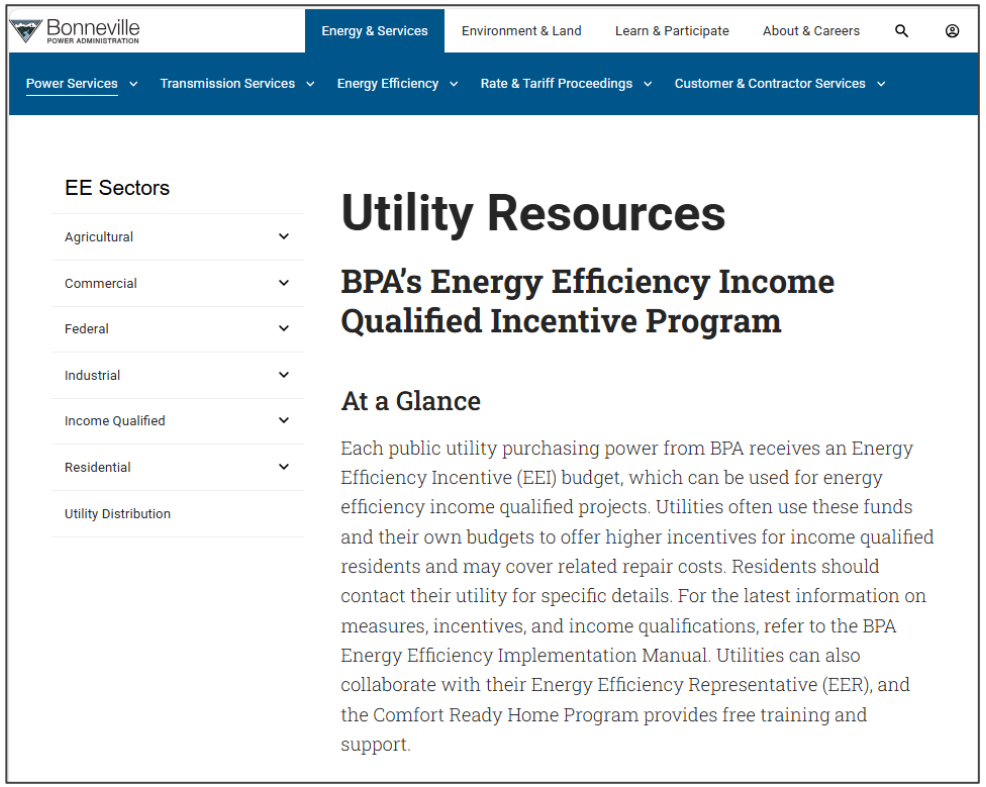
- 230% increase in funding from FY22 to FY24.
- 124% increase in savings from FY22 to FY24.
- Most Popular measures: Heat Pumps, Insulation, and Appliances.
- **So far in FY25:**
  - Over 3,000 washers and dryers installed, more than double than FY24.
  - Over 1.7 million sq feet of insulation installed, which is 26 football fields worth!
  - Over 1,500 ductless heat pumps, nearly 600 ducted heat pumps, and 43 packaged terminal heat pumps installed.

Income Qualified Successes!



Name Change is Implemented!

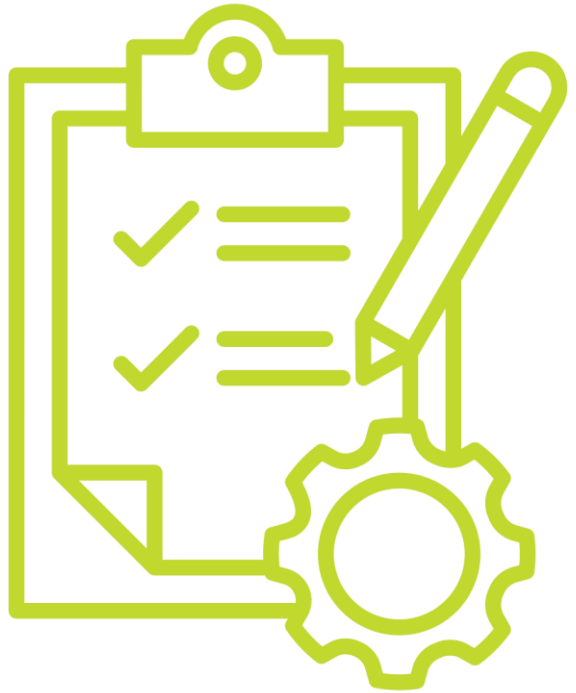
Program name is officially changed from “**Low Income Energy Efficiency**” to “**Energy Efficiency Income Qualified (EEIQ).**” Some website links have changed as a result.



https://www.bpa.gov/energy-and-services/efficiency/ee-sectors/energy-efficiency-income-qualified

Low Income Qualification Clarification

"Household eligibility is based on gross income and is defined in the Federal Weatherization Assistance Program (WAP) as 200 percent of the poverty income levels. Alternatively, approved statewide or tribal eligibility definitions may substitute for federally established income qualified levels, ***if available****."*



Income Qualifying Multifamily

Clarification added in the IM that you can income qualify and serve a single multifamily unit without having to serve and income qualify the entire building.

- Clarifying an existing policy.
- If needing to serve the whole building, utilities can still income qualify at least 50% of the units.

Highlighted Changes Effective Oct. 1

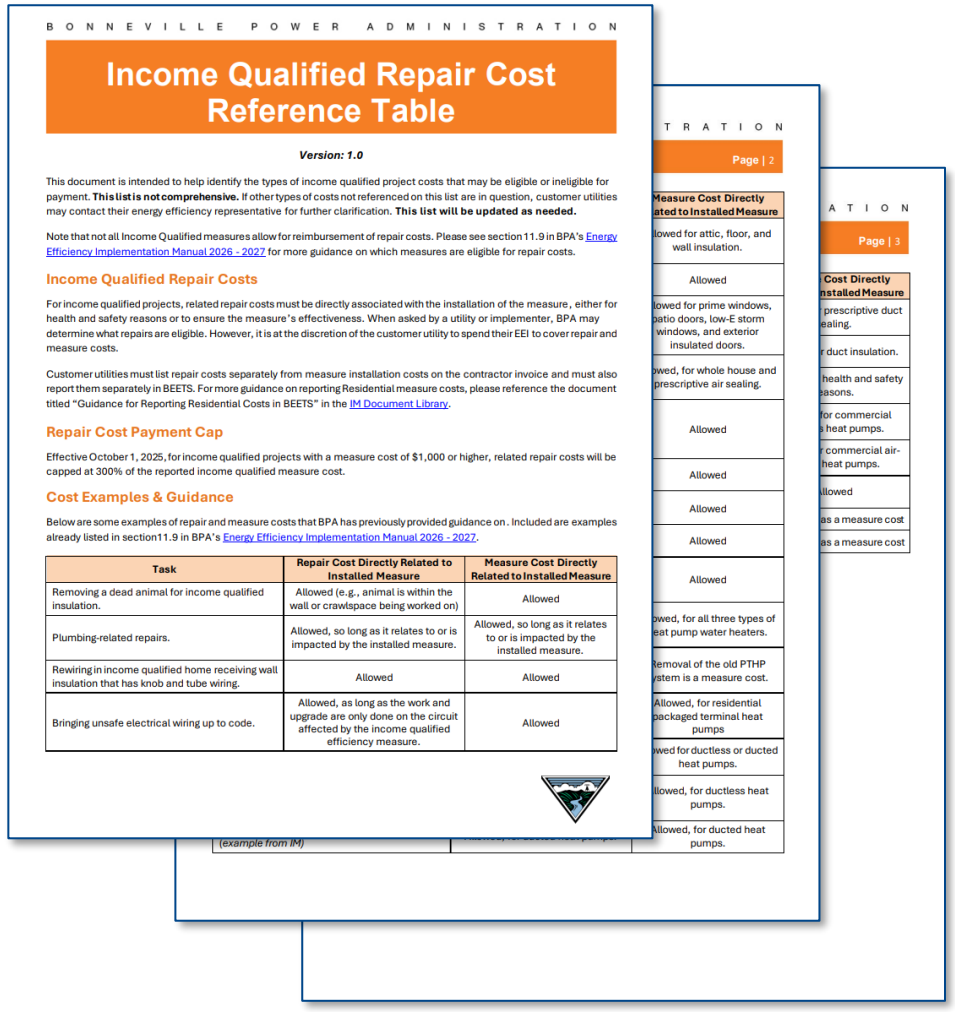
- Requiring two fields when entering projects in BEETS.
- Disallowing cost coverage of full roof replacements.
- Implementing new policy for repair cost coverage.
  - For an income qualified project with a measure cost of $1,000 or higher, related repair costs will be capped at 300% of the reported income qualified measure cost.

