

Clean Energy Transformation Act

Washington Equity Advisory Group
June 2022 EAG Meeting

June 15, 2022



PacifiCorp Equity Advisory Group (EAG) June Meeting June 15, 2022, 1pm-4pm Pacific Time

- RMI facilitators will change PacifiCorp, RMI, and Equity Advisory Group (EAG) participant names to First Name, Last Initial, PacifiCorp/RMI/EAG.
- We recommend using “Gallery View” (icon in top right) when in group discussions.
- If you called in with your phone, merge your audio and video.
- For technical support, click on “Chat” (icon in tool bar at bottom), toggle to “Jacob Becker, RMI” as the recipient, send your message.

EAG Members:

- If you are able, please keep your camera on for as much of the meeting as possible (icon in bottom left) but stay muted unless speaking.
- Please use the chat at any time to engage in the conversation or ask questions.
- To raise your virtual hand to speak, click on "Reactions" in your tool bar, select “Raise Hand.”

Public Observers:

- Thank you for joining us and observing this meeting.
- You can “Rename” yourself by clicking the “...” on your participant square.
- Please stay on mute with your camera off until the public comment period.
- Please use the chat for technical support by messaging “Jacob Becker, RMI,” but please do not ask questions or respond to prompts in the chat until the public participation period.

June 2022 Meeting Objectives

1. Update the EAG on energy efficiency programs
2. Begin understanding the non-energy impacts from PacifiCorp's programs and solicit EAG recommendations on quantitative benefits of demand response
3. Explore the preliminary results of PacifiCorp's Energy Burden study

June Meeting Agenda

Time (PT)	Description
1:00 PM	Meeting Overview and Updates EAG Check in
1:30 PM	Energy Efficiency Updates
1:45 PM	Non-Energy Impacts Q&A Group Discussion
2:20 PM	Break
2:30 PM	Energy Burden Study Q&A Group Discussion
3:50 PM	Public Comment
3:50 PM	Next steps EAG Check out

Takeaways from EAG Meetings

- EAG members and their associated organizations have incredibly strong relationships with their communities
- Having local in-person presence is fundamental to effective community engagement and outreach
- Communication tactics need to be easy for customers to consume
- Customers depend on reliable and affordable energy to meet many of their needs
- Building confidence and trust in energy initiatives will be critical for the future; education is key

