

Washington

Demand-side Management Advisory Group

May 10, 2024



- Docket UE-230172 Settlement Stipulations
 - Joint discussion with DSM Advisory Group and Low-Income Advisory Group
 - OP 24 Low Income Weatherization program enhancements
 - OP 22 Language Access Plan
 - Draft 2023 Annual Report, Draft 2022-2023 Biennial Conservation Report
 - System Benefits Charge draft filing
 - 2025 Conservation Potential Assessment (CPA)
 - Market, measure characterization and NEI applications
 - Tree Planting Conservation
 - 2024-2025 DSM Forecast
 - Energy efficiency program updates, adaptive management
 - Braiding opportunities – state and federal funding
-
- Updates
 - Demand Response – forecast, updates
 - CETA: Equity Advisory Group
 - CETA: Clean Energy Implementation Plan
 - CETA: Clean Energy Implementation Plan
 - 2024 YTD Customer Benefit Indicator metrics (prelim data)
 - 2024-2025 Energy Efficiency Pilots
 - Wrap-up

Docket UE-230172

Settlement Stipulation OP 24

Charity Spires



Action Items Pending from Prior Meetings

Action item from Dec 2023 meeting:

- Shay noted there will be Low Income Weatherization topics coming out of the GRC settlement
 - Build in time at DSM Advisory Group for this?
 - Or will there be another stakeholder process?
- Charity took as action item

Update

- Charity reviewing the GRC settlement and has an update today

Docket UE-230172 Settlement Stipulation OP 24

Docket UE-230172 Settlement Stipulation OP 24 states:

*PacifiCorp will work with its **DSM Advisory Group** to develop the following enhancements to its low-income weatherization programs:*

- a) Pilot program to overcome inability to weatherize homes because of deferred maintenance or large repairs.*
- b) Progress payments to weatherization agencies.*

Low Income Weatherization Program

Current program financial assistance

- **Energy Efficient Measures**

Local agencies leverage company funds with Washington Match Maker Program. Company pay 50% of installed eligible energy efficient measures, and pay 100% once Match Maker program funds are exhausted

- **Repairs**

Company reimburse 50% of installed cost of repair; 100% reimbursement if matching funds are exhausted. Annual limit of 30% of the annual reimbursement on energy efficient measures

- **Administration**

Agency Administrative Cost – 15% of the Pacific Power reimbursement

- **No annual funding cap**

Docket UE-230172 Settlement Stipulation OP 24

Discussion - Low Income *weatherization program* enhancements

1. **Pilot program to overcome inability to weatherize homes because of deferred maintenance or large repairs.**

- Effective February 1, 2022, funds available for repairs increased from 15% to 30% of the annual reimbursement on energy efficient measures
- Applicable to weatherization related repairs and repairs required to make home weatherization ready
- Intent - Reduce deferrals and increase # of households served

2. **Progress payments to weatherization agencies**

- Agencies invoice the company after project is completed

Docket UE-230172

Settlement Stipulation OP 22

Kimberly Alejandro



Docket UE-230172 Settlement Stipulation OP 22

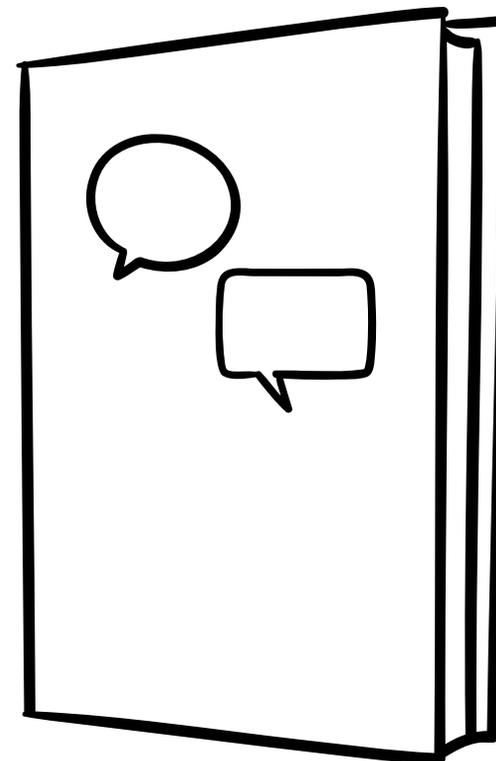
Kimberly Alejandro

Language Access Plan

Docket UE-230172 Settlement Stipulation OP 22 states:

*The Company will develop a **Language Access Plan** as detailed below:
Develop a draft language access plan within six months of the Commission's final order in this proceeding and share the draft Language Access Plan with the LIAG, Demand Side Management (DSM) Advisory Group, and EAG.*

- a) PacifiCorp will work with the LIAG, DSM Advisory Group, and the EAG to further develop the Language Access Plan and seek consensus on a final Language Access Plan.*
- b) PacifiCorp will make best efforts to implement the Language Access Plan prior to the filing of PacifiCorp's next general rate case and will provide this timeline to the LIAG, DSM Advisory Group, and EAG after the Language Access Plan is finalized.*
- c) In each LIBA annual report, PacifiCorp will report on the accomplishment of any objectives in the Language Access Plan and assess the need to update the Language Access Plan.*



Draft 2023 Annual Report, Draft 2022-2023 Biennial Conservation Report

Nancy Goddard



May 1 Draft 2023 Annual Report 2023 Plan vs Actual

Program of Initiative	2023 PacifiCorp Washington Conservation Estimates		2023 PacifiCorp Washington DSM Actual	
	kWh/Yr Savings (at site)	Estimated Systems Benefit Expenditures	kWh/Yr Savings (at site)	Systems Benefits Charge Expenditures
Low Income Weatherization (114)	130,100	\$ 1,193,659	154,807	\$ 1,122,473
Home Energy Savings (118)	3,600,300	\$ 5,665,780	4,994,042	\$ 6,187,859
Home Energy Reports (N/A)	3,558,528	\$ 462,996	4,466,880	\$ 435,105
Total Residential Programs	7,288,928	\$ 7,322,435	9,615,729	\$ 7,745,437
Wattsmart Business (140) - Commercial	24,052,821	\$ 8,838,620	31,698,688	\$ 9,445,025
Wattsmart Business (140) - Industrial	16,179,211	\$ 4,591,939	3,693,438	\$ 1,100,507
Wattsmart Business (140) - Irrigation	766,007	264,069	805,266	\$ 239,939
Total Business Programs	40,998,039	13,694,628	36,197,392	\$ 10,785,471
Northwest Energy Efficiency Alliance	3,664,463	\$ 877,438	3,415,622	\$ 954,497
Distribution Efficiency				
Production Efficiency			133,136	
Total Other Conservation Initiatives	3,664,463	877,438	3,548,758	\$ 954,497
Be Wattsmart, Begin at Home		\$ 70,008		\$ 51,135
Customer outreach/communication		\$ 250,000		\$ 170,587
Program Evaluations (& savings verification)		\$ 254,497		\$ 162,487
Potential Study update/analysis		\$ 15,368		\$ 49,695
System Support		\$ 98,378		\$ 73,183
End use load research & RTF Funding		\$ 65,500		\$ 36,119
Total Portfolio-Level Expenses	-	\$ 753,751	-	\$ 543,205
Total PacifiCorp Conservation	48,286,967	\$ 21,770,814	45,946,256	\$ 19,074,112
Total System Benefit Charge Conservatio	51,951,430	\$ 22,648,252	49,361,879	\$ 20,028,609

2023

Pac kWh

95% of 2023 Annual Conservation Plan

NEEA kWh

93% of 2023 Annual Conservation Plan

Pac \$

88% of 2023 Annual Conservation Plan

2022-2023 from Annual Reports (before adjustments)

Energy Efficiency Program (Tariff Schedule #)	2022 Annual Report		2023 Annual Report	
	kWh/Yr. Savings (at site)	Estimated Systems Benefit Expenditures	kWh/Yr. Savings (at site)	Systems Benefits Charge Expenditures
Low Income Weatherization (114)	261,515	\$ 747,702	154,807	\$ 1,122,473
Home Energy Savings (118)	2,625,379	\$ 3,629,851	4,994,042	\$ 6,187,859
Home Energy Reports	4,289,670	\$ 137,990	4,466,880	\$ 435,105
Total Residential Programs	7,176,564	\$ 4,515,543	9,615,729	\$ 7,745,437
Wattsmart Business (140)	26,850,318	\$ 8,439,423	36,197,392	\$ 10,785,471
Total Business	26,850,318	\$ 8,439,423	36,197,392	\$ 10,785,471
Northwest Energy Efficiency Alliance (NEEA)	3,328,800	\$ 905,984	3,415,622	\$ 954,497
Distribution Efficiency	24,611	\$ -	-	\$ -
Production Efficiency			133,136	
Total Other Conservation Initiatives	3,353,411	\$ 905,984	3,548,758	\$ 954,497
Be Wattsmart, Begin at Home		\$ 64,523		\$ 51,135
Customer outreach/communication		\$ 217,121		\$ 170,587
Program Evaluations (& savings verification)		\$ 276,541		\$ 162,487
Potential Study update/analysis		\$ 117,239		\$ 49,695
System Support		\$ 70,863		\$ 73,183
End use load research & RTF Funding & CTA 2045		\$ 58,090		\$ 36,119
Total Portfolio-Level Expenses		\$ 804,378		\$ 543,205
Total PacifiCorp Conservation Programs	34,051,493	\$ 13,759,344	45,946,256	\$ 19,074,112
Total System Benefit Charge Conservation	37,380,293	\$ 14,665,328	49,361,879	\$ 20,028,609

2023 as % of 2022

Residential kWh 134%

Business kWh 135%

Pac \$ 139%

2022-2023 Biennial Conservation Report - adjustments

(May 1 draft Biennial Conservation Report)

Home Energy Reports – adjustment to report evaluated savings:

Home Energy Reports	<u>2022</u>	Source/Notes
	4,289,670	Claimed Gross kWh at Site - Table 1
	3,445,717	WA Home Energy Report Evaluation
		80% Evaluated net realization rate
		Savings adjustment at site for Home Energy Reports 2022 (2022 (843,953) verified net savings - 2022 claimed savings)
	3,445,717	2022 HER Savings after adjustment

Home Energy Reports	<u>2023</u>	Source/Notes
	4,466,880	Claimed Gross kWh at Site - Table 1
	2,930,363	WA Home Energy Report Evaluation
		66% Evaluated net realization rate
		Savings adjustment at site for Home Energy Reports 2022 (2022 (1,536,517) verified net savings - 2022 claimed savings)
	2,930,363	2023 HER Savings after adjustment

Summary of Adjustments

Adjustment (MWh)	2022	2023	Total
Home Energy Reports	(844)	(1,537)	(2,380)
NEEA	(331)	-	(331)
Total	(1,175)	(1,537)	(2,712)

NEEA revised 2022 savings when they reported for 2023

Program Year	Annual Savings reported kWh (at site)	Revised Savings kWh (at site)	Net kWh Adjustment (at site)
2022	3,353,411	3,022,248	(331,163)
2023	3,415,622	3,415,622	-
Total Adj			(331,163)

May 1 Draft 2022-2023 Biennial Conservation Report

(includes adjustments)