New Reference Document: IQ Repair Costs

Posted in the
BPA Document Library under
"Residential".

Income Qualified

- Income Qualified Project Information Form + Income Verification (Optional – Customizable Word Document)
- Income Qualified Project Information Form + Income Verification (Optional – Fillable PDF)
- Income Qualified Eligibility Form (Optional)
- Repair Cost Reference Table



BONNEVILLE POWER ADMINISTRATION

Income Qualified Repair Cost Reference Table

Version: 1.0

This document is intended to help identify the types of income qualified project costs that may be eligible or ineligible for payment. **This list is not comprehensive.** If other types of costs not referenced on this list are in question, customer utilities may contact their energy efficiency representative for further clarification. **This list will be updated as needed.**

Note that not all Income Qualified measures allow for reimbursement of repair costs. Please see section 11.9 in BPA's Energy Efficiency Implementation Manual 2026 - 2027 for more guidance on which measures are eligible for repair costs.

Income Qualified Repair Costs

For income qualified projects, related repair costs must be directly associated with the installation of the measure, either for health and safety reasons or to ensure the measure's effectiveness. When asked by a utility or implementer, BPA may determine what repairs are eligible. However, it is at the discretion of the customer utility to spend their EEI to cover repair and measure costs.

Customer utilities must list repair costs separately from measure installation costs on the contractor invoice and must also report them separately in BEETS. For more guidance on reporting Residential measure costs, please reference the document titled "Guidance for Reporting Residential Costs in BEETS" in the IM Document Library.

Repair Cost Payment Cap

Effective October 1, 2025, for income qualified projects with a measure cost of $1,000 or higher, related repair costs will be capped at 300% of the reported income qualified measure cost.

Cost Examples & Guidance

Below are some examples of repair and measure costs that BPA has previously provided guidance on. Included are examples already listed in section11.9 in BPA's Energy Efficiency Implementation Manual 2026 - 2027.

Task	Repair Cost Directly Related to Installed Measure	Measure Cost Directly Related to Installed Measure
Removing a dead animal for income qualified insulation.	Allowed (e.g., animal is within the wall or crawlspace being worked on)	Allowed
Plumbing-related repairs.	Allowed, so long as it relates to or is impacted by the installed measure.	Allowed, so long as it relates to or is impacted by the installed measure.
Rewiring in income qualified home receiving wall insulation that has knob and tube wiring.	Allowed	Allowed
Bringing unsafe electrical wiring up to code.	Allowed, as long as the work and upgrade are only done on the circuit affected by the income qualified efficiency measure.	Allowed

(https://www.bpa.gov/energy-and-services/efficiency/document-library)

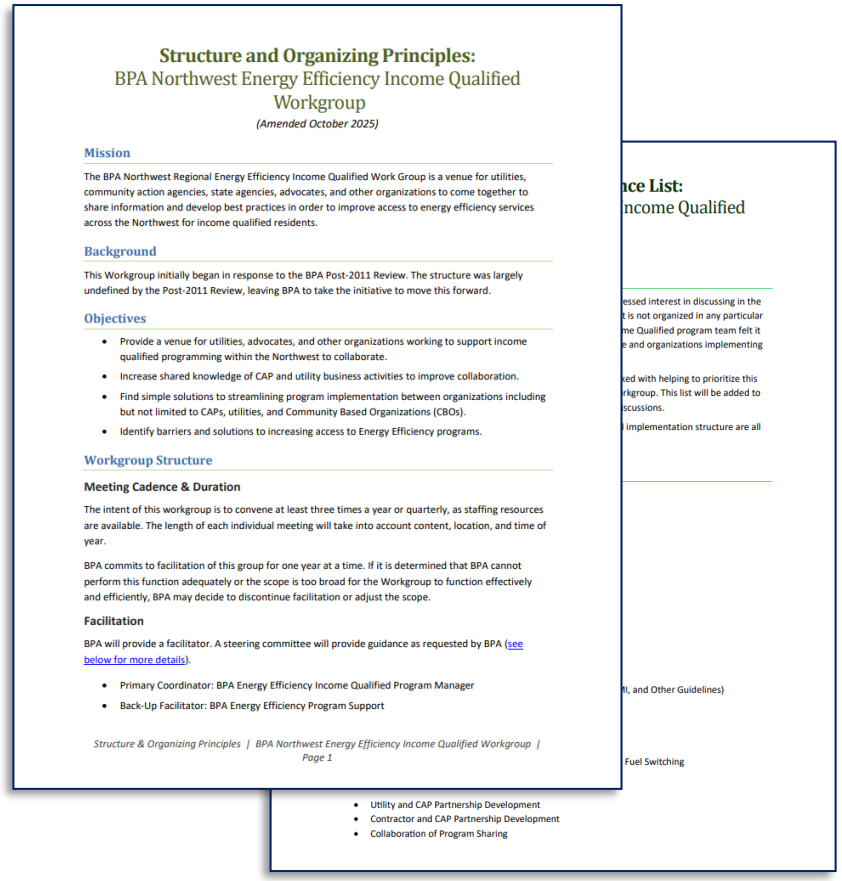
Recorded Webinar: Repair Cost Reference Table

- Hosted webinar on October 2, 2025 covered:
- IQ measure cost vs. install cost.
- Reporting IQ measure and repair costs.
- Repair cost cap policy.
- Eligibility of tasks as repairs vs. install costs.
- Nuances of repair costs.
- Presentation slides and webinar to be posted in the EE Presentations and Webinars.

Energy Efficiency Income Qualified Regional Workgroup

Last meeting held Oct. 6, 2025.

- Winter meeting date to be determined.
- Hosted three times a year.
- Presentations and facilitated discussions.
- Selected Steering Committee.
- Posted on Income Qualified Page.
  - Agendas and Resources from Previous Meetings
  - Workgroup Charter.
  - Discussion Topic Reference List.
  - Resources from previous meetings.



Structure and Organizing Principles:
BPA Northwest Energy Efficiency Income Qualified Workgroup
(Amended October 2025)

Mission

The BPA Northwest Regional Energy Efficiency Income Qualified Work Group is a venue for utilities, community action agencies, state agencies, advocates, and other organizations to come together to share information and develop best practices in order to improve access to energy efficiency services across the Northwest for income qualified residents.

Background

This Workgroup initially began in response to the BPA Post-2011 Review. The structure was largely undefined by the Post-2011 Review, leaving BPA to take the initiative to move this forward.

Objectives

- Provide a venue for utilities, advocates, and other organizations working to support income qualified programming within the Northwest to collaborate.
- Increase shared knowledge of CAP and utility business activities to improve collaboration.
- Find simple solutions to streamlining program implementation between organizations including but not limited to CAPs, utilities, and Community Based Organizations (CBOs).
- Identify barriers and solutions to increasing access to Energy Efficiency programs.

Workgroup Structure

Meeting Cadence & Duration

The intent of this workgroup is to convene at least three times a year or quarterly, as staffing resources are available. The length of each individual meeting will take into account content, location, and time of year.

BPA commits to facilitation of this group for one year at a time. If it is determined that BPA cannot perform this function adequately or the scope is too broad for the Workgroup to function effectively and efficiently, BPA may decide to discontinue facilitation or adjust the scope.

Facilitation

BPA will provide a facilitator. A steering committee will provide guidance as requested by BPA (see below for more details).

- Primary Coordinator: BPA Energy Efficiency Income Qualified Program Manager
- Back-Up Facilitator: BPA Energy Efficiency Program Support

Structure & Organizing Principles | BPA Northwest Energy Efficiency Income Qualified Workgroup | Page 1

…ce List:
…ncome Qualified

…essed interest in discussing in the
…t is not organized in any particular
…me Qualified program team felt it
…e and organizations implementing

…ed with helping to prioritize this
…rkgroup. This list will be added to
…scussions.
…implementation structure are all

…l, and Other Guidelines)

…Fuel Switching

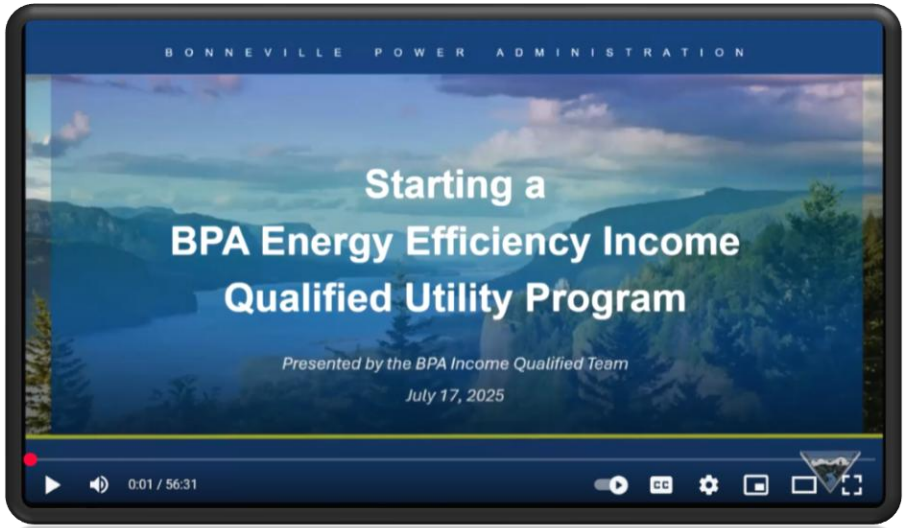
- Utility and CAP Partnership Development
- Contractor and CAP Partnership Development
- Collaboration of Program Sharing

Click on each page to access the documents online.