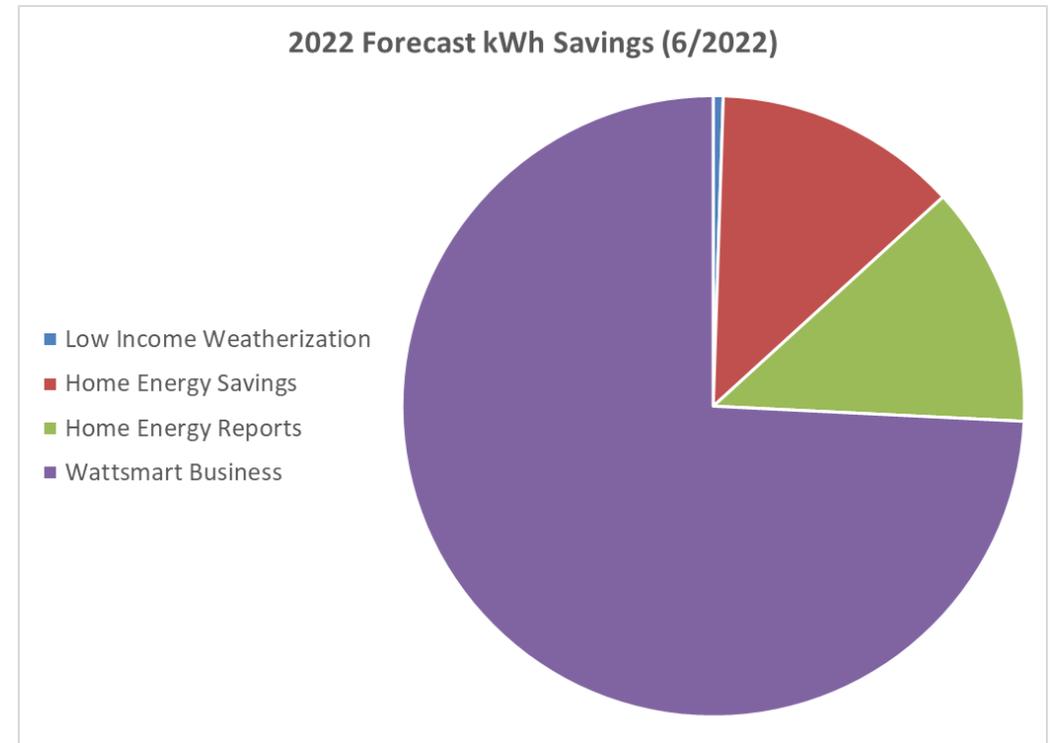


Energy Efficiency Update



Update – Energy Efficiency

- 2020-2021 Biennial Conservation Report (filed June 1)
 - Target was 86,979 MWh
 - Short of target due to COVID impacts
 - Adaptively managed:
 - Incentive increases
 - Vendor incentives
 - More
 - Considered in compliance with target based on HB 1446
 - Portfolio of programs was cost-effective
- 2022-2023 target is ~87,000 MWh
 - Continued shortfall forecasted due to COVID
 - Continued focus on energy savings

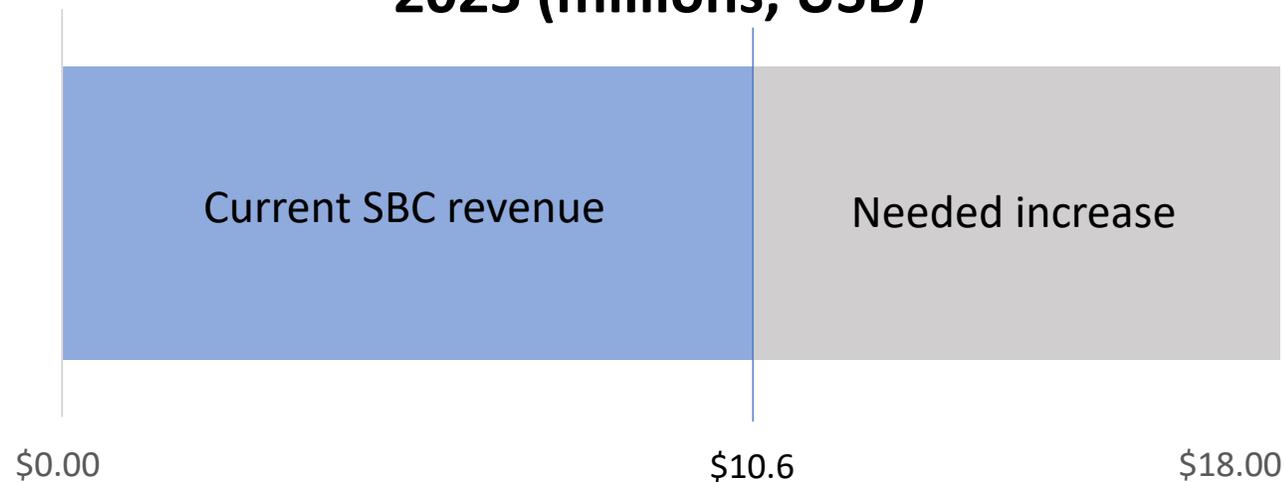


System Benefits Charge Review

System Benefits Charge: funds energy efficiency programs

- Balancing account (revenue in/program expenses out)
- Reviewed the account (as required by May 1), an increase is needed, filed it June 1

Total forecasted expenditures in 2022 and 2023 (millions, USD)*



*Note – 2022 and 2023 forecast expenditures are less than estimates provided in the DSM Business Plan and will need to be reevaluated in 2023 for additional changes to align with 2022-2023 biennial conservation target and activities

Result = **\$2.65/month** increase for average residential customer using 1,200 kWh/month (2.1%)
Requested effective August 1, 2022

Update: Wattsmart Business Clean Buildings Accelerator

What is Wattsmart Business Clean Buildings Accelerator?

- New part of Wattsmart Business for 2022-2023
- Lines up Pacific Power services w/requirements of Clean Buildings law (HB 1257)
- **Helps customers meet the requirements of the law and achieve energy savings**
- Assistance over one year via small group workshops, one-on-one coaching calls, support materials, Wattsmart Business services and incentives

CLEAN BUILDINGS REQUIREMENTS

- Designated Energy Manager
- ESPM Benchmarking (EUI) and Reporting
- Develop & Execute Energy Management Plan
- Develop Operations and Maintenance Program
- Determine & Comply with EUI