Energy Efficiency Program (Tariff Schedule #)	2022 Annual Report w/adjustments		2023 Annual Report w/adjustments		2022-2023	
	kWh/Yr. Savings (at site)	Systems Benefits Charge Expenditures	kWh/Yr. Savings (at site)	Systems Benefits Charge Expenditures	kWh/Yr. Savings (at site)	Systems Benefits Charge Expenditures
Low Income Weatherization (114)	261,515	\$ 747,702	154,807	\$ 1,122,473	416,322	\$ 1,870,176
Home Energy Savings (118)	2,625,379	\$ 3,629,851	4,994,042	\$ 6,187,859	7,619,421	\$ 9,817,710
Home Energy Reports	4,289,670	\$ 137,990	4,466,880	\$ 435,105	8,756,550	\$ 573,094
Home Energy Reports - adjustment	(843,953)		(1,536,517)		(2,380,470)	\$ -
Total Residential Programs	6,332,611	\$ 4,515,543	8,079,212	\$ 7,745,437	14,411,823	\$ 12,260,980
Wattsmart Business (140)	26,850,318	\$ 8,439,423	36,197,392	\$ 10,785,471	63,047,710	\$ 19,224,894
Total Business	26,850,318	\$ 8,439,423	36,197,392	\$ 10,785,471	63,047,710	\$ 19,224,894
					-	\$ -
Northwest Energy Efficiency Alliance (NEEA)	3,328,800	\$ 905,984	3,415,622	\$ 954,497	6,744,422	\$ 1,860,480
NEEA - adjustment			(331,163)		(331,163)	\$ -
Distribution Efficiency	24,611	\$ -	-	\$ -	24,611	\$ -
Production Efficiency			133,136		133,136	\$ -
Total Other Conservation Initiatives	3,353,411	\$ 905,984	3,217,596	\$ 954,497	6,571,007	\$ 1,860,480
					-	\$ -
Be Wattsmart, Begin at Home		\$ 64,523		\$ 51,135	-	\$ 115,658
Customer outreach/communication		\$ 217,121		\$ 170,587	-	\$ 387,708
Program Evaluations (& savings verification)		\$ 276,541		\$ 162,487	-	\$ 439,028
Potential Study update/analysis		\$ 117,239		\$ 49,695	-	\$ 166,934
System Support		\$ 70,863		\$ 73,183	-	\$ 144,046
End use load research & RTF Funding		\$ 58,090		\$ 36,119	-	\$ 94,209
Total Portfolio-Level Expenses		\$ 804,378		\$ 543,205	-	\$ 1,347,582
Total PacifiCorp Conservation Programs	33,207,540	\$ 13,759,344	44,409,739	\$ 19,074,112	77,617,280	\$ 32,833,456
Total System Benefit Charge Conservation	36,536,340	\$ 14,665,328	47,494,199	\$ 20,028,609	84,030,540	\$ 34,693,937

2022-2023 Targets and Results

(May 1 draft Biennial Conservation Report)

2022-2023 EIA Conservation Savings Target and Results Table

Category ^[1]	Approved Savings Target ^[1] (MWh at site)	2022-2023 Savings Results (MWh at site)	Excess Conservation from prior periods (MWh at site)	2022-2023 Savings Results Including Excess Conservation from prior periods (MWh at site)	% of Target
10-year conservation potential	471,050				
Pro Rata Share of 10-year conservation potential	94,210				
EIA Target	94,210	84,031	0	84,031	89%
Decoupling Penalty Threshold (5% of EIA Target)	4,711				
Total Utility Conservation Goal	98,921	84,031	0	84,031	85%
Excluded Programs (NEEA)	-6,774	-6,413		-6,413	
Utility Specific Conservation Goal	92,147	77,617		77,617	84%
EIA Penalty Threshold (EIA Target minus NEEA savings)	87,436	77,617		77,617	89%

[1] Categories and Approved Savings Targets are from UE-210830 - Order 01 Attachment A

[UTC Case Docket Document Sets](#) | [UTC \(wa.gov\)](http://UTC.wa.gov)

Draft Reports

Seeking input on draft reports sent 5/1/2024

- 2023 Annual Report on Conservation **Acquisition**
- 2022-2023 Biennial Conservation Report

Next Steps

- Comments requested by Wednesday, 5/15/2024
- File by 5/31/2024

System Benefits Charge – draft filing

Nancy Goddard



System Benefits Charge (SBC) Draft Filing

Follow-ups from last meeting (March 2024)

1. What is the average rate/bill impact? 1.1% increase
2. Bill impact for a residential customer using 1,200 kWh/month? \$1.51 increase
 - See Attachment D in the draft filing
3. Do PSE and Avista incorporate Demand Response within their tariff riders?
 - PSE recovers demand response PSE admin costs thru its conservation rider

System Benefits Charge (SBC) Draft Filing

Further thoughts:

Demand Response and equity expenses recovered via the SBC would be

- Reported in CEIP reports/plans (not in energy efficiency reports/plans)
- Included in future System Benefits Charge analysis and filings
 - On same schedule with energy efficiency (repeat what we did for this filing)
 - Forecasts for energy efficiency, demand response, and equity analyst expenses would be separate

Seeking to confirm the above, or any comments on this

System Benefits Charge Draft Filing

Seeking input on draft filing sent 5/1/2024:

- Proposal to include demand response and equity analyst in the SBC
- Proposed increase to \$24 million

Next Steps

- Comments requested by Thursday, 5/16/2024
- File by 5/31/2024
- Effective date if approved - 8/1/2024
- Re-analyze no later than March 2025

Condition 12d, WAC 480-109-130

Docket UE-230904 Order 01 Attachment A	12a	Recovery through an Electric Conservation Service Rider	Scope of Expenditures — Funds collected through the Electric Conservation Service Rider must be used on approved conservation programs and their administrative costs. Additionally, Rider funds may be used for other purposes when they have a benefit to Pacific Power customers and are approved by the Commission.
Docket UE-230904 Order 01 Attachment A	12d	Recovery through an Electric Conservation Service Rider	Pacific Power must file revisions to its cost recovery tariff, (Schedule 191) by June 1 each year, with the requested effective date of August 1 of that same year. If PacifiCorp files its cost recovery tariff early, a Draft Annual Report with completed savings evaluations (see section 6(d)) must accompany the filing.
WAC 480-109-130	2	Conservation cost recovery adjustment	(2) A utility must make a conservation cost recovery filing no later than June 1st of each year, with a requested effective date at least sixty days after the filing.
WAC 480-109-130	2	Conservation cost recovery adjustment	(2) If the utility believes that a filing is unnecessary, then it must file a request for exception and supporting documents no later than May 1st of each year demonstrating why a rate change is not necessary.

2025 CPA market, measure characterization and NEI applications

Peter Schaffer





Baselines & Considerations

AEG will develop baselines unique to how DSM planning is conducted in each state. Examples include:

- State Building Codes
 - ASHRAE 90.1, IECC or State-Specific (see table below)
- Federal equipment efficiency standards with applicable state-specific adjustments
- Baseline market data for equipment and measure saturation
 - PacifiCorp surveys, project data
 - Regional Technical Forum and California CPUC/eTRM
 - National and census region-specific saturation data

State	Residential Energy Code Used	Non-Residential Energy Code Used
Washington	Washington State Energy Code (WSEC) 2021	Washington State Energy Code (WSEC) 2021

Baselines & Considerations, Cont.

Federal Policy



- Tax incentives introduced on January 1, 2023, for the Inflation Reduction Act (IRA), focused primarily on low- and moderate-income households and disadvantaged communities by supporting upgrades in heating, cooling, weatherization, and comprehensive home improvements.
- In the 2023 IRP, AEG collaborated with PacifiCorp to integrate IRA and IJA impacts into their study by adopting faster ramp rates for measures targeting specific customer groups.
- This approach updates the 2021 Power Plan's ramp rates to reflect quicker adoption due to federal legislation.



Drivers of Difference in Forecasted Potential by Study



Key Drivers of Differences between Studies

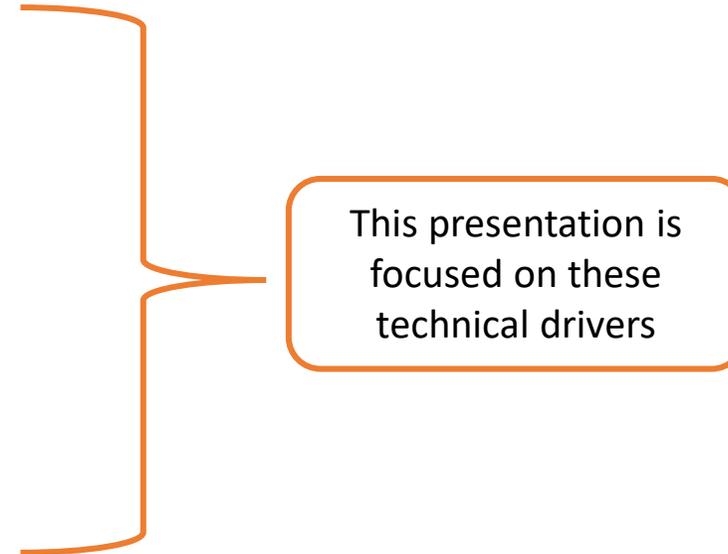


- **Technical Drivers:**

- Distribution of Customers and Sales by Sector Forecasts by Sector
- Sub-Sector Share of Load
- Sector-Specific Measures
- Climate
- Equipment Saturations
- Ramp Rates

- **Other Drivers:**

- Cost-Effectiveness Requirements
- Measure Sourcing Requirements
- Stringency of Local Building Codes and Standards





Residential Low-Income Segmentation

- Threshold definitions for base year 2023 (same as Residential Survey year)
 - Three income categories: low, moderate, and regular-income
 - Combination of federal poverty guidelines (FPG) and state median income (SMI), depending on LIHEAP annual income and household size levels

Jurisdiction	Threshold Definitions		
	Low-Income:	Moderate-Income: Above LI and Below:	Above-Moderate Income:
WA*	≤ 60% SMI ≤ 200% FPG	≤ 100% SMI	> 100% SMI

**WA low-income was split by household size.*

If less than 7 people per household, used 60% of SMI and if greater than 7, used 200% FPG.

Differences in Consumption by Sector



- Consumption by sector drives overall savings opportunities
 - Higher industrial and irrigation loads tend to have lower savings potential compared to overall load due to fewer opportunities
 - Different measure-level opportunities by sector and sub-sector
- Residential and commercial sectors generally have higher savings potential
 - More measure options
 - Often, more mature programs have more potential in early years due to more advanced ramp rates

Drivers of Residential Differences Across Studies



Location and Climate

- Differences in climate and location drive the saturation of cooling equipment and the run time of heating equipment
- More rural communities have higher saturations of electric heating equipment due to lack of natural gas access

Overall Household Energy Use

- Differences in household usage drives difference in certain end uses
- Example: types of existing heating equipment varies by home type, which drives the amount of heating potential

Saturation of Equipment

- Higher saturations of electric heating and water heating equipment increase overall household baseline energy use and present more savings opportunities

Drivers of Commercial Differences Across Studies



Building Type

- Certain equipment is more applicable to certain building types
- **Example:** Compared to offices, grocery has more refrigeration consumption, lodging has more water heating consumption

Climate and Location

- Much like residential, climate can have a large impact due to varying runtimes
- Access to natural gas service affects saturation of electric space and water heating

Data Sourcing

- Data sourcing is more of a driver of difference than residential because third-party sources are required for commercial
- **Example:** Different sources for RMP and Pacific Power states – CBECS and CBSA

Drivers of Industrial Differences Across Studies



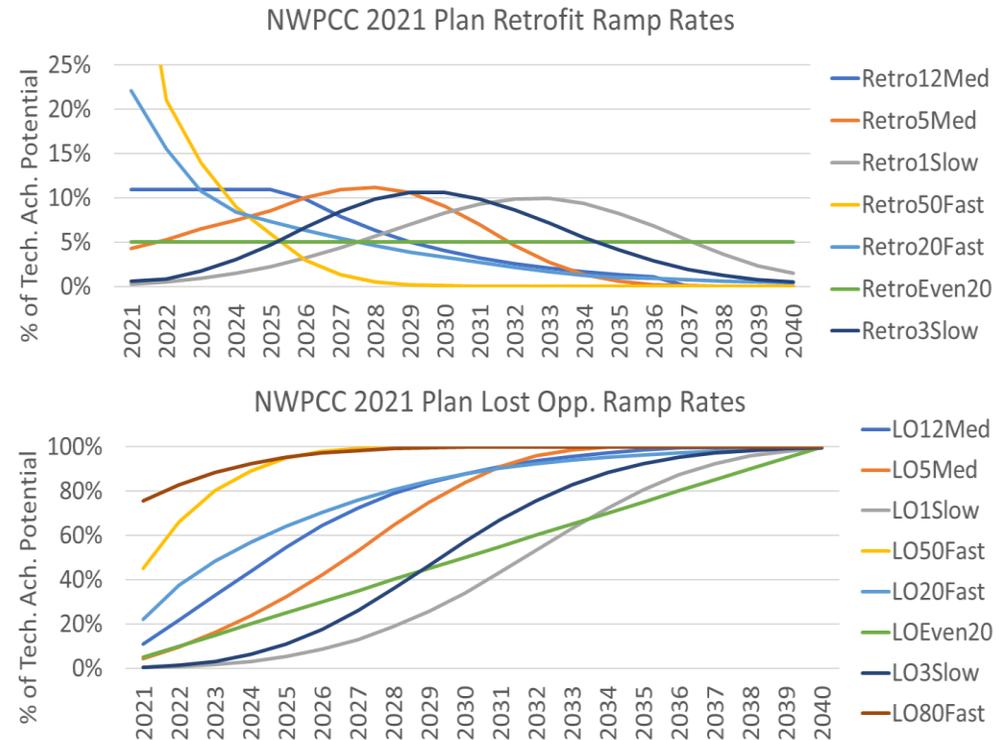
Industry Type	Applicable Measures	Data Sourcing
<ul style="list-style-type: none">• The industry type drives the savings potential• Example: Some industrial facilities may look more like a warehouse while others are heavy processing, presenting different savings opportunities due to equipment types and operation schedules• Industrial customers shutting down operations reduces savings opportunities (i.e., Packaging Corp of America)	<ul style="list-style-type: none">• Opportunities differ by what equipment types are present in the facility. Some industries have high compressed air loads, others may be driven more by motors or lighting loads.• Projects tend to be highly customized, capital-intensive, and may require interruptions to operations, affecting their technical feasibility.	<ul style="list-style-type: none">• Data sourcing is more of a driver of difference than residential because third party sources are required for industrial saturations.• Example: Different sources for RMP and PAC states – MECS for RMP and NWPC for Pacific Power