Recorded Webinar: Starting an EEIQ Program

Recorded webinar from July 17, 2025 covering:

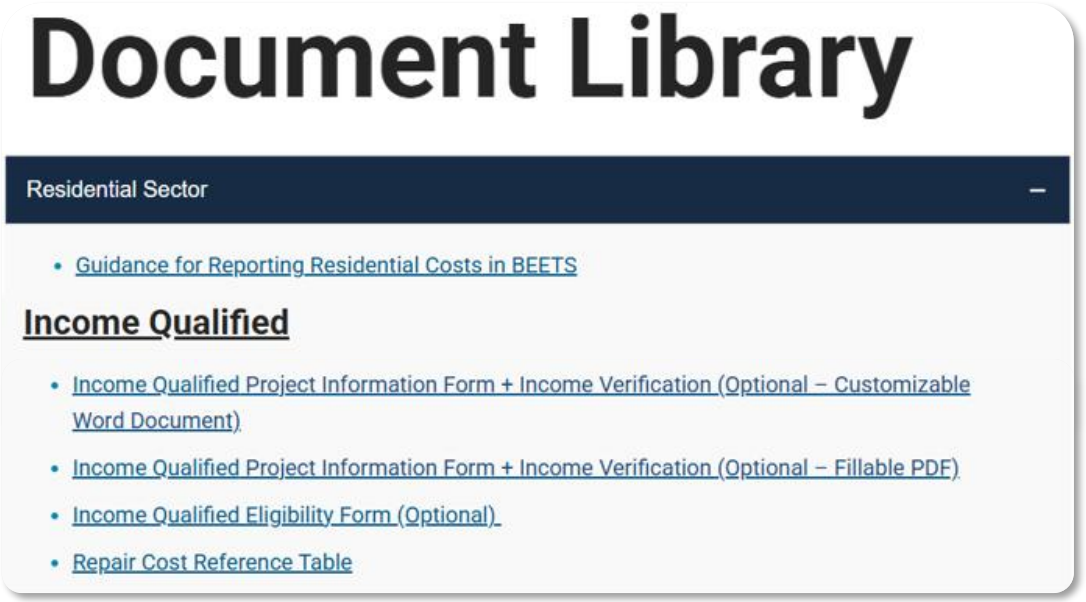
- Basics of starting an EEIQ Program.
- Available measures and documentation.
- Claiming repair costs.
- Outreach and coordination.
- Income qualification.
- Presentations from two utilities.



EE Presentations and Webinars | Presentation Slides | Recorded Webinar

Updated Income Qualified Program Resources

- BPA Energy Efficiency Income Qualified Homepage.
- Income Qualified Optional Form and Income Verification Template *(customizable).*
- Income Qualified Repair Cost Reference Table.
- *Coming Soon:*
  - *Updated Income Qualified Quick Start Guide.*
  - *Tribal Grant Application and Supporting Materials.*



Questions or Comments?

Thank you!

Jonathon Belmont

Residential Sector Lead

jmbelmont@bpa.gov

Amy Burke

Income Qualified Lead

aaburke@bpa.gov

Central Electric Cooperative

Income Qualified Program

October 10, 2025

CENTRAL ELECTRIC COOPERATIVE, INC.

Program Offerings

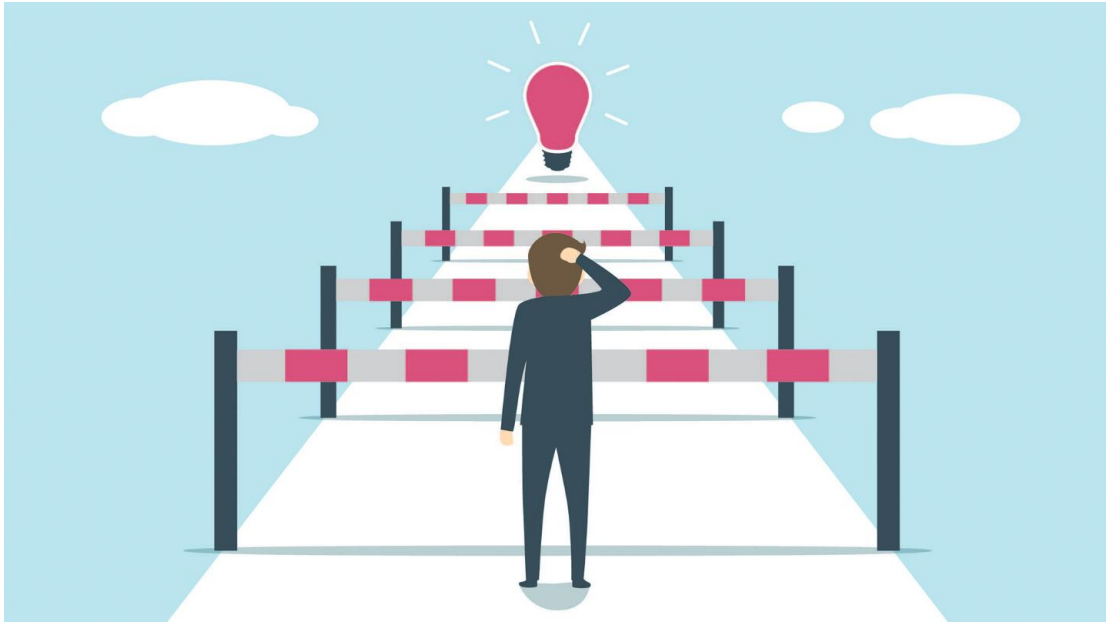
- Ductless Heat Pumps (DHPs).
- Heat Pumps/Duct Sealing.
- Insulation/Air Sealing.
- Unitary Heat Pump Water Heaters (HPWHs).
- Clothes Washer and Dryers.
- Windows.

How do Members Sign Up

- Option 1: CEC calls member who has received Energy Assistance Program (EAP).
- Option 2: Member calls CEC (aka high bills).
- Option 3: Referral from Community Action Program (CAP) Agency or HVAC Contractor.

Obstacles

- Limited contractor network.
- Increased cost per home.
- Administration burden.



Results

2022

- Total Homes Upgraded:
  - Approximately 30.
- Average Cost Per Home:
  - $7,723.
- Energy Savings per Home:
  - 2,860 kWh.

2023

- Total Homes Upgraded:
  - Approximately 49.
- Average Cost Per Home:
  - $9,263.
- Energy Savings per Home:
  - 3,184 kWh.

2024

- Total Homes Upgraded:
  - Approximately 55.
- Average Cost Per Home:
  - $15,994.
- Energy Savings per Home:
  - 4,791 kWh.

Plans for the Future

- Split heat pump water heaters:

- Whole house air sealing:

Questions?

Time for a break!