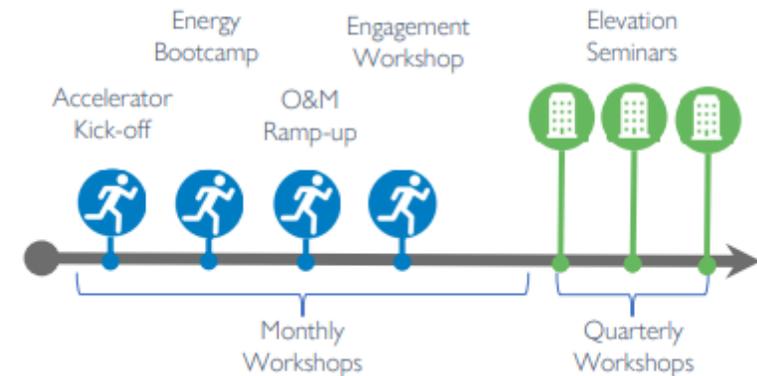
WHAT ACCELERATOR PROVIDES

- Energy Manager tools and guidance
- Hands-on ESPM Bootcamp and Support
- Energy Management Plan Practicum with Templates
- O&M Program Tools and Ongoing Elevation Seminars
- Guided EUI assistance using ESPM, virtual energy scans to define opportunities, Wattsmart Business incentives

WITH THE CLEAN BUILDINGS ACCELERATOR, YOU CAN ...

- Comply with Clean Buildings requirements
- Save energy and money
- Leverage Pacific Power support
- Demonstrate value to occupants/tenants
- Establish persistent improvements and O&M practices
- Establish scalable solutions for one or more buildings
- Set up ENERGY STAR Portfolio Manager
- Create Energy Management Plan and O&M Program

ACCELERATOR TIMELINE



Update: Wattsmart Business Clean Buildings Accelerator

Clean Buildings Accelerator recent activity:

- ***Pre-work (general awareness on Clean Buildings law)***
 - Clean Buildings law overview one-on-one with customers w/large buildings subject to the law (commercial, over 50,000 square feet)
 - Yakima County Development Association round table on Clean Buildings 1/27/2022 (joint with Washington Department of Commerce)
- ***Clean Buildings Accelerator customer recruitment: One-on-one customer outreach and coffee chats***
 - Outreach: Marcelino Osorio helped recruit participants in **Highly Impacted Communities**
 - Chats: Help inform customers about the opportunity (April-May)
- ***Kickoff workshop for first cohort (group of participants) - May 2022***
 - K-12 and higher education, non-profit, warehouse, event center
 - Customers from both Yakima Valley and Walla Walla areas

Clean Buildings Accelerator Event	# Customers	# Customers located in HIC
Coffee Chats	16	8
Accelerator Kickoff workshop	8	4

HIC = Highly Impacted Community

Non-Energy Impacts (NEIs)



What are NEIs? Why do they matter?

Non-Energy Benefits/Non-Energy Impacts (NEBs/NEIs): the impacts received from energy efficiency equipment or programs other than efficiency and accompanying savings

- NEBs/NEIs are applied to cost-effectiveness assessments to better understand the impacts of a measure or program
- An energy efficiency or demand response investment is considered not cost-effective if below 1.0; for example:

Consider an energy efficient showerhead upgrade investment

\$100 = Energy Savings value
\$20 = Water savings (Non-energy impact value)
\$110 = Cost of upgrade

Without NEIs = 0.90 = \$100 / \$110
With NEIs* = 1.1 = (\$100 + \$20) / \$110

*Marketing materials can incorporate water savings to highlight the return on investment customers can expect from buying an efficient showerhead

What are NEIs? Why do they matter?

Non-energy impacts can also be used to market benefits to customers but have varying degrees of *realization* in different markets and contexts. For example:

- **Health and safety benefits** from asthma reduction due to weatherization - Few healthcare providers or participants pay for energy efficiency's health benefits.
- **Improved home values** – Real estate professionals may not highlight energy efficiency improvements to customers. Customer's valuation of energy efficiency can vary from person to person.

While the value of NEIs are real, the ***market does not always reflect these benefits.***

Where do we find NEIs values?