Climate is a much lower driver of difference in industrial than in other sectors



Ramp Rates

- Ramp rates dictate the pace at which the potential is assumed to be achievable, separately for lost opportunity and retrofit measures
 - Lost Opportunity rates indicate the percent of equipment up for replacement in a given year that is assumed to be upgraded
 - Retrofit rates indicate the share of the 20-year potential assumed to be acquired in a given year
- The study uses a set of S-shaped diffusion curves developed by the Northwest Power and Conservation Council
- AEG analyzes PacifiCorp's recent state-specific program history to determine which ramp rate is most appropriate to apply





Levelized Costs

Similar to savings, measure costs vary by jurisdiction. Assumptions presented from Table 2-3 in 2023 CPA Volume I report:

The second table below walks through the adjustments that AEG makes prior to levelizing measure costs for supply curves, which are based on the state-specific cost-effectiveness test

Levelized Costs Perspective for WA:

- State/Sector-Specific Line Losses
- Customer Cost
- Utility Investment
- Annual Incremental O&M
- Secondary Fuel Impacts
- Non-Energy Impacts
- 10% Conservation Credit
- T&D Deferral Benefits
- Risk Mitigation Benefits

Table 2-3 Economic Components of Levelized Cost by State

Parameter	WA	CA	WY	UT	ID
Cost Test	Total Resource Cost (TRC)		Utility Cost Test (UCT)		
Initial Capital Cost	Included (100% of incremental cost, full measure cost for retrofit measures)		Utility Incentive		
Annual Incremental O&M ¹⁹	Included		Not Included		
Secondary Fuel Impacts ¹⁹	Included		Not Included		
Non-Energy Impacts	Included		Not Included		
Administrative Costs (% of incremental cost)	48%	45%	48%	22%	40%
Incentive Costs (% of incremental cost)	n/a ²⁰		43%	38%	39%

Input	Washington
CE Test	TRC, 10% adder
Measure Cost	\$1,000
Incentive Paid	n/a
Utility Admin %	*48%
Admin Spend	\$480
Non-Energy Impact	\$80
Cost for Bundling	\$1,400

*Administrative costs will be updated during the 2025 study

Non-Energy Impacts

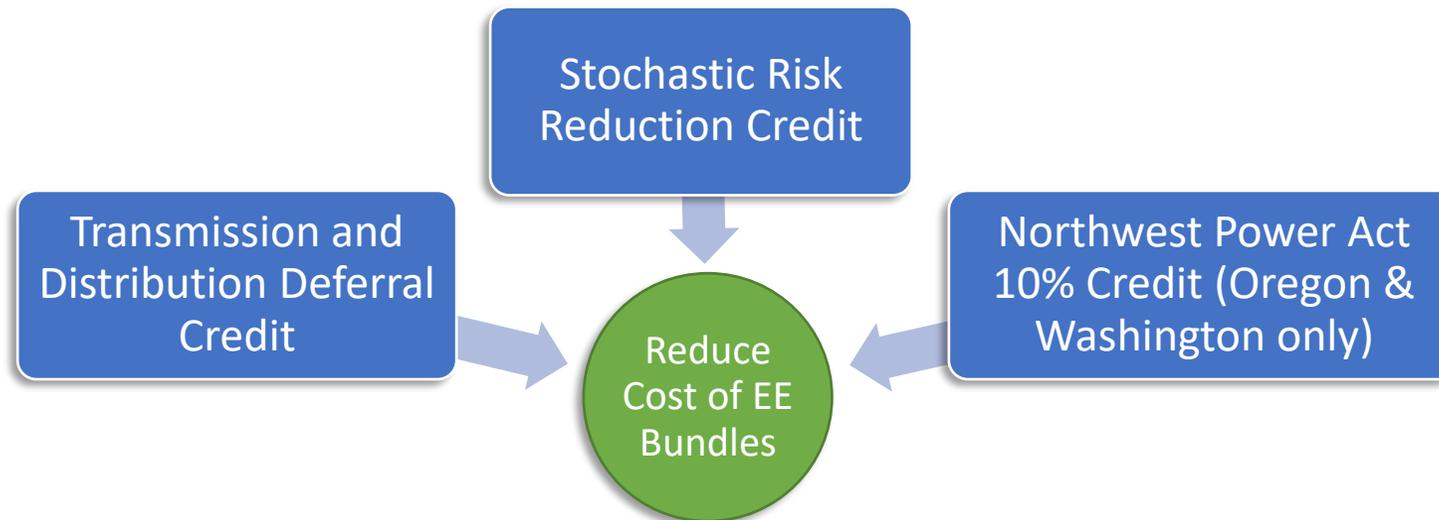


- AEG mapped Non-Energy Impacts (NEIs) to measures analyzed within Washington’s territory, including additional impacts specified by the RTF.
 - NEIs were primarily sourced from DNV GL’s study in the 2023 CPA for Washington. Includes revisions made with the DSM advisory group in 2022.
 - Recently calculated NEI of resiliency for weatherization measures will be included in 2025 CPA.
 - Evaluating non-energy impacts for modeling in the 2025 CPA related to bill discounts and energy assistance.
- NEIs were applied to savings in the model by specific measures and distributed to affected parties:
 - Utility
 - Customers
 - Participant
 - Vulnerable Population
 - Highly Impacted Communities
 - General Public



IRP Credits

The IRP incorporates three credits that reduce the modeled cost of energy efficiency bundles competing with supply-side resources in IRP modeling:



These credits are intended to capture benefits of energy efficiency that would otherwise not be reflected in IRP modeling.

These credits are consistent with industry standards and with the Northwest Power and Conservation Council.



Demand Response Resources



Defining Demand Response



Demand Response (DR): *Resources from fully dispatchable or scheduled firm capacity product offerings/programs such as a load control*

- Previously Class 1 DSM

Demand Response Program: one or more DR technologies which can be called to perform one or more grid services during a utility DR event.

This approach will be used in the 2025 CPA.

- Grid Service Provided: Peak Shaving, Fast DR, etc.
- Control Mechanism: Smart Thermostat, DLC Switch, etc.
- Technology Controlled: Central AC, Irrigation Pumps, HPWH
- **Example: HVAC Direct Load Control (Cool Keeper).** A central AC with a direct load control switch cycling during a peak event. Program specific to one control mechanism and one technology.



Resource Options

- The IRP primarily focused on sustained events due to modeling at the hourly level. However, the 2025 CPA will include an analysis of fast events, representing an improvement upon the 2023 CPA.
- Will continue to model third-party program potential with these two categories.

Sustained Events: represent an event lasting at least one hour and providing customers either day-ahead or day-of notification in advance.

Fast Events: represent an event lasting less than one hour and providing customers advanced notification of fifteen minutes or less with a near-instantaneous response.

Resource Options, Cont.



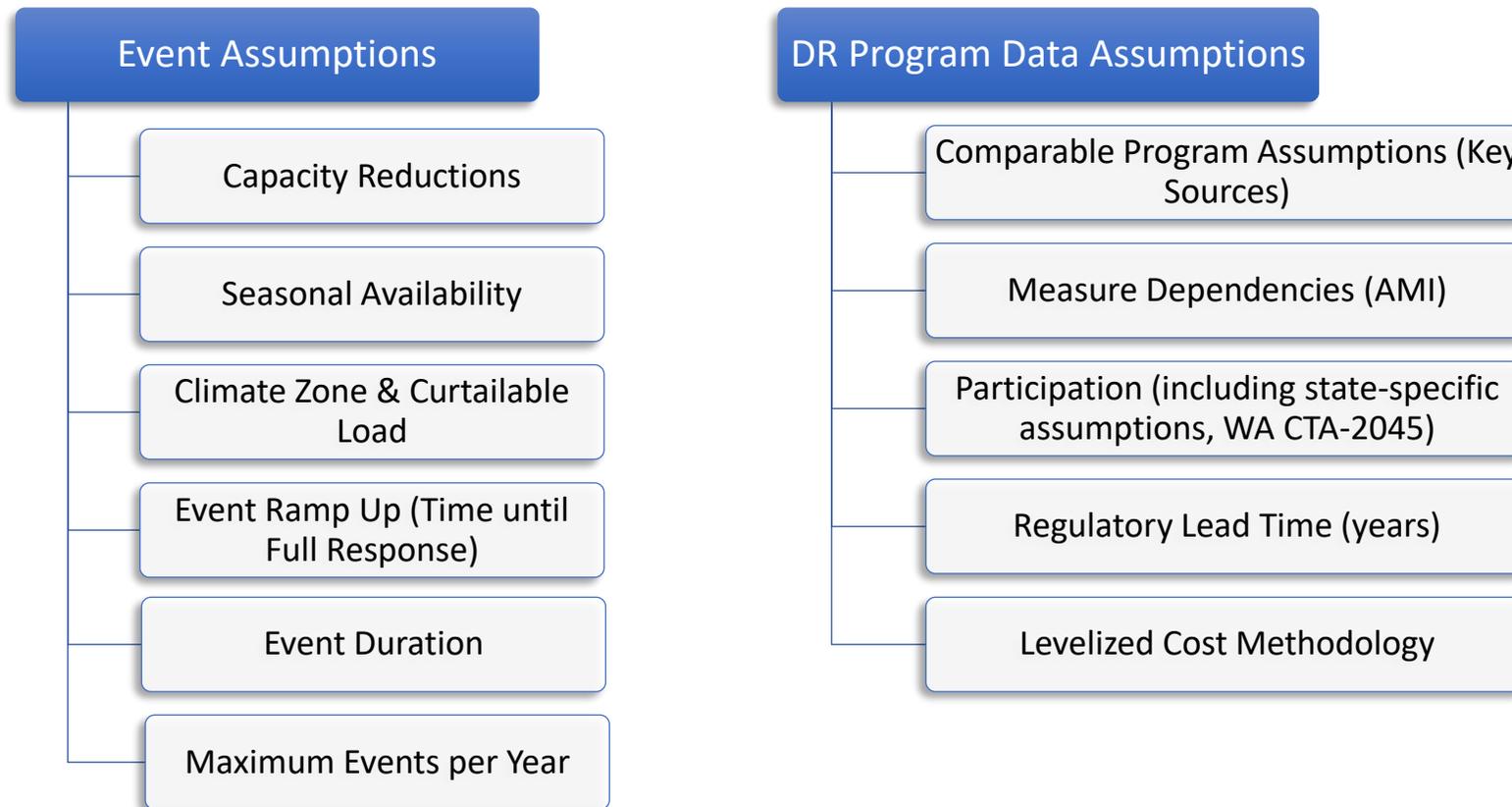
Program Category	Program Bundle	Mechanism / Description	Eligible for Fast Event Potential?*	Current Offering
Direct Load Control (Conventional)	Electric Vehicle Connected Charger Direct Load Control (DLC)	Automated, level 2 EV chargers that postpone or curtail charging during peak hours. Can potentially be used for energy storage.	✓	Planned for WA
	HVAC DLC	DLC switch installed on customer's heating and/or cooling equipment.	✓	-
	Irrigation Load Control	Automated pump controllers or DLC switch installed on customer's equipment.	✓	In WA
	Pool Pump DLC	DLC switch installed on customer's equipment.	✓	-
	Domestic Hot Water Heater (DHW) DLC	DLC switch installed on customer's equipment.	✓	In WA
Direct Load Control (Smart / Interactive)	DLC of Smart Home	Internet-enabled control of operational cycles of white goods appliances, electronics, and lighting. Controlled by a central smart hub or smart speaker.	-	-
	Grid Interactive Water Heater	CTA-2045 or other integrated communication port. Can also be used for energy storage.	✓	In WA
	Connected Thermostats DLC	Internet-enabled control of thermostat set points.		In WA
Energy Storage	Battery Energy Storage DLC	Internet-enabled control of battery charging and discharging.	✓	-
Curtailement	Third-Party (Fast Event)	Customers enact their customized, mandatory curtailment plan. May use stand-by generation. Penalties apply for non-performance. Customers must have EMS for automated compliance.	✓	In WA
	Third-Party (Sustained Event)	Customers volunteer a specified amount of capacity during a predefined "economic event" called by the utility in return for a financial incentive.	-	In WA

*All program bundles eligible for sustained events, some are eligible for fast events



Resource Assumptions

AEG conducts research to develop a comprehensive list of DR measure/program assumptions. We utilize PacifiCorp-specific program data where available.