Energy Efficiency Marketing Team

UTILITY ROUNDTABLES 2025

Oct. 15-16, 2025

Meet the Marketing Team

Mike Gross
Marketing Lead

Rachael Ettelman
Marketing Specialist

Maggie Bagan
Marketing Specialist

Ming Kust
Marketing Specialist

Robin Moodie
Marketing Specialist

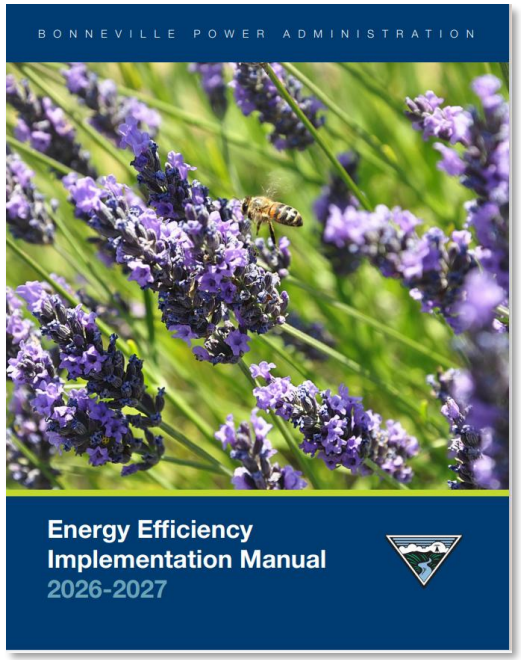
Skillset and Services

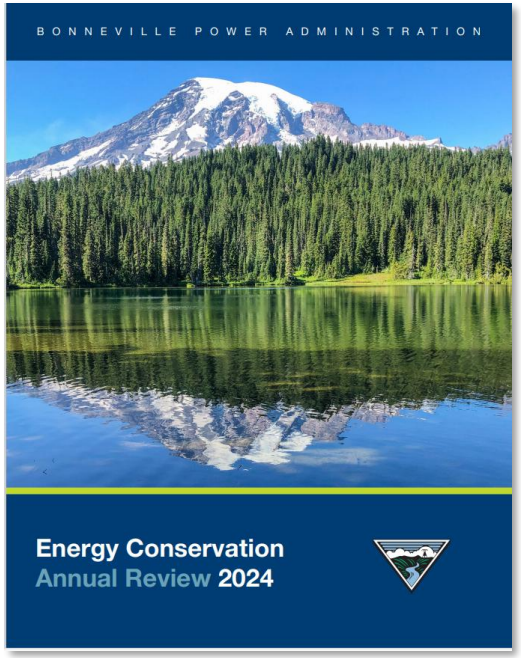
Collective Skills

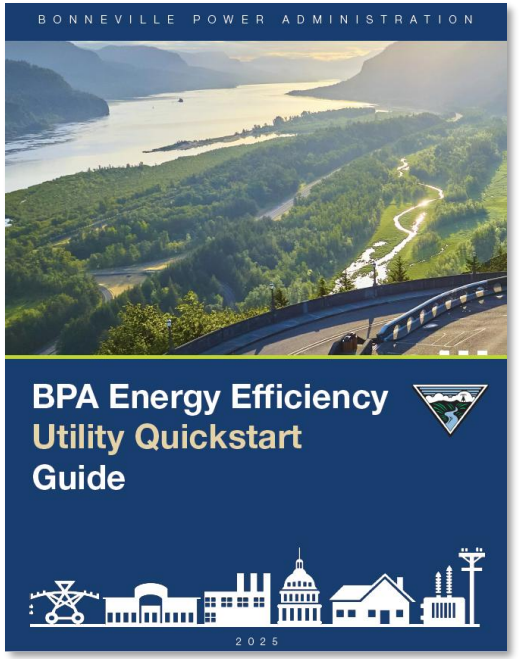
- Graphic Design
- Production Design
- Technical, Public Relations, Copywriting, and Editing
- Presentations
- Instructional and Social Media Videos
- Web Design
- Marketing Strategy and Planning

Marketing Team Publications

- Energy Efficiency Implementation Manual.
- Energy Conservation Annual Review.
- Energy Efficiency Action Plan.
- Energy Efficiency Utility Quickstart Guide.







Services

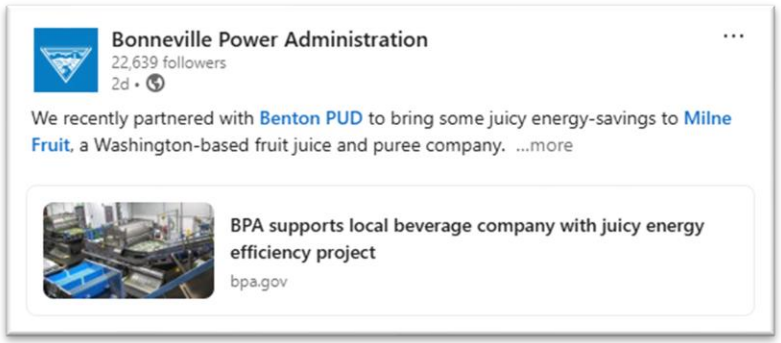
Marketing and Design

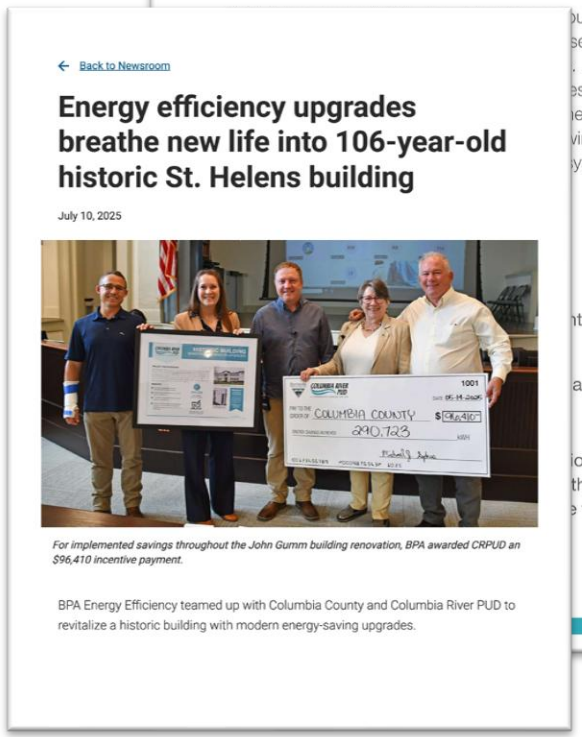
- Photos and graphic design production for images, logos, and icons.
- Marketing materials customization:
  - Custom fillable forms,
  - Social media content,
  - Flyers, or
  - Bill stuffers/post cards.
- Recommendations and support for marketing projects and campaigns.

Services

Press Kits:

- Press releases,
- Articles,
- Case studies,
- Project success posters, and
- Social media posts.