Embedded in Engineering Assumptions

Regional Technical Forum

Engineering Analysis

Primary Research

Evaluations

Proxy values, modeling

Survey data

Secondary Studies

Other utility evaluations

Industry or Statewide studies

Manufacturer data

NEIs used by Pacific Power – Energy Efficiency: Commercial and Industrial

NEI Reporting Name	Description
Administrative costs	Participant reported avoided overhead costs associated with invoice processing, parts/supplies procurement, contractor coordination, and customer complaints.
Avoided Illness From Air Pollution	Modeled value of avoided particulate matter 2.5 microns or less (PM2.5) associated with electricity generation at power plant. Does not Includes carbon dioxide.
Ease Of Selling Or Leasing	Participant reported improved ability to sell or lease property due to increased performance and desirability.
Fires/insurance damage	Avoided cost of fires based on insurance estimates
Lighting Quality And Lifetime	Participant reported value of improved lighting lumen levels, color, and steadiness.
O&M	Avoided time and costs associated with reduced maintenance, parts/repairs, service visits, and system monitoring
Product Spoilage/Defects	Participant reported value of avoided product losses (e.g. reduced food spoilage in grocery stores).
Productivity	Participant reported value of improved workplace productivity resulting from improved rest and sleep related to improved living conditions.
Sales Revenue	Participant reported increased sales resulting from improved product.
Supplies and materials	Includes changes in the type, amount, or costs of materials, and supplies needed
Thermal Comfort	Increased comfort due to fewer drafts and even temperatures throughout the building.
Waste disposal	Participant reported costs to remove solid waste and landfill fees (e.g.: fees to dispose of CFLs).
Water/Wastewater	Reduced water usage due to efficient equipment (C&I)

NEIs used by Pacific Power – Energy Efficiency: Residential

NEI Reporting Name	Description
Avoided Illness From Air Pollution	Modeled value of avoided particulate matter 2.5 microns or less (PM2.5) associated with electricity generation at power plant. Does not include carbon dioxide.
Bad Debt Write Offs	Reduction in cases of bad debt write offs
Calls to utility	Reduction in number of calls to utility from customers
Carrying Cost On Arrearages	Reduced carrying cost on arrearages
Ease Of Selling Or Leasing	Participant reported improved ability to sell or lease property due to increased performance and desirability.
Fires/insurance damage	Avoided cost of fires based on insurance estimates
Health and safety	Participant reported costs from time off and lost pay due to fewer missed days of work/school, heat/cold stress, etc., resulting from measures installed in the home.
Lighting Quality And Lifetime	Participant reported value of improved lighting lumen levels, color, and steadiness.
O&M	Modeled avoided time and costs associated with reduced maintenance, parts/repairs, service visits, and system monitoring
Productivity	Participant reported value of improved workplace productivity resulting from improved rest and sleep related to improved living conditions.
Thermal Comfort	Increased comfort due to fewer drafts and even temperatures throughout the home.

Both C&I and residential

Water Savings	Value of reduced expenditures for water consumption.
Avoided replacement costs	Modeled avoided time and costs associated with the replacement of equipment.

NEI Treatment

NEIs from secondary sources are adjusted to account for the transferability of NEIs from one study and jurisdiction to another.

Confidence Factors = How well the study follows research best practices

- For example, does the study have a statistically significant sample size?

Plausibility Factors = Nuances in NEI research outside of the actual study methodology

- For example, how old is the study? Does it reflect the measure we are applying it to?

Estimate economic adjustment factors = Economic adjustment from original study jurisdiction to PacifiCorp's service territory - Not applicable to all NEIs.

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- For example,

Equation: PacifiCorp Specific NEI

$$NEI\ Value_{Original\ Jurisdiction} * CF * PF * Economic\ Adjustment_{PacifiCorp} = NEI\ Value_{PacifiCorp}$$

The lowest possible CF and PF score a study could receive was 50%.

NEIs Treatment – Example

1. Start with the unadjusted NEI from the original study. WA low-income NEB for reductions in debt write-offs.

$$NEI\ Value\ original\ Jurisdiction = \frac{\$10,024}{339,561\ kWh} = \$0.03/kWh$$

2. Multiply the unadjusted NEI value by the CF and PF and convert to present day dollars.

Confidence Factor = 0.933 (high)

Plausibility Factor = 0.846 (broad measure match (5 year or less study))

$$\frac{\$0.03}{kWh} * 0.933 * 0.846 = \frac{\$0.024}{kWh} = Adjusted\ NEI\ Value$$

3. Apply the economic adjustment factor. If there is more/less bad debt write offs relative to the jurisdiction in the study. Since this study took place in WA the value = 1 for the state adjustment. For the intrastate adjustment, the study estimated a PacifiCorp utility cost of \$7,650 per customer. For all of Washington, this value is \$8,820.

$$Adjusted\ NEI\ Value * Economic\ Adjustment_{All\ Washington} * Economic\ Adjustment_{PacifiCorp} = NEI\ Value_{PacifiCorp}$$

$$\frac{\$0.024}{kWh} * 1 * \frac{\$7,650}{\$8,820} = \frac{\$0.02}{kWh}$$

NEI Status – Energy Efficiency

Current activities

1. Revisit assumptions and concepts.
 - a. Set minimum threshold to 60-70%
 - b. Revise matching methodology to be broader and more inclusive.
 - c. Reduce discounting for older studies.
2. Map NEIs to measures in the upcoming conservation potential assessment.