Resource Costs



The following components are typically included within demand response program costs:

- Measure Costs
 - Energy-using technology cost (e.g. ENERGY STAR Connected EV Charger)
 - Enabling technology cost (e.g. DLC Switch, Smart Thermostat, HEMS)
 - “Bring-Your-Own” program designs can lower measure costs substantially and will be considered where possible
 - Incentives (annual, per-event, or both)
 - In states utilizing the California DR Cost-Effectiveness Protocol, only a portion of the incentive is counted to estimate the customer’s cost to participate (see next slide)
 - Utility administrative costs*
 - Utility staff to manage program (X FTEs at \$Y/yr. allocated across multiple programs)
 - Program development costs (up-front \$ for each new program)
 - Marketing costs (\$/yr.)
- *Can be transitioned to a third-party aggregator in some circumstances*



Participant Costs

- In Washington, participant costs are estimated to satisfy requirements of Total Resource Cost test.
- PacifiCorp uses the California DR Cost-Effectiveness Protocol methodology to estimate participant costs as a percentage of incentives.
 - Lower percentages used to reflect programs that are less intrusive to customers
 - See assumptions from 2025 CPA below:

Program	Participant Cost (% of Incentive)
HVAC Direct Load Control (DLC)	35%
Domestic Hot Water Heater (DHW) DLC	25%
Grid-Interactive Water Heaters	25%
Connected Thermostat DLC	35%
Smart Appliances DLC	75%
DLC of Pool Pumps	75%
Electric Vehicle DLC Smart Chargers	75%
Battery Energy Storage DLC	75%
Third Party Contracts	75%
Irrigation Load Control	75%

Demand Response (DR) Credits



The 2023 IRP incorporated two credits that reduced the modeled cost of DR bundles competing with supply-side resources in IRP modeling. These credits are intended to capture benefits that would otherwise not be reflected in IRP modeling.

Transmission and Distribution Deferral Credit

- Applied same credit to DR as described in the EE measure section of this presentation.

Operating Reserve Credit

- In this case, for Contingency and Regulation Reserves

Non-Energy Impact Credit

- De-rated costs by 10% in WA to reflect non-quantifiable NEIs



Non-Modeled Resources



Demand-Side Rates



- Voluntary rate options that reduce demand during peak periods.
- Objective similar to demand response = reduce or shift peak
- Significant difference in resource firmness
 - Utility can rely on DR program impacts through direct control or contractual agreement
 - Customers' response to varying rate design is dependent on their desire to respond to economic signals
 - **IRP does not model incremental demand-side rate potential as a resource**
- Resource assumption development process similar to DR, but delivery cost is not assessed in CPA
- Rate designs modeled in CPA: only those that are incremental to the baseline forecast (e.g., existing block rates are omitted)



Demand-Side Rate Options

Critical Peak Pricing (CPP)

- Much higher rate for a particular block of hours that occurs only on event days. Requires AMI technology.

Peak Time Rebates (PTR)

- Rebates for reduced consumption for a particular block of hours that occurs only on event days. Requires AMI technology.

Time-of-Use (TOU)

- Higher rate for a particular block of hours that occurs every day. Requires either on/off peak meters or AMI technology.

Real Time Pricing (RTP)

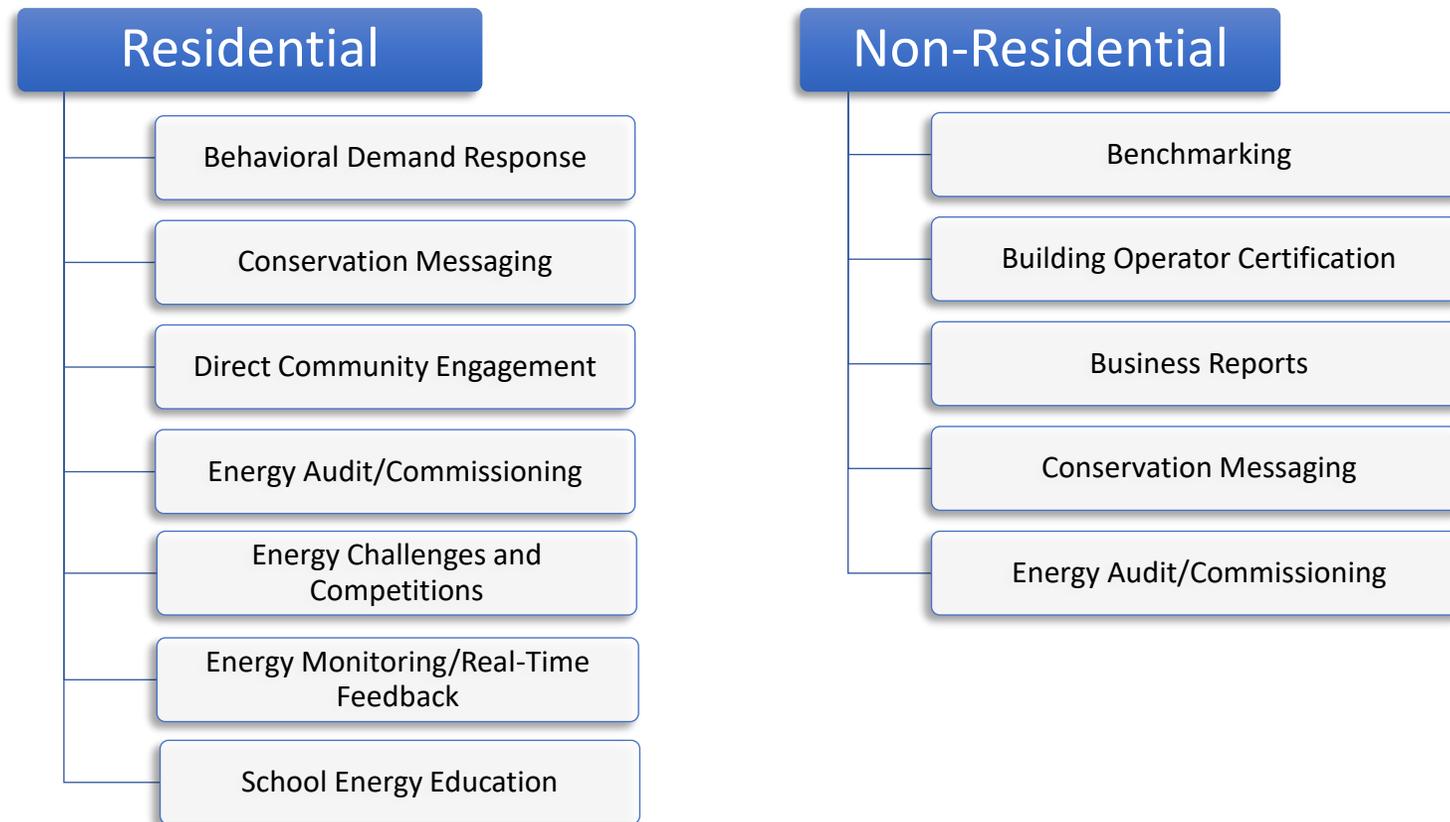
- Variable hourly rates based on real-time utility production costs. Requires AMI technology.

*Behavioral DR/Conservation Messaging moved to Education & Information (E&I) program investigation.



Education and Information

- Non-incented behavioral-based impacts achieved through broad energy education and communication efforts
- Not modeled in IRP; conducting research to estimate expected ranges of impacts



Tree Planting Conservation

Peter Schaffer



Tree Planting Conservation

- Annual proposed tree planting count: 300 trees per year (pro-rated for partial year)
- Cost: \$60,000 (trees, labor, marketing, and administration)
- Additional benefits: carbon storage, air pollution removal, storm water impacts, ultraviolet radiation reduction, nature habitat, aesthetics
- Estimated savings per tree in CPA: ~50-95 kWh
 - Source: [i-Tree Tools - Calculate the benefits of trees!](#)). Based on levelizing over thirty-year measure life or planning horizon. Savings don't start until several years after costs incurred.
- How should savings be treated when evaluating cost-effectiveness? Two options: Can rely on a levelized value or annual savings per year.



Cost-Effectiveness – Tree Planting Conservation

Evaluated shade tree installation savings of 10+ common trees in Yakima, WA

Used i-Tree Database and benchmarked with other sources including Center for Urban Forest Research, State of Idaho, Arizona PSC TRM, and peer-reviewed publications.

Estimate = 1,458 kWh per tree over 30 years, 49 kWh/yr on average in WA

Cost = \$200 per tree

Incorporated additional NEIs (\$0.04/kWh saved)

Based on estimates developed by Davey Tree and shared by Idaho Power

Air Pollution Savings

Carbon Savings

Stormwater Runoff Savings

Total Estimated Benefit:

- **Levelized => \$110**
- **Annual => \$81**

Recommendation: Use levelized approach of 30 year measure life for simplicity in calculation and to align with IRP methodology for evaluation.

2024-2025 Demand-Side Management Forecast

Nancy Goddard



May 2024 Forecast for 2024

Source of 2024 Forecast

- **Orange** = 2024-2025 DSM Business Plan
- **Green** = 5/2024 implementer forecasts

Pac kWh 2024 Forecast

100% of 2024-2025 DSM Business Plan

- Residential - 81%
 - Home Energy Reports forecast revised to 66% of Bidgely forecast
- Business - 105%

Pac \$ 2024 Forecast

97% of 2024-2025 DSM Business Plan

- Residential – 91%
- Business – 100%

Note: %'s are % of DSM Business Plan, not % of EIA penalty threshold

Program or Initiative	DSM Business Plan, 11/1/2023		Current Forecast, as of 5/3/2024			
	2024		2024		2024	
	Gross kWh/Yr Savings @site	Estimated Expenditures	Gross kWh/Yr Savings @site	Estimated Expenditures	Forecast % of kWh	Forecast % of \$
Low Income Weatherization (114)	179,524	\$ 1,549,500	179,524	\$ 1,549,500	100%	100%
Home Energy Savings (118)	4,411,367	\$ 6,803,544	4,025,658	\$ 6,066,753	91%	89%
Home Energy Reports (N/A)	4,212,000	\$ 330,101	2,932,380	\$ 283,176	70%	86%
Total Residential Programs	8,802,891	\$ 8,683,145	7,137,562	\$ 7,899,429	81%	91%
Wattsmart Business (140) - Commercial	23,629,370	\$ 10,518,281	24,826,960	\$ 10,265,406		
Wattsmart Business (140) - Industrial	6,761,000	\$ 2,646,595	7,103,663	\$ 2,937,210		
Wattsmart Business (140) - Irrigation	672,498	\$ 275,785	706,582	\$ 292,156		
Total Business Programs	31,062,868	\$ 13,440,661	32,637,205	\$ 13,494,772	105%	100%
Northwest Energy Efficiency Alliance	4,471,095	\$ 950,118	4,471,095	\$ 950,118	100%	100%
Distribution Efficiency	-		-			
Production Efficiency	630		630		100%	
Total Other Conservation Initiatives	4,471,725	\$ 950,118	4,471,725	\$ 950,118	100%	100%
Be wattsmart, Begin at Home		\$ 71,758		\$ 71,758		100%
Customer outreach/communication		\$ 250,000		\$ 250,000		100%
Program Evaluations (& savings verification)		\$ 293,885		\$ 293,885		100%
Potential study update/analysis		\$ 120,000		\$ 120,000		100%
System Support		\$ 68,416		\$ 68,416		100%
End use load research		\$ 20,700		\$ 20,700		100%
Regional Technical Forum (RTF) funding		\$ 50,688		\$ 50,688		100%
Total Portfolio-Level Expenses		\$ 875,447		\$ 875,447		100%
Total PacifiCorp Conservation	39,865,759	\$ 22,999,254	39,775,397	\$ 22,269,648	100%	97%
Total System Benefit Charge Conservation	44,337,483	\$ 23,949,372	44,246,492	\$ 23,219,766	100%	97%