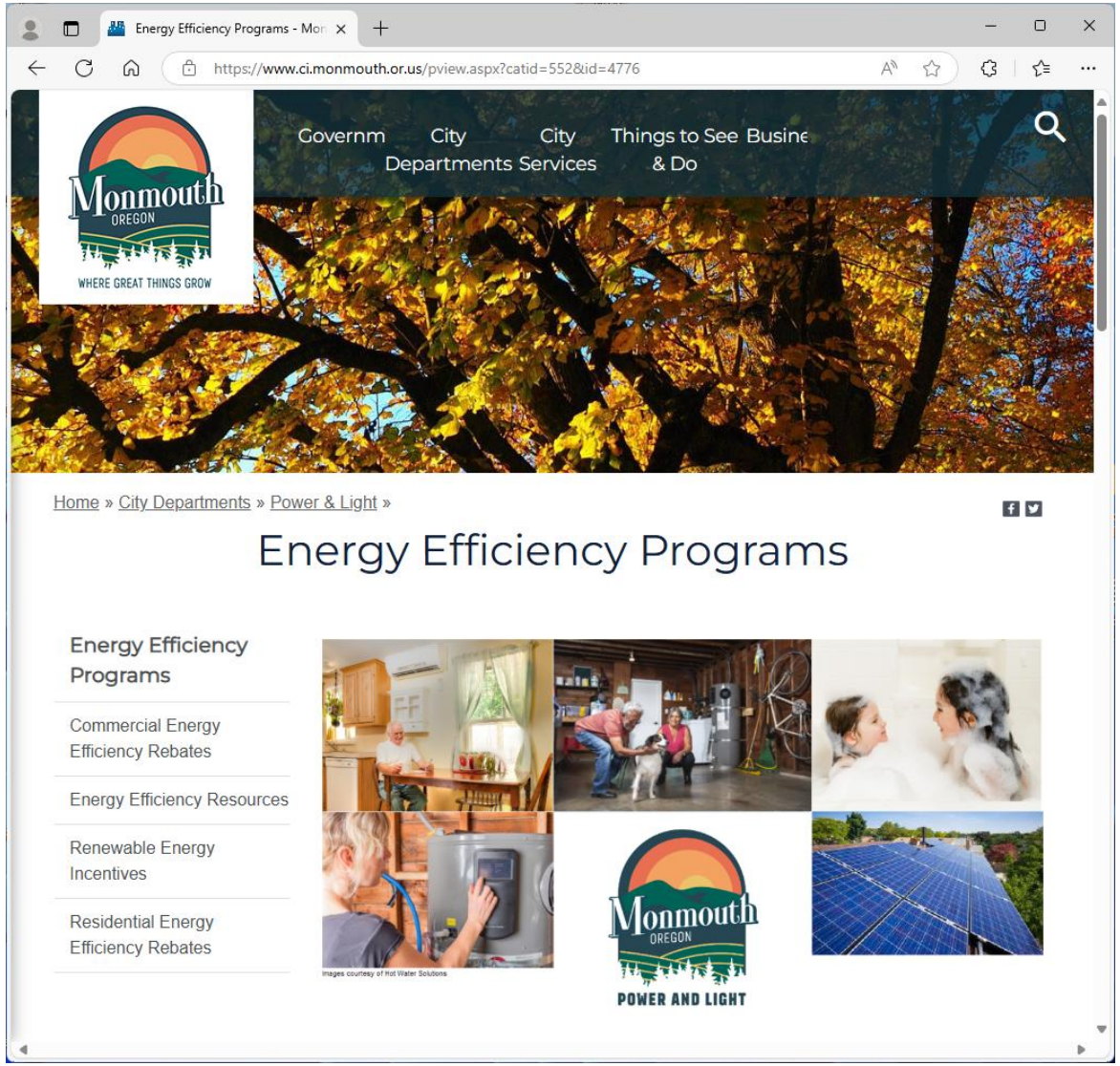




New Services

Website Recommendations

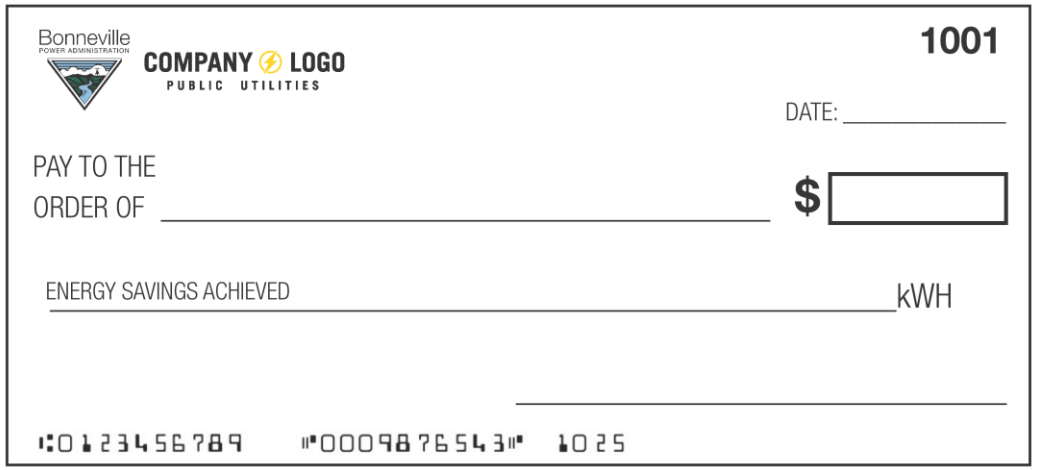
- Review existing website and make recommendations.
- Graphics production.
- Search engine optimization.
- Improve user experience.
- Increase program visibility.

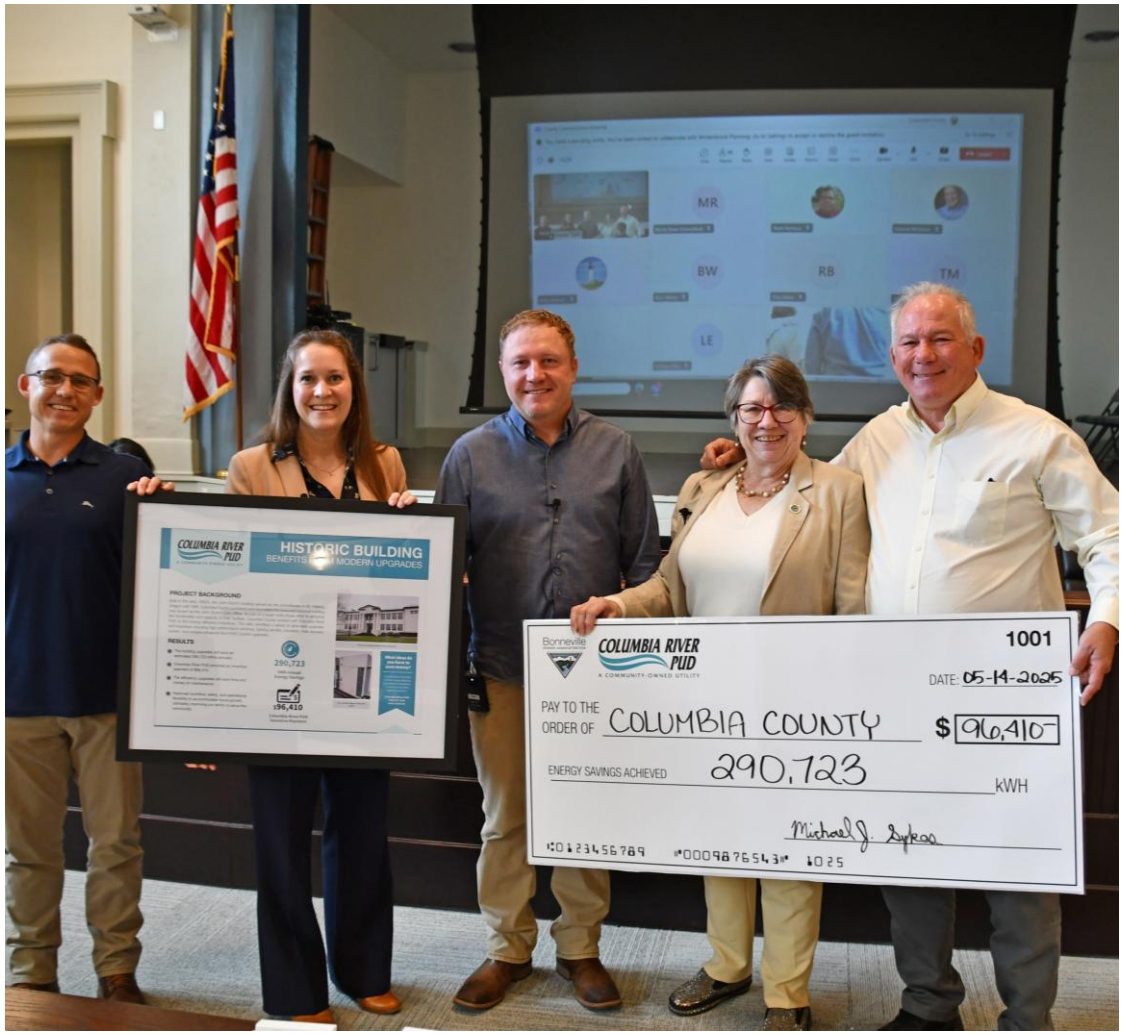


New Services

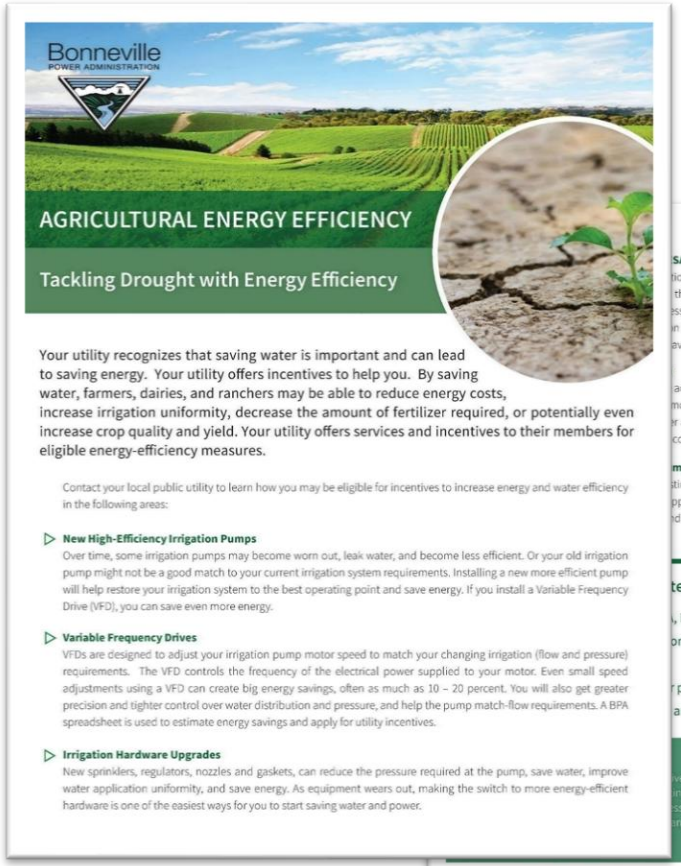
Big Check

- Laminated.
- Customized with logo.
- Re-usable with dry erase markers.
- Great for photo ops for case studies, articles, etc.