Discussion

1. Based on your community's needs and preferences, what benefits described today are the most important for PacifiCorp to deliver on?
2. Which of the benefits that have not been quantified should be prioritized for further research?

Demand Response NEIs

Research to date:

2021 conservation potential assessment (CPA)

- literature review on NEIs - no monetized NEIs found
- some sources did describe potential non-energy impacts, which were assigned to three categories: Societal, Utility, and Participant NEIs (examples on next slide).

2023 CPA

- consultant searching for and investigating if any additional literature is available that applies or monetizes NEIs for demand response

Request: feedback from the equity advisory group on potential NEIs to monetize and apply to demand response for the 2023 CPA

Demand Response NEIs

<i>Societal Non-Energy Impacts</i>	<i>Utility Non-Energy Impacts</i>	<i>Participant Non-Energy Impacts</i>
Employment above the job creation benefits of manufacturing a combustion turbine or constructing T&D upgrades	Improved customer relations	Satisfaction/pride from preventing outages and being “green”
Economic development (e.g., changes in gross domestic product)	Reduced marketing and administrative costs due to demand response customer participation in multiple distributed energy resource programs	Improved ability of integrated load management solutions to manage energy use (e.g., demand response -enabled thermostat)
Improved air quality (avoiding criteria pollutants above and beyond the level of existing environmental regulations)		Economic well-being (e.g., fewer bill-related calls, fewer power shut-offs/reconnects, reduced foreclosures)
Additional greenhouse gas (GHG) mitigation benefits (beyond avoided GHG cost embedded in the energy price and criteria pollutants included in the generation cost)		Better public image for commercial enterprises
Environmental justice improvements		
Biological impacts		
Land use, including impacts of energy infrastructure on local ecosystems (fewer power plants)		
Improved energy security/resilience (e.g., reduced dependence on imported fossil fuels)		

Energy Burden Study



Next Steps



Equity Advisory Group Meetings	Topics <i>(future meeting topics may be refined)</i>
January 19, 2022	<ul style="list-style-type: none"> • Clean Energy Implementation Plan (CEIP) updates • Reflections of 2021 and ideas for 2022
February 16, 2022	<ul style="list-style-type: none"> • Energy efficiency programs (Wattsmart Business) • Electric vehicle (EV) plan and transportation electrification grant program
March 16, 2022	<ul style="list-style-type: none"> • EAG member presentations • Low-income bill assistance (LIBA) • Transportation electrification grant program (continued)
April 13, 2022	<ul style="list-style-type: none"> • EAG member presentations (continued) • Time of use (TOU) pilot • Residential energy efficiency and agriculture demand response • Transportation electrification grant program update
May 23-25, 2022	<ul style="list-style-type: none"> • In person meetings with EAG members in Walla Walla and Yakima
June 15, 2022	<ul style="list-style-type: none"> • Updates: System Benefits Charge for Energy Efficiency (EE)/DSM Forecast • Energy Burden Assessment • Non-Energy Impacts
July 13, 2022	<ul style="list-style-type: none"> • Updates: TOU, Energy Efficiency (EE) Utility Actions, Wattsmart Communication Update • Wattsmart Education Program in Schools • Utility Action Customer Benefit Indicators (CBIs) - # of household and businesses participating in programs; workshops
September 14, 2022	<ul style="list-style-type: none"> • Updates: NEI Update, Demand Response; Transportation Electrification Grant • Home Energy Savings and Wattsmart Business Proposed Program Changes • CBI Input • Comms Resource Library
October 19, 2022	<ul style="list-style-type: none"> • EE Updates and CBI Input
December 7, 2022	<ul style="list-style-type: none"> • Reflections on 2022 and Plan for 2023

Next Steps

- 1. Materials.** Notes from this meeting will be shared and posted to the website next week. We will share and post July 2022 EAG Meeting materials in advance of the **next meeting on July 13, 1-4 pm PT.**
2. EAG member presentations to resume in July and September