Program or Initiative	Current Forecast, as of 5/3/2024		DSM Business Plan, 11/1/2023					
	2024		2025		2024 + 2025	2024 + 2025	2024 + 2025	
	Gross kWh/Yr Savings @site	Estimated Expenditures	Gross kWh/Yr Savings @site	Estimated Expenditures	Gross MWh Savings @site	Estimated Expenditures	Forecast % of kWh	Forecast % of \$
Low Income Weatherization (114)	179,524	\$ 1,549,500	179,524	\$ 1,589,060	359	\$ 3,138,560	100%	100%
Home Energy Savings (118)	4,025,658	\$ 6,066,753	5,026,161	\$ 7,785,282	9,052	\$ 13,852,035	96%	95%
Home Energy Reports (N/A)	2,932,380	\$ 283,176	2,469,060	\$ 338,427	5,401	\$ 621,603	68%	93%
Total Residential Programs	7,137,562	\$ 7,899,429	7,674,745	\$ 9,712,770	14,812	\$ 17,612,198	83%	96%
Wattsmart Business (140) - Commercial	24,826,960	\$ 10,265,406	24,776,945	\$ 11,109,429	49,604	\$ 21,374,835		
Wattsmart Business (140) - Industrial	7,103,663	\$ 2,937,210	6,480,625	\$ 2,592,714	13,584	\$ 5,529,924		
Wattsmart Business (140) - Irrigation	706,582	\$ 292,156	692,498	\$ 283,876	1,399	\$ 576,032		
Total Business Programs	32,637,205	\$ 13,494,772	31,950,068	\$ 13,986,018	64,587	\$ 27,480,791	102%	100%
Northwest Energy Efficiency Alliance	4,471,095	\$ 950,118	5,660,650	\$ 989,413	10,132	\$ 1,939,531	100%	100%
Distribution Efficiency	-		227,000		227		100%	
Production Efficiency	630		630		1		100%	
Total Other Conservation Initiatives	4,471,725	\$ 950,118	5,888,280	\$ 989,413	10,360	\$ 1,939,531	100%	100%
Be wattsmart, Begin at Home		\$ 71,758		\$ 73,552		\$ 145,310		100%
Customer outreach/communication		\$ 250,000		\$ 250,000		\$ 500,000		100%
Program Evaluations (& savings verification)		\$ 293,885		\$ 167,584		\$ 461,469		100%
Potential study update/analysis		\$ 120,000		\$ 25,000		\$ 145,000		100%
System Support		\$ 68,416		\$ 68,416		\$ 136,832		100%
End use load research		\$ 20,700		\$ 43,200		\$ 63,900		100%
Regional Technical Forum (RTF) funding		\$ 50,688		\$ 50,688		\$ 101,376		100%
Total Portfolio-Level Expenses		\$ 875,447		\$ 678,440		\$ 1,553,887		100%
Total PacifiCorp Conservation	39,775,397	\$ 22,269,648	39,852,443	\$ 24,377,228	79,628	\$ 46,646,876	98%	98%
Total System Benefit Charge Conservation	44,246,492	\$ 23,219,766	45,513,092	\$ 25,366,641	89,760	\$ 48,586,407	99%	99%

- **Orange** = from 2024-2025 DSM Business Plan
- **Green** = from 5/2024 implementer forecasts (2024 and 2025 forecasts for Home Energy Reports are revised to 66% of Bidgely forecast)

2024-2025 Forecast

Category	Target 2024 + 2025	DSM Business Plan 2024 + 2025		Current Forecast, as of 5/3/2024 2024 + 2025	
	Gross MWh Savings @site	Gross MWh Savings @site	% of Target	Gross MWh Savings @site	% of Target
i. Ten-year potential:	406,486				
ii. Two-year EIA target (includes NEEA):	84,971	91,123	107%	89,760	106%
iii. Two-year EIA Penalty Threshold (excludes NEEA):	74,839	80,991	108%	79,628	106%
iv. Two-year Decoupling Penalty Threshold (5% of EIA Target):	4,249				
v. Two-Year Utility Conservation Goal (EIA Target + Decoupling):	89,220	91,123	102%	89,760	101%
NEEA	10,132				
<i>Target subject to penalty (EIA Penalty Threshold + Decoupling)</i>	<i>79,088</i>	<i>80,991</i>	<i>102%</i>	<i>79,628</i>	<i>101%</i>

<u>2024-2025 Expenditure Forecast (including NEEA):</u>	
2024-2025 DSM Business Plan	\$49,316,013
May 2024 forecast	\$48,586,407
May 2024 forecast % of DSM Business Plan	99%

2024-2025 Forecast – Condition 3d

Providing the forecast at DSM Advisory Group meetings to meet this condition:

Docket UE-230904 Order 01 Attachment A	3d	Pacific Power must inform the Advisory Group members when its projected expenditures indicate that Pacific Power will spend more than 120 percent or less than 80 percent of its annual conservation budget.
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Energy Efficiency Program Updates Adaptive Management Procurement Update



Evaluation Findings & Adaptive Management

Table 1-4: Program Energy Savings (kWh) and Realization Rate

Year	Claimed Savings (kWh)	Evaluated Savings (kWh)	Realization Rate
2020	3,542,270	5,748,805	162%
2021	3,333,142	5,101,997	153%
Total	6,875,412	10,850,802	158%

Table 1-4: Program Energy Savings (kWh) and Realization Rate

Year	Claimed Savings (kWh)	Evaluated Savings (kWh)	Realization Rate
2022	4,289,670	3,445,717	80%
2023	4,466,880	2,930,363	66%
Total	8,756,550	6,283,237	73%

- 2020-2021: High realization rates
- 2022-2023: Savings reported in annual reports was provided by Bidgely
 - Unexpected drop in realization rates
 - Largest reduction was in Paper treatment group that receives the highest savings
 - No changes to program delivery from previous years including same implementer, same evaluator
 - Program implementer sent incomplete data to evaluator; data has been provided as of 5/7
- Adaptive management: Lower 2024-2025 forecasted savings to align with realization rate, refresh paper reports, improve QA/QC of data sent to evaluator

Procurement Update - Home Energy Savings, Wattsmart Business

Nancy Goddard

Request for Proposals: Home Energy Savings/Wattsmart Business Delivery

- Followed steps in Competitive Procurement Framework
- RFP went out 9/1/2023
- Bids received 10/31/2023
- Start date for new contracts from this RFP: April 1, 2024
- Term: 5 years
 - 3 years with option to extend for 2 years (“3 + 2”)
- **Three contracts from this RFP are in place:**
 1. Home Energy Savings – Resource Innovations
 2. Wattsmart Business (commercial measures) – Evergreen Energy Partners
 - Selected a new prime contractor – Evergreen was a sub-contractor before
 - Transition is underway
 - Incurring start-up and transition costs, these are included in the forecast
 3. Wattsmart Business (industrial/ag measures) - Cascade Energy
 - Another contract with Cascade Energy in place for Wattsmart Business managed account delivery

Braiding opportunities – state and federal programs

Jay Olson



Braiding opportunities

Jay Olson

Pacific Power steps:

(provided 11/20/2023 in response to follow-up question from UTC Staff 11/16/2023 on Biennial Conservation Plan filing)

- Research opportunities as they develop
- Share with DSM AG to inform and discuss adaptively managing programs

Update

- Tracking HEAR, IRA, IJA
 - IRA-funded Home Energy Rebate programs are not yet available
 - HEAR RFA conference held 5/7/24
 - HEAR RFAs due 5/30/24
 - Coordinate with entities that receive funding through the RFA process
 - If awarded funds Pacific Power will braid funds with HES rebates for available measures

Braiding opportunities – Home Energy Savings

Jay Olson

Update (cont.)

- Continue sharing braiding opportunities with trade allies
- Continue sharing information on tax credits
- Collaborate with entities and third-party implementers for shared measure braiding such as HPs & HPWHs
 - Example: Ongoing collaboration with the Sustainable Living Center
 - Launched in Q4 2023 with 9 HPWH braided projects
 - Continuing in 2024 with 3 more HPWHs to date

Updates



- Demand Response – forecast, updates
- CETA: Equity Advisory Group
- CETA: Clean Energy Implementation Plan
- CETA: Clean Energy Implementation Plan
 - 2024 YTD Customer Benefit Indicator metrics (prelim data)
- 2024-2025 Pilots
- Braiding opportunities – state and federal funding

Demand Response Updates

Don Jones, Jr.

Demand Response Portfolio Updates

ONGOING

Irrigation Load Control (ILC)

2023 preliminary results, 2024 upcoming

Commercial & Industrial (C&I DR)

2023 preliminary results, 2024 upcoming

Residential Optimal Time Rewards (OTR)

Just launched – Q1 2024

IN DEVELOPMENT

Residential EV Managed Charging

- Approved in TE Plan
- Program expected to launch Q3 2024

ON HORIZON

Batteries

- Under consideration for launch in 2025
- At early stage of development

Irrigation Load Control

First Year (2023) Results

Enrolled (End of Season)	74 pumps
Curtailments	15.5 hours, over 5 events
Average Curtailment	0.13 MW
Average Available Load	0.42 MW

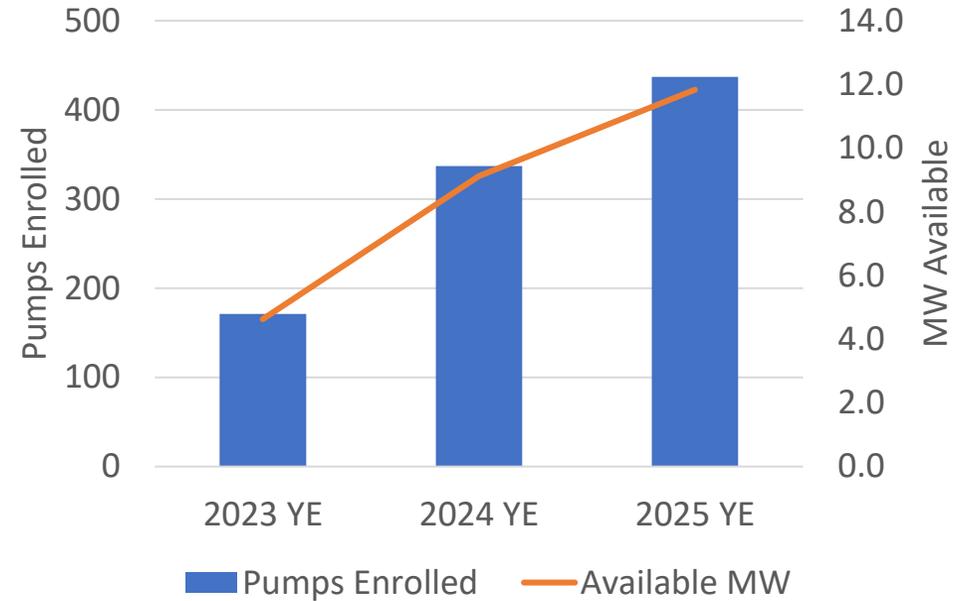
- Strong enrollment in first year ramped up during season and resulted in 97 additional installs post-season
- High rates of opt-outs on Aug. 15 and Aug. 16 impacted curtailment performance
- Gradual onboarding over season reduced average available load

Irrigation Load Control Forecast

	2023 YE (Actual)	2024 YTD (Actual)	2024 YE (Forecast)	2025 YE (Forecast)
Pumps Enrolled	171	240	337	437
Available MW*	4.6	6.0	9.1	11.8

*Based on estimated 25 kw per enrolled pump

Program Cost	\$514,294		\$569,389	\$525,113
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C&I Demand Response

2023 Results

	60 Min
Sites Enrolled (YE)	4
MW Enrolled (YE)	0.28*
Curtailments	12 hours, over 5 events
Average Curtailment	0.16 MW
Average Available Load	0.64 MW

*One customer that nominated 0.6 MW dropped out of the program in August.