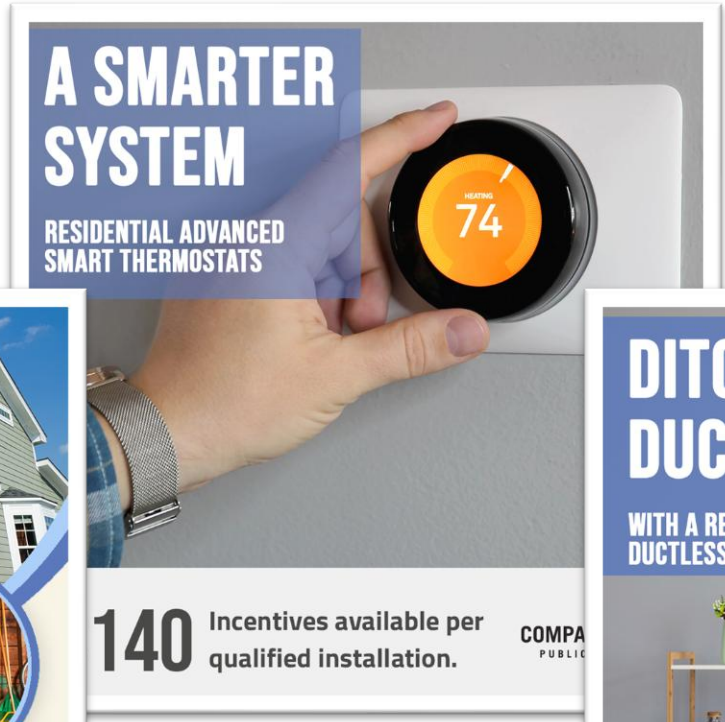


Updated Templates: Flyers



Updated Templates: Postcards, Bill Stuffers

Updated Templates: Social Media Posts



Questions or Comments?

UTILITY ROUNDTABLES 2025

Utility Distribution Sector

Oct. 15-16, 2025

Utility Distribution Strategic Priorities

Utility Distribution

Increase communication with utility management to promote the value of Utility Distribution measures.

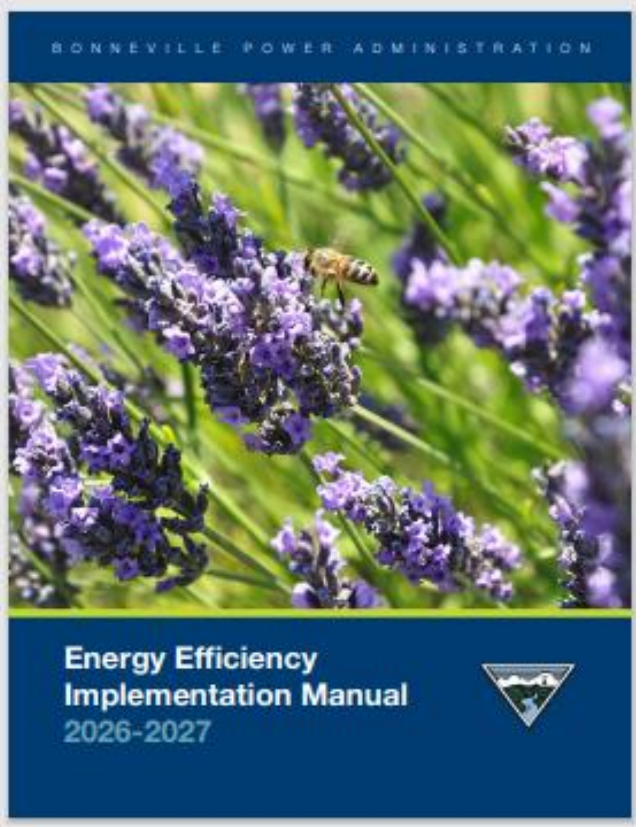
2026-2027 Priorities

- Continue to encourage Re-conductor and Transformer Measures.
- Renew Marketing for Conservation Voltage Reduction (CVR) projects.
- Re-Introduce Daily Demand Voltage Reduction (D-DVR).

Implementation Manual – Section 12
What Measures are in this Sector?

Two main groups: FY 2026+

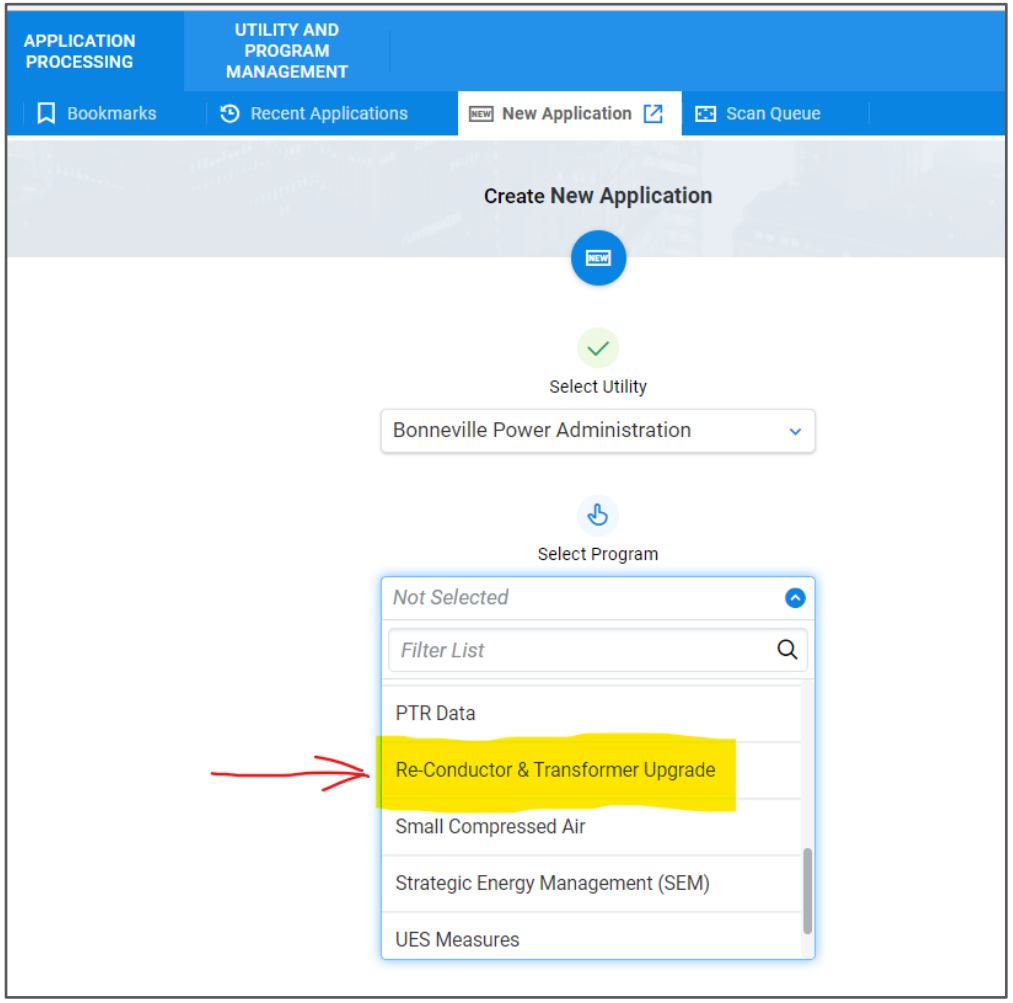
1. Re-conductor and Transformers (35-year measure): **$0.38/kWh.**
    - Several other measures: voltage increase, power factor correction, etc., but they are infrequently submitted/reported.
2. Conservation Voltage Reduction (CVR) / Voltage Optimization (VO) (10-year measure life): **$0.33/kWh** incentive.



Reconductor-Transformer (RT) Calculator: Program in BEETS

What is it?

- New streamlined process for these two measures, an alternative to custom project submittal.
- Project support document files can be attached to the calculator (all in one file).
- More automated data entry fields.
- Can handle up to six transformer and six reconductor measures in one file.