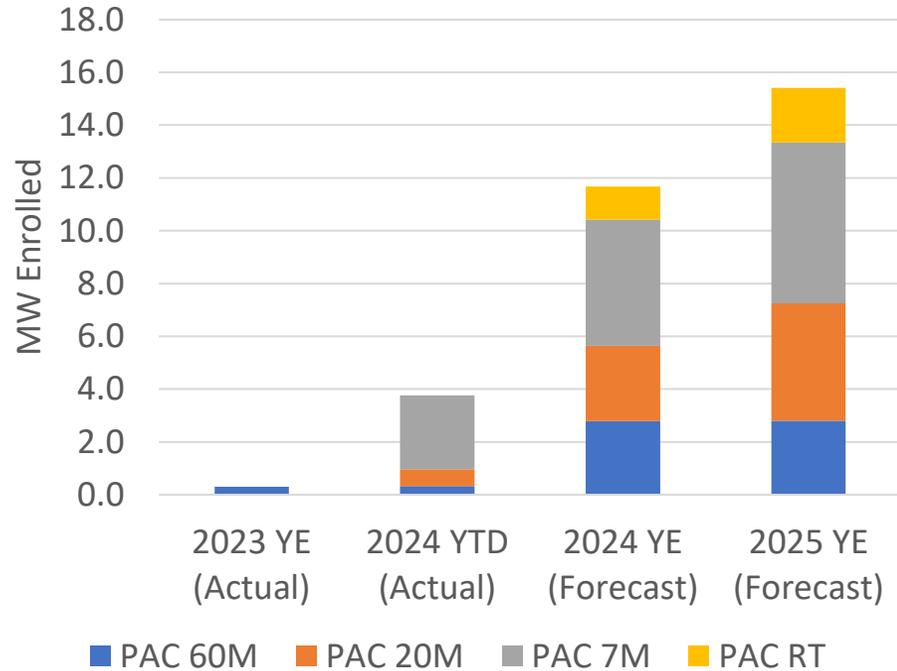
60-min and 20-min

- Persuasive business case, effective outreach and sales process led to strong recruitment pipeline
- Performance varied over 2023 events due to need for learning, monitoring capability
- All 2023 events had more than 60 minutes notice

7-min and Real-time

- Software build-out to allow for automated dispatch ongoing through end of 2023
- Opened for enrollment in January 2024

C&I Demand Response Forecast



	2023 YE (Actual)	2024 YTD (Actual)	2024 YE (Forecast)	2025 YE (Forecast)
60Min MW	0.3	0.3	2.8	2.8
20M MW	0.0	0.6	2.9	4.4
7M MW	0.0	2.8	4.8	6.1
RT MW	0.0	0.0	1.3	2.1
CIDR Total MW	0.3	3.8	11.7	15.4

Program Cost (\$)	\$105,412		\$1,016,544	\$1,262,345
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Optimal Time Rewards (Residential) Forecast

	2024 YTD (Actual)	2024 YE (Forecast)	2025 YE (Forecast)
Water Heaters (MW)	0.00	1.78	3.26
Thermostats (MW)	0.08	0.14	0.33
OTR Total (MW)	0.08	1.92	3.59
Program Costs (\$)		\$72,441	\$67,321

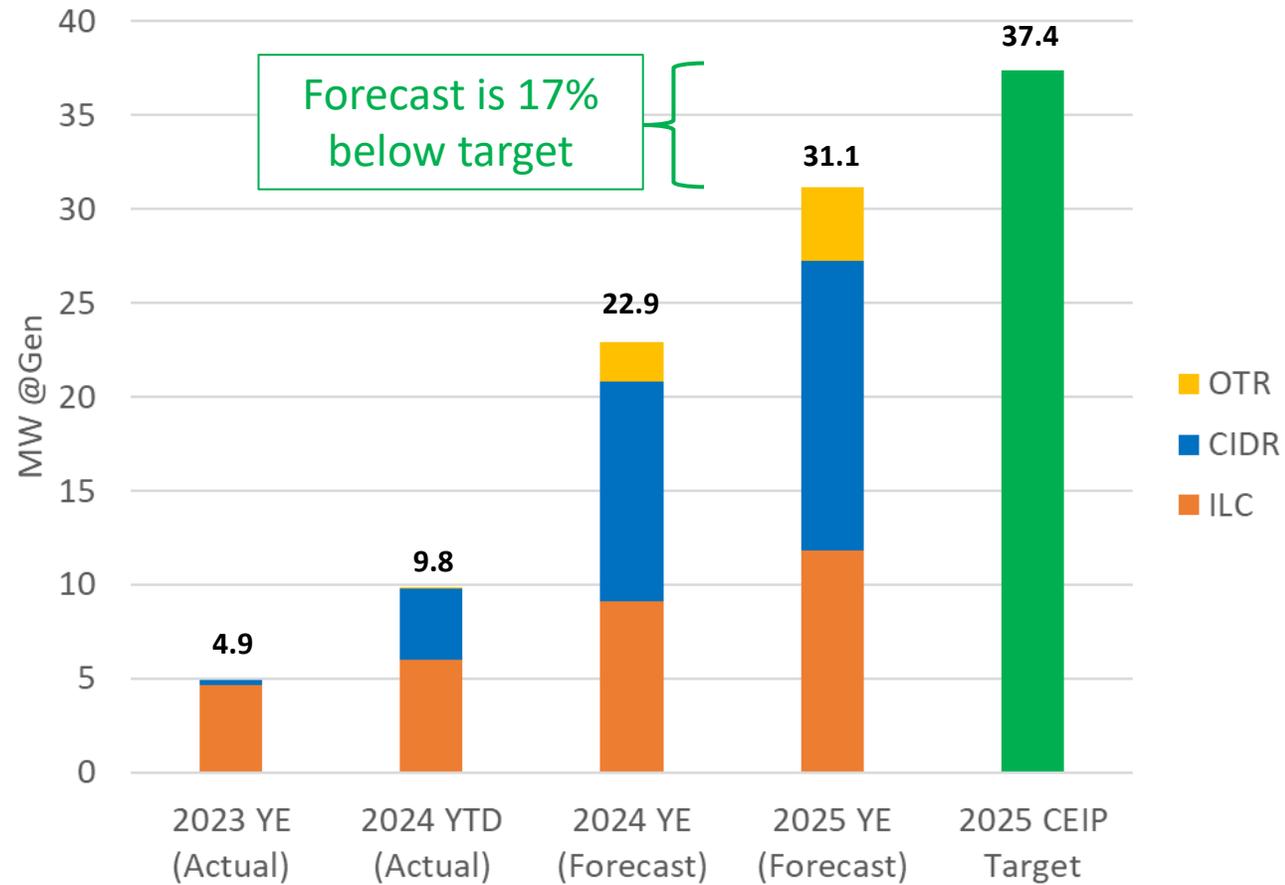
- 154 thermostats enrolled as of May 1, enrollment growing steadily
- Tstat enrollments include
 - 137 standard rate households
 - 11 net metering households
 - 5 bill assistance households
 - 1 TOU household
- Water heater recruitment (MF) underway
- Water heater enrollment for SF expected in Q2

DR Portfolio Costs

- Costs for 2024 and 2025 are estimates based on the MW forecast – could vary based on performance and ramp rate
- Forecast portfolio cost exceeds SBC costs presented in March – achieving the CEIP target likely will mean additional increases to SBC
- SBC request designed to recover costs only after costs are known

	2023 (Actual)	2024	2025
CIDR	\$105,412	\$1,016,544	\$1,262,345
ILC	\$514,294	\$569,389	\$525,113
OTR	\$12,302	\$72,441	\$67,321
Total Forecast	\$632,008	\$1,658,374	\$1,854,779
SBC Request	\$632,008	\$1,580,081	\$1,603,472
<i>Difference</i>	<i>\$0</i>	<i>\$78,293</i>	<i>\$251,307</i>

DR Portfolio Forecast



Strategies to close the gap:

- Launching new programs - managed charging, residential batteries
- Expansion of current programs to new devices or markets
- Increased results from existing programs



WA Equity Advisory Group Updates & Community Calendar

Kimberly Alejandro

May 2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
28	29	30	1	2	3	4
		Pacific Power Community Visits with the Equity Advisory Group	Pacific Power Community Visits with the Equity Advisory Group	Pacific Power Community Visits with the Equity Advisory Group		Yakima Taco Fest @ State Fair Park 1pm - 9pm
5	6	7	8	9	10	11
						Walla Walla Downtown Farmers Market @ Famers Market Pavilion 9am - 1pm
12	13	14	15	16	17	18
Downtown Yakima Farmer's Market @ Rotary Marketplace 9am-1pm				Chamber Café Agriculture, Agribusinesses & Agritourism @ Walla Walla Chamber 8:30am - 9:45am		Walla Walla Downtown Farmers Market @ Famers Market Pavilion 9am - 1pm
19	20	21	22	23	24	25
Downtown Yakima Farmer's Market @ Rotary Marketplace 9am-1pm		PWS Low Water Landscaping @ WWCC Water & Environmental Center 6pm - 8:30pm				Walla Walla Downtown Farmers Market @ Famers Market Pavilion 9am - 1pm
26	27	28	29	30	31	1
Downtown Yakima Farmer's Market @ Rotary Marketplace 9am-1pm						
2	3	Notes				

May One on One Community Visits

When: April 30 – May 2, 2024

Where: Yakima & Walla Walla Counties

Purpose: To build upon existing relational partnerships, meet with Pacific Power's Washington Equity Advisory Group members where they are in community and share updates and resources.



May One on One Community Visits

Key Takeaways:

- Large emphasis on partnerships built on trust (relational partnerships)
- Recognition of the increase in energy program opportunities
- Community Calendar a resource to several EAG members
- In community, language needs (mostly) met
- Access to information at an all-time high

Challenges:

- Increase in those seeking support services
- Navigation of (all) available resources is difficult

Opportunities:

- Strategic outreach and engagement efforts
- Braid funding opportunities/resources when possible



Washington Equity Advisory Group 2024 Meeting Schedule (Past)

Date / Time / Meeting Format	Proposed Agenda Topics*
January 11, 2024 (1pm-4pm) Online	Transportation Electrification New Programs (WA) Residential Demand Response (DR) Program General Rate Case Background Information & Updates
February 8, 2024 (1pm-4pm) Online	Weatherization Presentation Transportation Electrification Integrated Resource Planning (IRP) Introduction
March 14, 2024 (1pm-4pm) Hybrid: WorkSource Yakima	<i>Community Connections:</i> <ul style="list-style-type: none"> • South Central Workforce Council Presentation Activity: Revisiting Community Priorities Energy Efficiency Updates
April 11, 2024 (1pm-4pm) Online	Emergency Management & Preparedness Presentation <ul style="list-style-type: none"> • Horace Ward (Sr. Emergency Management Specialist) Distribution System Planning (DSP) Introduction Integrated Resource Planning (IRP) Update
April 30 – May 2 nd , 2024 (Tuesday – Thursday)	Local, in-person visits with the WA Equity Advisory Group <ul style="list-style-type: none"> • May – Wildfire Awareness Month

Washington Equity Advisory Group 2024 Meeting Schedule (Present/Future)



Date / Time / Meeting Format	Proposed Agenda Topics*
June 13, 2024 (1pm-4pm) Online	WA General Rate Case Update Presentation <ul style="list-style-type: none"> • Approach Discussion on Item 10: Low Income Bill Assistance / Arrearage Management Plan / Outreach Program / Billing Logic Integrated Resource Planning (IRP) Updates Energy Efficiency Updates
July 11, 2024 (1pm-4pm) Online	Clean Energy Implementation Plan (CEIP) Annual Progress Report Disconnections Presentation
August (Details to be determined)	Low Income & Equity Advisory Group Joint Meeting <ul style="list-style-type: none"> • Low Income Bill Assistance (LIBA), Arrearage Management Plan (AMP), Outreach Program, Billing Logic
September 12, 2024 (1pm-4pm) Hybrid: Marcus Whitman Hotel 2nd Floor Boardroom	Community Connections: Blue Mountain Action Council Presentation Energy Efficiency Updates: <ul style="list-style-type: none"> • (Preview 2025 Annual Conservation Plan including potential updates to Utility Actions and preview 2025 program changes) Integrated Resource Planning (IRP) Update Demand Response Program Update
October 10, 2024 (1pm-4pm) Online	Low Income & Equity Advisory Group Joint Meeting <ul style="list-style-type: none"> • Share out of August activities and identify next steps together Multi-Family Electric Vehicle Supply Equipment (EVSE) Program Communications Update
November	No Meeting
December 12, 2024 (1pm-4pm) Online	End of the Year Reflection; 2025 Planning

Clean Energy Implementation Plan (CEIP) Updates

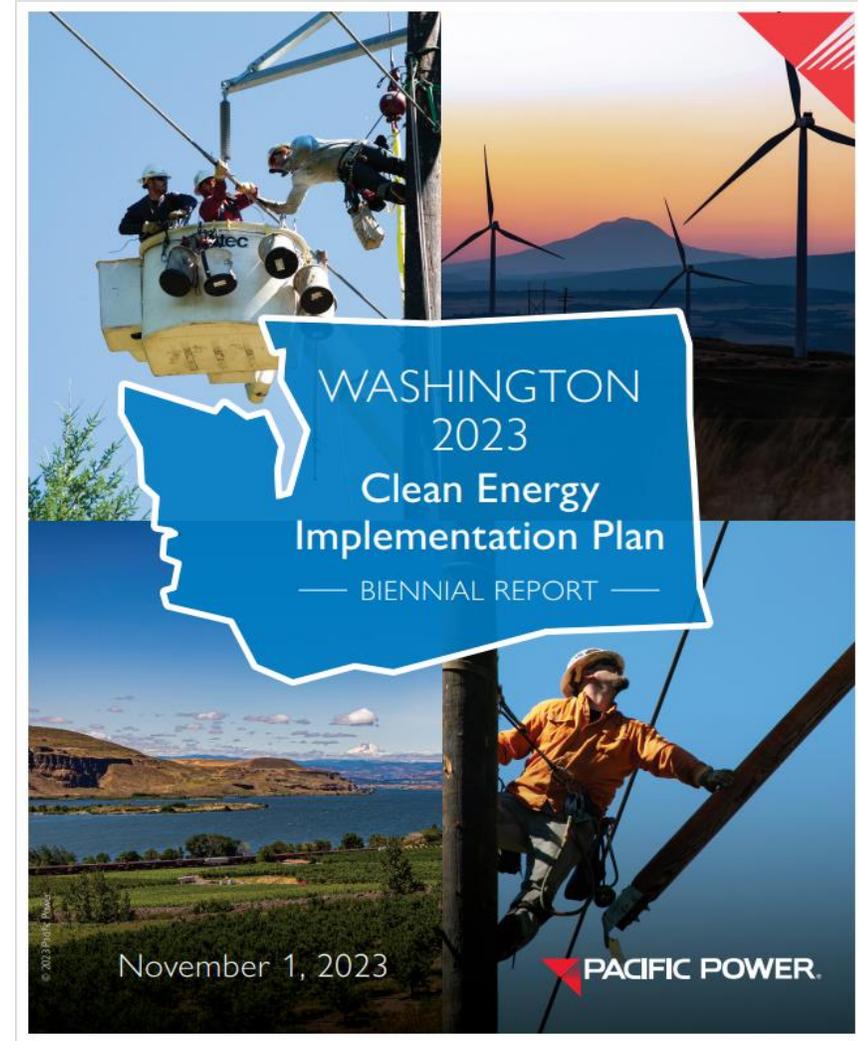
Kimberly Alejandro

Clean Energy Implementation Plan Updates

The Commission has recently initiated an adjudication to resolve the Company's 2023 Biennial CEIP Update. The Company continues to work with parties to resolve the issues presented, and a Commission decision on the CEIP Update is expected, at the latest, at the end of this year.

Pacific Power will file its Clean Energy Implementation Plan Progress Report (2023 results) by July 1, 2024.

*The latest: [Clean Energy Implementation Plan Biennial Update](#)
Docket [UE-210829](#)*



Recent Filings

	Draft to you	Comments requested by	Response to comments on <u>draft</u>	Filing	Response to comments on <u>filing</u>	Approval Decision
<i>Clean Energy Implementation Plan Biennial Update</i> Docket UE-210829	10/2/2023	10/16/2023		11/1/2023 <i>Initial filing</i> 11/28/2023 <i>Workpapers</i>		<i>Anticipated December 2024</i>

Upcoming CEIP Engagement Series Meeting & Vulnerable Population Workshops

Three Vulnerable Population Workshops consisting of:

- Workshop #1:
 - **June 2024**, Clean Energy Implementation Plan Engagement Series (3-hour sessions)
 - The team will table set, providing background information on current methods used to identify Vulnerable Populations in Pacific Power's WA service area
- Workshop #2:
 - August 2024 (2-hour session)
 - The team will walk through Pacific Power's Settlement Condition factors
 - Collaborate with interested persons to develop alternatives and the identification of a preferred methodology to identifying/tracking Vulnerable Populations
- Workshop #3:
 - October 2024 (2-hour session)
 - The team will review results from the workshops and discuss next steps



All are welcome!
Dates and time
coming soon!

Customer Benefit Indicator Metrics 2024 YTD Preliminary Results

Nancy/Jay

Energy Efficiency CBI Metrics – Residential (updated)

Number of Households Who Participated									
	Tribal Lands			All HIC			All Customers		
Energy/Efficiency Program	2022	2023 prelim	2024 YTD	2022	2023 prelim	2024 YTD	2022	2023 prelim	2024 YTD
Low Income Weatherization	16	11	-	29	42	4	140	95	31
Home Energy Savings	48	280	89	317	1,381	348	2,499	4,031	812

Amount of Expenditures from Energy Efficiency Programs									
	Tribal Lands			All HIC			All Customers		
Energy/Efficiency Program	2022	2023 prelim	2024 YTD	2022	2023 prelim	2024 YTD	2022	2023 prelim	2024 YTD
Low Income Weatherization	\$89,449	\$83,878	\$0	\$160,076	\$374,477	\$35,017	\$637,517	\$963,969	\$202,680
Home Energy Savings	\$88,647	\$228,233	\$69,235	\$305,915	\$1,114,141	\$405,241	\$1,619,949	\$3,041,091	\$887,728

	Tribal Lands	All HIC	All Customers
Number of Households (total population)	7,087	30,815	113,342
2022-2024 YTD number of households who participated	444	2,121	7,608
% who participated	6.3%	6.9%	6.7%

Does not account for any overlap from households who participated in more than one year.

Number of households (total population):

Source July 2023 CEIP progress report

<https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/ceip/210829-PAC-CEIP-2023-Progress-Rpt-7-3-23.pdf>

Energy Efficiency CBI Metrics - Wattsmart Business

(updated)

- Utility Actions for Wattsmart Business focus on small businesses

Number of Businesses Who Participated									
	Tribal Lands			All HIC			All Customers		
Energy/Efficiency Program	2022	2023 prelim	2024 YTD	2022	2023 prelim	2024 YTD	2022	2023 prelim	2024 YTD
Wattsmart Business	13	7	7	86	59	28	189	198	69
Wattsmart Small Business	18	24	5	105	166	53	137	244	74
Amount of Expenditures from Energy Efficiency Programs									
	Tribal Lands			All HIC			All Customers		
Energy/Efficiency Program	2022	2023 prelim	2024 YTD	2022	2023 prelim	2024 YTD	2022	2023 prelim	2024 YTD
Wattsmart Business	\$279,391	\$31,802	\$83,634	\$2,048,657	\$636,164	\$500,913	\$3,455,821	\$4,364,950	\$868,898
Wattsmart Small Business	\$179,212	\$173,649	\$47,038	\$1,462,492	\$1,869,985	\$793,637	\$1,827,348	\$2,486,333	\$961,815

2024-2025 Energy Efficiency Pilots

Nancy Goddard

2024-2025 Energy Efficiency Pilots

Pilot - Initiatives within existing programs (not separate programs)	New or ongoing	Program	Purpose
On-Bill Financing for residential customers	Ongoing	Home Energy Savings	Reduce the upfront cost barrier to participation in residential energy efficiency programs by offering on-bill financing, including for manufactured homes on rented space and homes on tribal trust lands
Manufactured Homes Targeted Delivery 	Ongoing	Home Energy Savings	Increase installation of energy efficiency measures within new and existing manufactured homes
Heat Pump Water Heaters Online Platform/Direct Delivery 	New	Home Energy Savings	Increase installation of energy efficient heat pump water heaters through additional delivery method and compare results against existing HPWH participation levels
Geo-Targeted Energy Efficiency	Ongoing	Home Energy Savings, Wattsmart Business	Increase participation in specific area(s) where additional value such as deferring possible infrastructure investments has been identified
Non-residential Lighting Controls	Ongoing	Wattsmart Business	Increase installation of lighting controls as part of business customer lighting retrofit projects
Clean Buildings Accelerator 	Ongoing	Wattsmart Business	Help building owners who must comply with the Clean Buildings laws

Heat Pump Water Heater Web Platform Pilot – Home Energy Savings

Jay Olson

Pilot Update

- Partial/early launch in Walla Walla November 2023 (9 enrollments)
- Fully launched in Yakima in January 2024
- No uptake in Q1 so initiated marketing effort to generate awareness
 - April: 3 projects in Walla Walla and 3 projects in Yakima
 - Added 3 new participating trade allies
 - Trade ally incentive correction

The screenshot displays the Pacific Power website interface. At the top, the Pacific Power logo is on the left, and navigation links for 'BUY NOW', 'Why Buy Here?', 'Benefits', 'Considerations', 'Product Info', and 'Installation' are on the right. Below the navigation is a hero section titled 'Three Ways to Save on a New Heat Pump Water Heater'. This section contains three panels: 1. 'Save money right now.' with a photo of a couple and text about a \$900 off purchase price and \$500 off from the Sustainable Living Center. 2. 'Save money this year.' with a photo of the US Capitol and text about tax credits/rebates of up to 30% of installation. 3. 'Save money every day.' with a photo of a man washing a baby and text about 23% lower electricity usage. A 'Product Advisor' pop-up is overlaid on the page, titled 'Why fuel type matters: Replacing an existing water heater that is already electric likely requires less labor and materials. If you have an existing non-electric water heater, you may need to upgrade your electric panel to 200 amps which can be costly. You may want to check with a licensed professional if your unit will need a mixing valve.' Below this text are four icons representing different fuel types: 'It's Electric' (green leaf icon), 'It's Gas' (red flame icon), 'It's Propane' (yellow speech bubble icon), and 'It's Unknown' (yellow question mark icon). A 'Next Steps' section follows, recommending a qualified installer and listing three fulfillment options: picking up the unit, home delivery, and choosing a qualified installer. At the bottom right, a product image of the 'A.O. Smith ProLine XE Voltex Hybrid Heat Pump Water Heater' is shown with its pricing: 'Regular Price \$2,000.00' and 'Sale Price \$600.00'. A 'Chat' button is also visible.

Manufactured Home Targeted Delivery – Home Energy Savings

Pilot Update

- In 2023, six manufactured new homes were incentivized accounting for nearly 14,000 kWh, and outreach efforts have led to 2024 pipeline projects as well.
- Heat pump measures accounted for approximately 520,000 kWh in Manufactured homes. Savings were also accrued by way of smart thermostats, LED lighting, water heating, appliances, and windows.
- In 2023, more than 1,000 customers living in manufactured homes in Highly Impacted Communities received no cost duct sealing installation.
- 5 new manufactured home projects to date in 2024
 - Increased engagement with distributors and working closely with sales staff
- ~ 250 manufactured home households have received rebates for measures such as insulation and no-cost installation of duct sealing and smart thermostats
 - Lower than 2023: approaching saturation, temporary supply shortage of insulation

Pilot Update

Pacific Power and its implementor Cascade Energy are contracting with Stillwater Energy for the following Clean Buildings customer outreach engagements for 2024 and 2025.

- Open Houses (**New**):
 - 2 sessions per day split between Tier 1 and Tier 2 customers
 - Format will include a Clean Buildings informational presentation with energy efficiency and renewable program information from Pacific Power. Extensive Q&A and one-on-one assistance is provided for the remainder of the session.
 - Customer site assessments will be offered to identify efficiency upgrades to achieve their energy goals
 - 1 Yakima open house – 2024
 - 1 Walla Walla & 1 Yakima open house – 2025

Clean Buildings Accelerator Pilot

Pilot Update Continued

- Accelerator Workshops:
 - Series of virtual monthly meetings to provide information about the Clean Buildings law, the various paths to compliance and assist customers with establishing an Energy Portfolio Manager account and determining their EUI-T if applicable.
 - Format is informational and activity driven with group discussions (cohort)
 - Target audience is 8 –10 large commercial customers – compliance required for this sector in 2026
 - Pacific Power will provide one Accelerator per year for 2024 and 2025.
- Helpline (**New**):
 - Individual customer assistance via phone/email for site specific customer questions related to Clean Buildings
 - Staffed by Stillwater Energy - experienced with Clean Buildings
 - Available to all commercial customers regardless of facility size who are subject to compliance under the Clean Buildings initiative. The helpline will be available in both 2024 and 2025.