Reconductor Measures Can Also Be Custom Projects

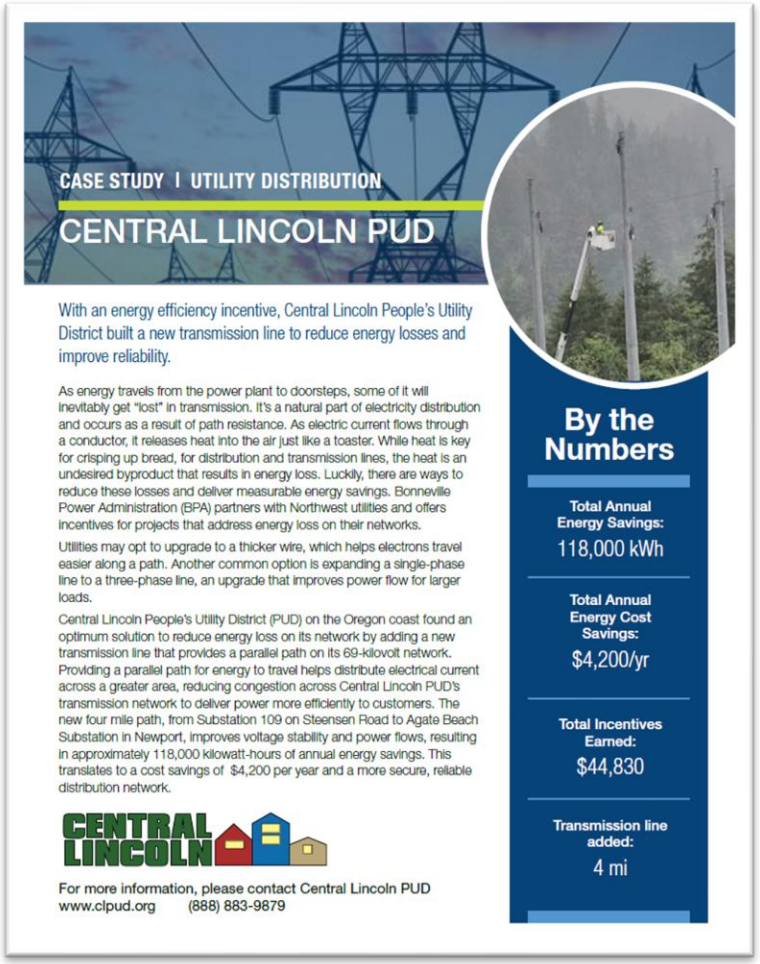
- When a reconductor project gets complicated.
- It can-not be addressed via RT-file.
- We leverage Load-Flow models executed by utility engineers or consultants.
- Outputs from the model (Peak kW Loss) are used to calculate Energy Savings.
- Tony Koch prepares the Custom Project details and enters into BEETS.

Utility Project Submittals in FY 2025

Utility	Program / Savings Type	Busbar Energy Savings (kWh/year)
Inland	Re-Conductor & Transformer	401,882
Idaho County	Re-Conductor & Transformer	117,835
Flathead	Re-Conductor & Transformer	268,061
Vigilante	Re-Conductor & Transformer	185,224
Coos-Curry	Re-Conductor & Transformer	390,686
DOE-RL	Re-Conductor & Transformer (Transformers)	29,867
Oregon Trail	Re-Conductor & Transformer	32,014
Cowlitz	Re-Conductor & Transformer	92,583
Vigilante	Custom Projects Option 1 - Reconductor	122,012
Fall River	Re-Conductor & Transformer	5,924
Kittitas	Re-Conductor & Transformer	371,794
Snohomish	Custom Projects Option 2 - Reconductor	29,691
Benton PUD	Custom Projects Option 1 - CVR	887,019
Vigilante	Custom Projects Option 1 - Reconductor	74,068
Lakeview	Re-Conductor & Transformer (Transformer)	89,530
Central Lincoln	Custom Projects Option 1 - Transmission Line	117,974
	FY25 Total (kWh/year)	**3,216,164**
	aMW	**0.37**

A Special Project to Highlight

Central Lincoln PUD Case Study



CASE STUDY | UTILITY DISTRIBUTION

CENTRAL LINCOLN PUD

With an energy efficiency incentive, Central Lincoln People's Utility District built a new transmission line to reduce energy losses and improve reliability.

As energy travels from the power plant to doorsteps, some of it will inevitably get "lost" in transmission. It's a natural part of electricity distribution and occurs as a result of path resistance. As electric current flows through a conductor, it releases heat into the air just like a toaster. While heat is key for crisping up bread, for distribution and transmission lines, the heat is an undesired byproduct that results in energy loss. Luckily, there are ways to reduce these losses and deliver measurable energy savings. Bonneville Power Administration (BPA) partners with Northwest utilities and offers incentives for projects that address energy loss on their networks.

Utilities may opt to upgrade to a thicker wire, which helps electrons travel easier along a path. Another common option is expanding a single-phase line to a three-phase line, an upgrade that improves power flow for larger loads.

Central Lincoln People's Utility District (PUD) on the Oregon coast found an optimum solution to reduce energy loss on its network by adding a new transmission line that provides a parallel path on its 69-kilovolt network. Providing a parallel path for energy to travel helps distribute electrical current across a greater area, reducing congestion across Central Lincoln PUD's transmission network to deliver power more efficiently to customers. The new four mile path, from Substation 109 on Steensen Road to Agate Beach Substation in Newport, improves voltage stability and power flows, resulting in approximately 118,000 kilowatt-hours of annual energy savings. This translates to a cost savings of $4,200 per year and a more secure, reliable distribution network.

CENTRAL LINCOLN

For more information, please contact Central Lincoln PUD
www.clpud.org (888) 883-9879

By the Numbers

Total Annual Energy Savings:
118,000 kWh

Total Annual Energy Cost Savings:
$4,200/yr

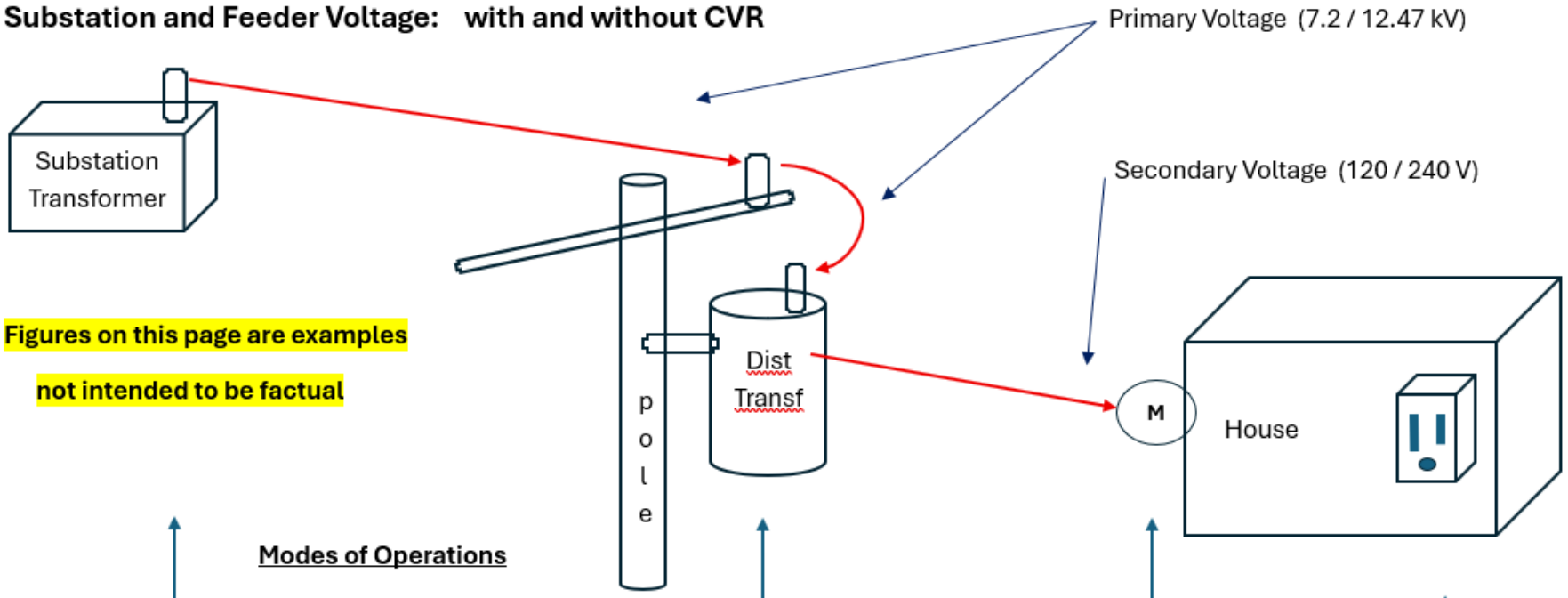
Total Incentives Earned:
$44,830

Transmission line added:
4 mi

Clallam PUD: Deploying CVR projects with AMI Data

- Clallam has traditionally implemented CVR using Primary end of line voltage.
- The PUD is currently in CVR-factor data gathering for two substations.
- CVR-factor calculation relies on turning the CVR voltage setting On and Off on a daily-basis. A CVR-factor is calculated, usually using ~6 months of daily On / Off data, for a specific substation, and reflects the native load of the substation.
- The following page illustrates some different CVR operating modes.