Wrap-up

Nancy Goddard



Recent Drafts to DSM Advisory Group

	Draft emailed to you	Comments requested by	Comments received	Response to comments	Filing
2025 CPA Measure/Program List	3/26/2024	4/8/2024	Received comments from UTC Staff 4/16/2024	5/1/2024	n/a
System Benefits Charge (Schedule 191)	5/1/2024	5/16/2024			5/31/2024
2023 Annual Report 2022-2023 Biennial Conservation Report Commerce Report for 2022-2023	5/1/2024	5/15/2024			5/31/2024

Planned 2024

DSM Advisory Group Meetings, Drafts for DSM AG Review, Filings, CEIP Engagement meetings

March

Advisory Group meeting #1

March 26

System Benefits Charge Review (Schedule 191)

Schedule 191 (SBC)

Filing

If no change, draft request for exception to DSM AG by Mar 31, file by May 1

If change needed, draft filing to DSM AG by May 1, file by June 1

April

April 5:

CEIP Meeting - all Advisory Groups and open to the public. IRP/CEIP Update, Distribution System Planning (DSP) in WA, and a preliminary look into the upcoming Vulnerable Population Workshops

May

Advisory Group meeting #2

May 10

2023 Annual Report
2022-2023 Biennial Conservation Report
NEI applications
CPA market and measure characterization

May 1:

SBC Exemption filing (if needed)

May 1:

Draft 2023 Annual Report and 2022-2023 Biennial Conservation Report to DSM AG

May 15:

Comments on reports due



June

Due by June 1

(will be filed 5/31):

File 2023 Annual Conservation Report and Commerce Report

File 2022-2023 Biennial Conservation Report

SBC filing (if needed)

June:

CEIP Meeting - more updates, diving into Distribution System Planning, and Vulnerable Population Background Information

July

July 1:

File CEIP Progress Report (on 2023)

ACP: Annual Conservation Plan
BCP: Biennial Conservation Plan
CEIP: Clean Energy Implementation Plan
DSM AG: Demand-side Management Advisory Group

Planned 2024

DSM Advisory Group Meetings, Drafts for DSM AG Review, Filings, CEIP Engagement meetings

August

August 6:
CEIP Hybrid Meeting
2025 IRP/CEIP
Updates, CEIP
Progress Report,
continue the
discussion into
Distribution
System Planning.

September

**Advisory Group
meeting #3**
1/1/2025 program changes
2025 Annual Conservation Plan

Sept 16:
Program change
documents to DSM AG
(incorporating RTF UES and
protocols expected as of 10/1/2024
RTF cutoff date)

Sept 30:
Comments on program
change docs due

October

Oct 15:
Draft 2025 Annual
Conservation Plan

Oct 30:
Comments on draft ACP
due

CEIP Meeting

November

Nov 15:
File 2025 Annual
Conservation Plan

Nov 15:
Home Energy Savings and
Wattsmart Business program
changes for 1/1/2025
announced on website

December

**Advisory Group
meeting #4**
Draft 2025 Communications
Plan

ACP: Annual Conservation Plan
BCP: Biennial Conservation Plan
CEIP: Clean Energy Implementation Plan
DSM AG: Demand-side Management Advisory Group

2024 DSM Advisory Group Meetings

	Key Topics	Updates
#1 March 26	<ul style="list-style-type: none"> • System Benefits Charge Review • 2024-2025 DSM Forecast, adaptive management • Braiding opportunities – state and federal funding 	<ul style="list-style-type: none"> • Procurement – Home Energy Savings, Wattsmart Business Delivery • Demand Response • CETA: Equity Advisory Group • CEIP: CEIP update, 2023 Customer Benefit Indicator Metrics (preliminary results) • Pilots • Wrap-up
#2 May	<ul style="list-style-type: none"> • Docket UE-230172 Settlement Stipulations • Draft 2023 Annual Report, 2022-2023 Biennial Conservation Report • System Benefits Charge draft filing • 2025 Conservation Potential Assessment – market, measure characterization and NEIs • Tree Planting Conservation • 2024-2025 DSM Forecast, adaptive management • Braiding opportunities – state and federal funding 	<ul style="list-style-type: none"> • Demand Response – forecast, updates • CETA: Equity Advisory Group • CEIP: CEIP update, 2024 YTD Customer Benefit Indicator Metrics • Pilots • Wrap-up
#3 September	<ul style="list-style-type: none"> • Preview of planned program changes for 1/1/2025 • Preview of 2025 Annual Conservation Plan • 2024-2025 DSM Forecast, adaptive management • Braiding opportunities – state and federal funding 	<ul style="list-style-type: none"> • Demand Response • CETA: Equity Advisory Group • CEIP: CEIP update, 2024 YTD Utility Actions/Customer Benefit Indicator Metrics • Pilots • Wrap-up
#4 December	<ul style="list-style-type: none"> • 2025 communications and outreach plan • 2024-2025 DSM Forecast • Braiding opportunities – state and federal funding 	<ul style="list-style-type: none"> • Demand Response • CETA: Equity Advisory Group • CEIP: CEIP update, 2024 YTD Utility Actions/Customer Benefit Indicator Metrics • Wrap-up

Thank you



Planned 2025

DSM Advisory Group Meetings, Drafts for DSM AG Review, Filings

January

January 1:
Draft IRP

March

Advisory Group meeting #1
March xx
System Benefits Charge Review (Schedule 191)

Schedule 191 (SBC) Filing
If no change, draft request for exception to DSM AG by Mar 31, file by May 1

If change needed, draft filing to DSM AG by May 1, file by June 1

March 31:
File final IRP

May

Advisory Group meeting #2
2024 Annual Report

May 1:
SBC Exemption filing (if needed)

May 1:
Draft 2024 Annual Report to DSM AG

May 15:
Comments on reports due

May 1:
Public Participation Plan

June

June 1:
File 2024 Annual Conservation Report and Commerce Report

SBC filing (if needed)

July

July 1:
File CEIP Progress Report (on 2024)

ACP: Annual Conservation Plan
BCP: Biennial Conservation Plan
CEIP: Clean Energy Implementation Plan
DSM AG: Demand-side Management Advisory Group
IRP: Integrated Resource Plan

Planned 2025

DSM Advisory Group Meetings, Drafts for DSM AG Review, Filings

August

September

October

November

December

Advisory Group meeting #3

1/1/2026 program changes
2025 Annual Conservation Plan

Sept 1:
Program change documents to DSM AG
(incorporating RTF UES and protocols expected as of 6/1/2025 RTF cutoff date)

Sept 15:
Comments on program change docs due

Oct 1:
File CEIP (2026-2029)

Oct 1:
Draft 2026-2027 Biennial Conservation Plan

Oct 15:
Comments on draft BCP due

Nov 1:
File 2026-2027 Biennial Conservation Plan

Nov 15:
Home Energy Savings and Wattsmart Business program changes for 1/1/2026 announced on website

Advisory Group meeting #4

Draft 2026 Communications Plan

ACP: Annual Conservation Plan
BCP: Biennial Conservation Plan
CEIP: Clean Energy Implementation Plan
DSM AG: Demand-side Management Advisory Group

Pilot Descriptions from 2024-2025 DSM Business Plan

Heat Pump Water Heaters Online Platform/Direct Delivery Pilot

Jay Olson

(from Pilots section of 2024-2025 DSM Business Plan filed in Nov. 2023)

Heat Pump Water Heaters Online Platform/Direct Delivery

- **Purpose:** Increase installation of energy efficient heat pump water heaters through additional delivery method and compare results against existing HPWH participation levels.
- **Costs:** Costs are included in the existing program delivery and incentive budgets for the biennial period.
- **Size:** The Program Administrator expects 100-120 projects over the two-year period.
- **History:** Heat Pump Water Heaters are an existing measure and NEEA initiative but this technology has seen low participation rates in the program as well as regionally. Approach and results will be shared with NEEA's Products Coordinating Committee.
- **Implementation:** In Q4 2023, adding heat pump water heaters to a new online platform that offers direct shipment and fixed fee installation of heat pump water heaters.
- **Marketing:** Using multi-channel marketing, the measure will be promoted to customers via email, direct mail and bill inserts, which will drive participation to the online platform.

Manufactured Home Targeted Delivery

(from Pilots section of 2024-2025 DSM Business Plan filed in Nov. 2023)

Manufactured Homes Targeted Delivery

- **Purpose:** Increase installation of energy efficiency measures within new and existing manufactured homes.
- **Costs:** Costs are included in the existing program delivery and incentive budgets for the biennial period.
- **Size:** The Program Administrator expects 500-1,000 manufactured home projects over the two-year period.
- **History:** Builds on work from pilot in prior biennial period.
- **Implementation:** Build awareness and utilization of available customer incentives for manufactured home measures, including new manufactured homes and existing manufactured home duct sealing, direct install lighting, heat pumps, evaporative coolers, central air, windows, and insulation.
- **Marketing:** Utilize geo-targeted analysis, marketing, outreach, and lead sharing methods to optimally reach customers, including customers in underserved areas or non-participating areas.

Clean Buildings Accelerator Pilot

Hallie Gallinger

(from Pilots section of 2024-2025 DSM Business Plan filed in Nov. 2023)

Clean Buildings Accelerator

- **Purpose:** Help building owners who must comply with the Clean Buildings law (House Bill 1257 – Tier 1, buildings greater than 50,000 square feet, Senate Bill 5722 – Tier 2, buildings 20,000 – 50,000 square feet) get a jump start while also identifying savings opportunities and achieving savings results (reported in the Wattsmart Business program).
- **Costs:** Costs are included in the Wattsmart Business program delivery and incentive budgets for the biennial period.
- **Size:** Up to 40 buildings (approximately 10-20 buildings per year in 2024 and 2025).
- **History:** Builds on work from pilot in prior biennial period
- **Implementation:** Continue to leverage Puget Sound Energy development work that lead to Clean Buildings Accelerator offer in Wattsmart Business for buildings located in Pacific Power’s service area. Outreach for the offer will include customers in Highly Impacted Communities and other customers who may lack resources to get started with Clean Buildings. Services and incentives will be offered as part of the Wattsmart Business Strategic Energy Management offer. Services may include:
 - Coffee chats to provide general information and enroll customers
 - Sprints including monthly virtual workshops for 4 months
 - Virtual energy scans to identify energy savings opportunities
 - Cohort elevate workshops (quarterly for graduates)
 - Coaching calls
 - Energy Star Portfolio Manager training

Demand Response Program Overviews

Irrigation Load Control



Direct Load Control Device

Connected Energy, implementer, installs control device at the pump, and toggles power on/off based on PacifiCorp signal

ILC Program aggregates pump load for load-relief curtailment – typically a few 1-4 hour events per season.

Customers receive incentives based on availability (pump run time) during summer season.

Minimum Dispatch Notice	Incentive (\$/kw-yr)
22-minute	\$45
Hour ahead	\$30
Day ahead (24 hour)	\$18

C&I DR

- Customers nominate curtailment amount based on technical review
- Energy monitoring devices installed at the meter gives Enel X real-time load visibility, to coach customer to meet nomination
- Four enrollment options offer range of frequency, duration, and incentive amounts

	60 Minute Product	20 Minute Product
Dispatch Hours	Summer only, 3 PM – 9 PM PST non-holiday weekdays	Year round, 8 AM – 9 PM PST non-holiday weekdays
Dispatch Alerts	At least 60 minutes before an event	At least 20 minutes before an event
Event Duration	1– 3 hours	15 minutes to 4 hours
Max Events	Max 1 per day / 25 per year	1– 2 per day maximum
	7 Minute Product	Real-Time
Dispatch Hours	24x7x365	24x7x365
Dispatch Alerts	At least 7 minutes before an event	None
Event Duration	15 minutes to 4 hours	Up to 15 minutes
Max Events	25 per year	50 per year



Enel X platform gives customers access to monitor their own energy usage

Optimal Time Rewards

Water Heaters

Multifamily property managers sign participation agreement for the building

Armada Power installs device on each water heater unit

Individual tenants opt in and sign lease addendum and T&C through mobile app

Property managers get \$5/unit enrolled, and tenants get \$20 for enrolling and \$25 annually

Dispatch is instant, for up to 2 hours, maximum of two events a week



Smart Thermostats

Customers enroll through their thermostat app

\$50 for enrolling, plus \$25 a year

20-minute notice, plus easy opt-out

Dispatch is a 3-degree setback to temperature setting; reverts to normal schedule after event

Dispatch can last up to 4 hours, but expected to usually be less