Substation and Feeder Voltage: with and without CVR



Modes of Operations

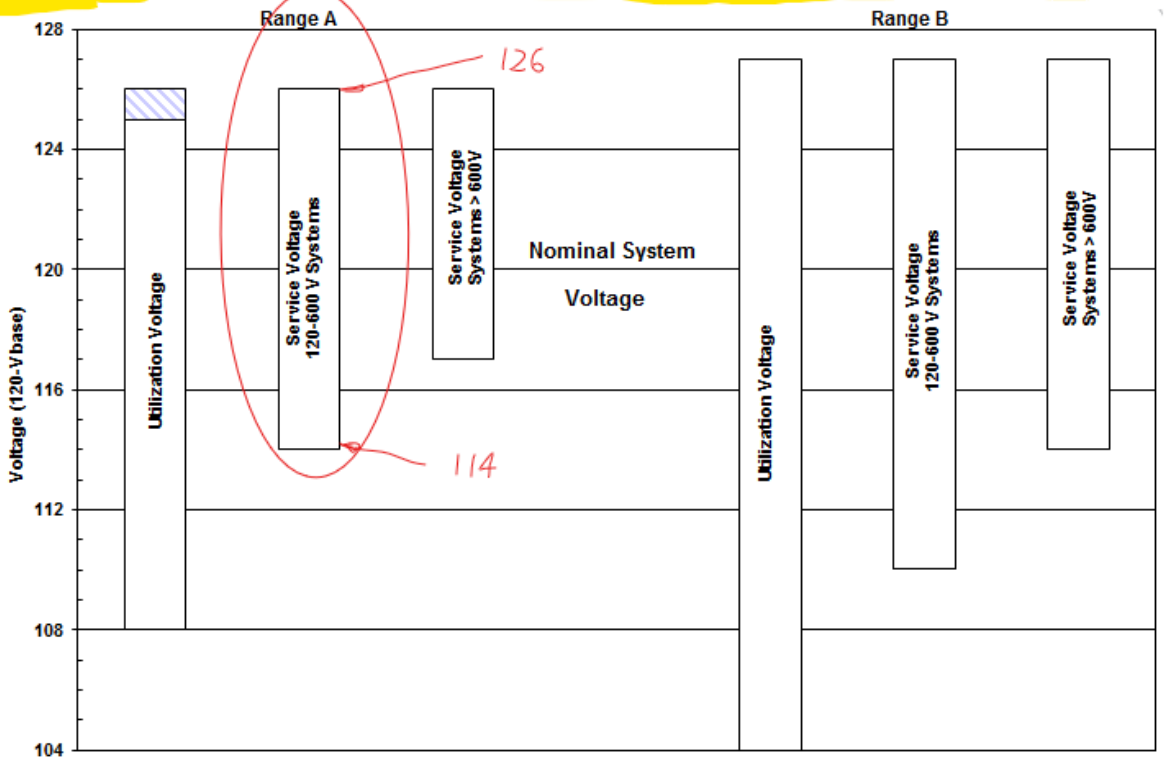
Max: 126 V	**ANSI C.84.1 Max & Min**	**Min: 114 V**	**Min: 110 V**
122 – 124 V	**Typical non-CVR operation**	**121 – 122 V**	**120 – 122 V**
123 Avg		**121 Avg**	**120 Avg**
120 Avg	**2-3V Reduction CVR target: 118 EOL**	**117 Avg**	**116 Avg**
	Uses radios to communicate EOL voltage to sub		
118 Avg	**4-5V Reduction CVR with AMI voltage feedback**	**115 Avg**	**114 Avg**
	Eliminates the need for EOL radios		

Annex B

Illustration of Voltage Ranges of Table 1

Figure B1 shows the basis of Range A and Range B limits of table 1. The limits in table 1 were determined by multiplying the limits shown in this chart by the ratio of each nominal system voltage to the 120V base. [For exceptions, see note (c) to Figure B1.]

A technique commonly called Conservation Voltage Reduction (CVR) is sometimes used for energy and or demand reduction. Determination of the value of CVR is beyond the scope of this Standard. However, it is recommended that the application of CVR should be limited to voltages in Range A for normal operation. Range B should be reserved for emergency, infrequent operation. CVR systems should not be designed to operate below Range B for any condition.



(informative)

Figure B1

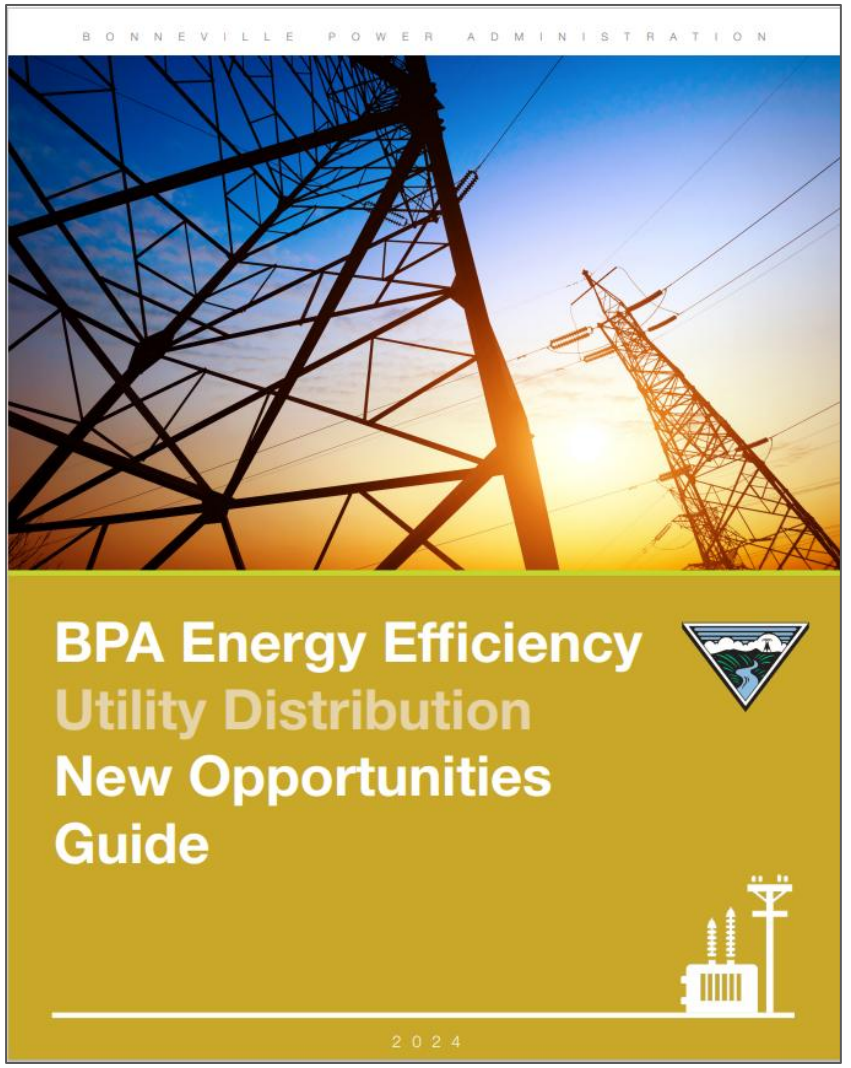
Re-Introduction of Daily DVR Energy Savings Pilot Program

- BPA has been working for the past year+ to enhance the Daily Demand Voltage Reduction (DVR) offering.
- BPA will host a **customer webinar on Nov. 13** to discuss Daily DVR in more detail.
  - ***Invite your Distribution Engineering staff to the webinar.***
- BPA developed economic analysis tools that specifically quantify the overall benefit to utilities.
- BPA will address the possibility for hybrid CVR and Daily DVR in the webinar.

Utility Distribution: New Opportunities Guide

A marketing document to share with other staff…

https://www.bpa.gov/-/media/Aep/energy-efficiency/utility-toolkit/uds-nog.pdf



Contact Info for Technical Customer Service Support

Tony Koch, PE, CEM

Mechanical Engineer

jakoch@bpa.gov

(206) 220-6777

Closing Remarks
Thank you, Surveys, and Safe Travels!

Efficiency Exchange Conference Raffle

Adjourn!

Don’t Forget the Survey: