Clean Energy Implementation Plan (CEIP) Engagement Series

June 2024 Meeting Notes

Tuesday, June 18, 2024, 9:00 -11:00 am Pacific Time

These notes were synthesized and summarized by E Source, PacifiCorp's meeting facilitation partner.

Executive Summary

There were 37 people in attendance, including members of the public and Pacific Power representatives, at the second iteration of the Clean Energy Implementation Plan Engagement Series meeting this year. The virtual meeting, which was hosted via the Zoom platform, provided Clean Energy Plan (CEP) updates, presented the first Vulnerable Populations workshop, reviewed Integrated Resource Planning (IRP) modeling, and introduced Distribution System Planning (DSP) solutions and engagement. To maximize accessibility, the meeting was recorded for those who could not attend and Spanish and ASL interpretation/translation were provided.

The following is a summary of the content and feedback received during the 3-hour public meeting.

Session Objectives

1. Communicate Clean Energy Implementation Plan updates
2. Present Vulnerable Population Workshop objectives and review the proposed approach
3. Review Integrated Resource Planning modeling and impacts
4. Learn about Distribution System Planning solutions and engagement

Opening

Pacific Power's Regulatory Manager Rohini Ghosh opened the CEIP meeting by welcoming the attendees and thanking the public for continued participation. Public perspectives are essential to achieving meaningful impacts on communities.

E Source's Jeffrey Daigle reviewed meeting experience items, provided an overview of the agenda and objectives, and introduced the presenters.

Clean Energy Implementation Plan

Rohini Ghosh, Regulatory Projects Director at Pacific Power, provided Clean Energy Implementation Plan updates. The Washington Utilities and Transportation Commission (WUTC) 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.

The company operates on a 4-year filing cycle, with annual progress reports, slated for filing by July 1, 2024, and biennial updates, slated for filing by November 1, 2024. The biennial update will address key target metrics while the annual progress report looks backwards into 2023 and presents results analyzing how the company performed against targets and reports on Community Benefit Indicator (CBI) metrics. Updated filings are always available on the Pacific Power and WUTC websites. Members should look out for updates on the annual progress report after filing, key takeaways and a summary of the report will be provided in future engagement spaces.

The original biennial report was filed on November 1, 2023. On January 11, 2024, interested parties and commission staff filed comments and recommended approval, subject to conditions. The matter was brought to commission on March 22, 2024; however, an agreement could not be reached so the matter was suspended on March 25, 2024, and set for adjudication by Order 09. Pacific Power gave testimony on June 17, 2024, and will have a second settlement conference on July 11, 2024. If an agreement is not reached, the company will continue the full adjudication process. The latest date for decision is the end of the year, but in the meantime the company moves forward on planning, growth, and updates and is currently gearing up planning for the 2025 CEIP filing.

Ms. Ghosh expressed that written feedback is always welcomed in the space in addition to meeting discussion as the company continues to push for a collaborative environmental and acknowledges that there is a lot of information that may be digested later and prompt questions or feedback.

Vulnerable Populations Workshop #1

Laura James, Senior Project Manager at Pacific Power, convened the first of two Vulnerable Populations Workshops which will serve as a high-level overview while the next workshop dives into recommended factors. The goals for the first workshop include sharing settlement condition 14, reviewing the current approach to defining Vulnerable Populations, comparing the company's approach to other utilities in Washington, and discussing feedback on existing methodology. October's CEIP meeting will present Pacific Power's plan for updating vulnerable population calculation and collect feedback on the approach.

CBI settlement condition 14 mandates Pacific Power to convene interested parties for up to 2 workshops to review and improve the Company's approach to identifying and tracking vulnerable populations by considering the vulnerability factors listed below (including reasonable alternatives or additions).

- Sensitive populations
    - Disabilities, cardiovascular disease, low birth weights, higher rates of hospitalization, home care
- Energy security/insecurity

    - Arrearage/disconnections, estimated energy burden, housing burden
- Other socioeconomic factors
    - Access to digital/internet resources, food, health care, educational attainment level, historical redline influence, linguistic isolation, race, transportation expenses
- Geographic areas that Pacific Power identified as "high needs" or "underserved"
- Geographic areas with an average home energy burden of 6% or more
- Qualified Census Tracts as defined by HUD
- Geographic areas considered to be a "community in economic distress"

The Clean Energy Transformation Act (CETA) requires utilities to identify Highly Impacted Communities (HICs) and Vulnerable Populations (VPs) within its service area. HICs were determined based on a Washington Department of Health Environmental Health Disparities analysis of socioeconomic and climate change impacts, and status as designated Tribal land, by census tract. The Washington Administrative Code 480-100-640 requires HICs be identified using the cumulative impact analysis pursuant to RCW 19.405.140 in combination with census tracts that are at least partially in Indian country. VPs were identified through engagement with interested parties to review data about Pacific Power customers and assess priority concerns. The goal is to identify vulnerable populations based on adverse socioeconomic factors and sensitivity factors developed through the advisory group process and public participation plan described in WAC 480-100-655.

As part of the process to identify vulnerable populations, Pacific Power reviewed the demographics of the Washington service area, consisting of 137,000 customers across Benton, Colombia, Garfield, Kittitas, Yakima, and Walla Walla counties. These are mostly urban areas with some of the lowest median income levels in the state. Relative to the rest of the state, the company's service area has a significantly different demographic and socio-economic make-up. Pacific Power's service area has more Hispanic and Latino customers, a greater percentage of customers that speak a language other than English at home, customers below the poverty line, and a greater percentage of customers working in the sectors of agriculture, forestry, fishing, hunting, and mining.

Washington defines highly impacted communities (HICs) as census tracts that meet at least one of two qualifying criteria:

- The census tract earns a 9 or 10 Environmental Health Disparity (EDH) Score from the Washington Department of Health (DOH); or
    - EHD Score: It is the overall ranking of each of the nineteen Washington Tracking Network measures, which are grouped into four categories:
        - Environmental exposures include Nitrous-Oxide diesel emissions (annual tons/Km2), ozone concentration, particulate matter (PM) 2.5 concentration, populations near heavy-traffic roadways, and toxic releases from facilities.
        - Environmental effects include lead risk from housing, proximity to hazardous waste treatment and disposal facilities, proximity to national priorities list facilities (superfund sites), proximity to risk management plan facilities, and wastewater discharge.
        - Socioeconomic factors include limited English, no high school diploma, race/ethnicity, population living in poverty, transportation expense, unaffordable housing, and unemployed.

        - Sensitive populations include deaths from cardiovascular disease and low birth weight.
- The census tract is covered or partially covered by "Indian Country" as defined in 18 U.S.C. Sec. 1151

18 census tracts with an EHD score of 9 or 10, which are considered highly impacted, are in the Yakima area, and 1 is in the Walla Walla area. 6 census tracts are on Tribal Lands in the Yakima area, none in the Walla Walla area.

Pacific Power engaged the Equity Advisory Group (EAG) to develop a strategy for how VPs are considered, seeking EAG members that are representatives from highly impacted communities and vulnerable populations to provide expertise on equity-related topics as people with lived experience. The EAG was first convened in May 2021 with 8 members. In June 2021, the company solicited member input and presented background information on the CEIP process, HICs and VPs, and company service area. Members worked in groups to list priority disadvantaged groups in their communities and specific challenges faced by those groups. In July 2021, the company synthesized the demographic factors identified by the EAG and presented them to the EAG for review then integrated additional feedback from EAG to finalize the set of VPs.

Some groups and challenges identified by the EAG are:

- Age
    - 65+ adults
    - Young children
- Health
    - Hard of hearing
    - Mental health challenges
    - Physical/mental disabilities
- Education
    - Students
- Income
    - Energy burdened
    - Low-income immigrants
    - Low income
- Immigration and Language
    - Non-English speakers
    - Immigration status
- Location and housing
    - Unhoused
    - People living in rural areas
    - Single parents
    - Multi-family households
    - Gas heated homes
    - Multi-generational households
    - Agricultural/farm workers
    - People living in different land statuses

Pacific Power reviewed the vulnerable groups and challenges identified by the EAG and retained those groups facing challenges that Pacific Power had some influence on. The final list included 22 different demographic groups.

Vulnerable Populations			
1	Households with high school diploma or lower educational attainment	12	Immigration status (outside of US citizen)
2	Older Adults (65+ yrs.)	13	People who speak limited English
3	Young Children (5 yrs. or under)	14	Renters
4	People who have a hearing impairment	15	Multi-generational households
5	People with a disability	16	Multi-family households
6	People with medical equipment at home	17	People experiencing homelessness
7	Diverse supplier business owners	18	People living in rural areas
8	Energy burdened	19	People living in different land statuses (e.g., land trust vs. fee patent with different regulatory requirements)
9	Asset Limited, Income Constrained, Employed (ALICE)	20	Agricultural and/or farm workers
10	Low-income migrants	21	Gas-heated homes
11	Low income	22	Single parents

Subcategory	2020 Baseline (#)	2020 Baseline (%)	2022 (#)	2022 (%)
All Customers	**14,750**	**13%**	**12,445**	**11%**
Tribal Lands	2,103	21%	1,356	17%
HIC	6,471	21%	5,368	17%
Low income	5,061	38%	4,820	35%
ALICE	12,992	38%	11,417	31%
Immigration status (outside of US citizen)	983	5%	1,536	8%
People who speak limited English	5,114	14%	6,295	17%
Renters	7,404	18%	6,334	17%
Multi-generational households	521	17%	456	14%
Older Adults (65+ yrs.)	1,896	12%	1,909	12%
Young Children (5 yrs. or under)	1,540	18%	944	11%
People with a disability	2,940	19%	2,776	18%

The Pacific Power 2023 CBI Report Card, which is available for download here, presents a 2020 baseline measurement and a 2022 measurement for all metrics. This sample reporting for Number of Energy Burdened Households measures energy burden for the geographically defined HICs and Tribal Lands,

and the Vulnerable populations. Each vulnerable population is a single demographic factor analyzed across the service area. Please note, not all the VPs are shown above. Of the groups shown, the data shows how the baseline number and percent of energy burdened households varies by group, and how the change from 2020 to 2022 varies. For all customers (shown in first row), the number decreases from 13% to 11%, compared to a decrease from 21% to 17% for HIC households. The vulnerable populations start with the white rows. Across the VPs, the baseline proportion of households in the group that were energy burdened varied, as did the degree of change from the baseline year to 2022. For example, the percentage of energy burdened households in which residents speak limited English increased, from 14% to 17%.

Pacific Power is continuously looking for opportunities to improve the CBI framework, including the definition of named communities, while ensuring the framework has the stability needed to consistently measure impacts over time. Since filing the original CEIP in 2021, several updates have been made to the data and reporting for the CEIP including:

- Disaggregated HIC reporting to show Tribal Lands separately
- Updated methodology for 2023 CEIP Survey (used to identify vulnerable population households) based on suggestions from EAG to improve hard-to-reach customer response
- Updated applications for the residential energy efficiency and low-income weatherization programs to track owner/renter status and language spoken at home
- Published the CBI Report Card to make data more accessible
- Obtained new source to allow us to report impacts for people living on trusts

Each utility was tasked with developing their own methodology for identifying vulnerable populations. Both Puget Sound Energy (PSE) and Avista applied a geographic definition of vulnerable populations, but each took a different approach. PSE, like Pacific Power, worked with stakeholders to identify vulnerable demographic characteristics. PSE then created an indexing methodology, similar to the one used by DOH to identify HICs, to determine the intensity of need by census block, based on the prevalence of each of the vulnerable groups. In 2023 PSE updated their approach to identify areas of “deepest need” to specially highlight clusters of households with severe energy burden.

The Puget Sound Energy approach:

- Used list of factors identified through stakeholder outreach to index census blocks to identify high, medium, and low vulnerability areas
- Revised vulnerable population methodology in 2023 Biennial Update
    - Simplified original methodology
    - Incorporated additional factors, several related to heat risk: housing quality, social isolation, lack of trees, etc.
    - Created “deepest need” designation (another tier)

The Avista approach used geographical approach relying on DOH methodology:

- Defined vulnerable populations as census tracts that scored 9 or 10 in the DOH socioeconomic or sensitive populations categories, but were not identified as highly impacted communities
- Of 142 census tracts in Avista service area, 36 were identified as highly impacted communities, and another 12 identified as vulnerable population areas

- Avista will use the White House Climate and Economic Justice Screening Tool to incorporate new factors into its indexing methodology and map new vulnerable populations in 2025

Pacific Power's biennial update plans to incorporate the White House economic justice screening tool in 2025 update to screening plan.

Geographic tracking

Pros	**Cons**
Synthesizes across multiple factors to allow more	May create pockets of more vulnerable customers "hidden" within less vulnerable areas
Focuses impact tracking on most intensive need	bucketing multiple explanatory factors can make it difficult to determine drivers of different outcomes (creates "black box")
Easier to tie impacts to specific areas (can use utility data)	

Single factor tracking

Pros	**Cons**
Differences in the outcomes by specific factor or characteristic are more visible, easier to communicate to different interested parties	Does not target resources to most intensive need
Allows for program design to target sub-populations based on specific factors that may drive differences (e.g., renters)	Difficult to identify members of each population - requires survey approach
Each single factor assessed over whole service area – no geographic "pockets" are missed	Accuracy of measurements varies by population group, dependent on size and propensity to respond, etc.
	Requires monitoring and communicating results for long list of factors

Meeting Discussion:

Ms. James opened the room for discussion asking:

- Do you agree or disagree with Pacific Power's assessment of pros and cons of each approach?
    - Heather Moline – wondering why tracking needs to be one or the other? For example, redlined neighborhoods must be approached geographically even if there are cons to that approach method.
        - Ms. James replied that although the presentation noted high level differences between both approaches, it does not need to be one or the other. UTC raises a good point that distinct factors present differently across service areas.
    - Charlee Thompson – where is the data coming from?
        - Lee Elder, Load Forecasting Manager at Pacific Power stated the company relies heavily on residential survey data which is conducted every 2 years and is modified to acquire specific service territory information. However, it is noted

that every survey comes with a margin of error associated with response rate. The company also relies heavily on U.S Census Bureau and American Community Survey data where available.

    - Charlee Thompson – Earlier during CEIP discussions one thing that came up as a pro is the uniqueness of the approach to go back and view later as the definition of VPs progress. This helps decipher whether a situation should be viewed as dual or either or. Recommends it is best not to silo ourselves into one approach.
- Ms. James asked if the group saw any lessons learned.
    - Charlee Thompson – Nothing comes to mind top of head but suggests a deep dive to compare different programs and definitions of VPs as targeted by programs. Is there one utility that is servicing customers in a specific way?
    - Stefan de Villiers– Can Lee Elder speak more to response rate for residential surveys?
        - Mr. Elder shared that the WA survey response rate was 4.7% in the company's most recent survey, which was conducted via email and phone.
- Which approach do you perceive as more appropriate for identifying vulnerable populations?
    - Elijah Cetas – how does Pacific Power plan to address single factor analysis and align it with geographic realities of service territory? For example, tribal lands have a geographic overlay and may not get high survey response in tribal lands which may lead to less investment and incentives in program development, but because of geographic overlay we know where tribal lands are an example of this is the graph highlighting tribal lands in Yakima. As cons are identified, how does the company plan to cross between 2 analyses to get the best results?
        - Ms. James shared that the company uses survey data to track impacts against VP because currently there is not another way to determine when certain groups are impacted. For HICs and geo subsets within tribal lands, impacts are tracked easier because the only criteria is knowing where the impact happened, asking was it in HIC or on tribal lands? The example raised is a good point. The survey is an imperfect tool that can also be recognized as a con of the approach.
        - Elijah Cetas – how does the company move between both tracking methods to find solutions that fit all demographics?
            - Mr. Elder replied that this is an issue to work through in forthcoming meetings. As a group, an option may be proposed, and the company will see what the outcome looks like from a geographical approach. There is not one definitive answer but many practical solutions and options to work through and see what makes the most sense.
- In a geographic approach, what factors are important for right-sizing granularity of analysis? The company is looking for any guidance on how to go about a more geographical approach.
    - Heather Moline – For Pacific Power it makes sense that too much desegregation would not yield the desired results since Washington service territory is already small and the population percentage for low-income customers is high. It may not work to further refine.
    - Charlee Thompson– When chatting with PSE about methodology, did cluster analysis come up? Part of their geographical approach is to identify data as granular as possible,

but there has been difficulty in getting specific household data. When a frequency pops up in a particular geographic designation, the company can assume that the larger area will also be designated as part of VP or HIC.
    - Mr. Elder shared that Pacific Power has talked with folks at PSE over the last 2 years, however, that specific methodology does not ring a bell. The company is open to having a more detailed conversation to iron out the nuances of the minor details and see what PSE has to offer.
  - Elijah Cetas – Pacific Power mentioned concern with geographic areas around pockets of assumptions of homogeneity. There can be a risk of too fine granularity in some sense. Community investments and experiences of poverty and health effects could be a positive community bubble in thinking about where geographic investments need to be made and pinpointing community scale impacts. These bubbles can capture exactly where groups are experiencing difficulties to supplement current data and can further refine areas as regions.
      - Alessandra de la Torre– Agreed with Elijah's point about using bubbles of homogeneity to form community investments. For more success in surveys, how much of that outreach is in person at different community events? More in-person visits offer the opportunity to collect more responses in hard-to-reach areas.
        - Mr. Elder detailed previous outreach methods involving EAG members to help distribute surveys, however, that method did not yield successful results. The company is willing to consider other outreach methods in the future.
- What are important considerations for ensuring drivers of different outcomes are clearly identified? The goal is to analyze how trend lines may move differently. If a particular group is having a different outcome than another demographic the company can start to pinpoint drivers of differences.
  - Elijah Cetas – The slide highlighting different percentages in named communities was helpful and can be used to consider how some of those different HICs can track benefits related to CBIs (Community Benefit Indicators). For example, how much EE investments are going into different communities over time and track changes and uptick.
    - Ms. James shared that the company has received different perspectives from each group and got a lot of comments on this approach during the settlement process.
    - Heather Moline – Based on the conversation, it seems large companies and state agencies are thinking of meeting policy as math exercise. Instead, the hope should be that relationship building will lead to being able to identify key neighborhoods. Pacific Power must identify who are the key players in service territories that the company has key relationships with? Without these people it would be impossible to gather CETA data. The pushback is that companies are not doing enough, it is hard to show compliance with policy given the nature of relationships within the service territory. Going forward, think less of how data works and more of highlighting key relationships.

- Mr. Elder acknowledged the importance of the human element; this is not a situation of algorithm and math.
- Heather Moline – if the company does not have a list of key contacts that work with culturally specific groups, that may be viewed as a red flag.
- Mr. Elder called out the communications team as being diligent in communicating with advisory group members. There is always room for illustrating that more in the work the company does and metrics put out relating to VPs.

Integrated Resource Plan

Randy Baker, Director of Resource Planning at Pacific Corp, recapped April's CEIP meeting as a high-level review of the Integrated Resource Planning (IRP) cycle looking at the modeling process and sharing updated portfolio results. The meeting goal is to explain how federal and state policy can significantly drive outcomes for the portfolio and explore Washington specific requirements and modeling. Feedback is critical to this process and there will be additional opportunities to participate.

A key part of federal policy impacting planning for the Clean Energy Transformation Act (CETA) and the CEIP is tax credits. On August 16, 2022, President Biden signed the Inflation Reduction Act into law, aimed at addressing clean energy and climate change. Although the IRA covers many types of credits and activities, overwhelmingly the most vital component for IRP are the two types of tax credits both of which offset the development of non-emitting resources, but in separate ways.

Inflation Reduction Act

- Added resources receive one of two types of tax credit IF in service by 12/31/2037
    - Production Tax Credit (PTC) - based on the megawatt-hours of energy produced by a resource
    - Investment Tax Credit (ITC) - an upfront tax credit on the build costs of a resource
- PTC is a 10-year credit
- The IRP has included these credits on all future resources built through 2037
    - Based on location or development, resources can be eligible for a bonus credit – ONLY the location bonus is applied in modeling

Pacific Power's IRP modeling makes use of the tax break, either ITC or PTC, that is most favorable to a given technology. For example, a production tax credit may provide the most cost-savings for solar energy, whereas an ITC may provide the most savings for a battery or energy storage resource. As discussed previously in this meeting series, the IRP model then accounts for these cost offsets when selecting which resources should be added in its 20-year long-term planning.

On November 21, 2021, the bi-partisan Infrastructure Investment and Jobs Act (IIJA) was signed into law. The law provides substantial funding for transportation and infrastructure spending and offers financing options which may be beneficial to some energy companies and developers. Pacific Power is pursuing these benefits on projects/investments currently on owned items

Infrastructure Investment and Jobs Act

- This law provides grants or other advantageous financing for projects
- Pacific Power is pursuing these benefits on projects/investments currently on owned items
- Modeling challenge:
    - Pacific Power may see reduced cost from developers in the future based on these benefits, but that is not guaranteed
    - From a risk standpoint Pacific Power has chosen NOT to model any benefits to projects related to this act since these benefits are not guaranteed to pass to customers

There is a modeling challenge presented in the fact that the company cannot guarantee that incentives to resource developers will be passed onto customers. Any benefits passed on to customers will appear in the project costs offered to Pacific Power in a future procurement process. Prices have proven to be quite volatile in recent years, and these cost savings and grants, if achieved, can mitigate cost increases due to other factors such as supply issues, materials cost, etc. Consistent with most IRP planning, the treatment of these potential benefits in the IRP is conservative, meaning the company does not assume the benefit will be passed to customers. The primary impact to long-term planning now is therefore applications for existing and owned resources, with additional impacts captured in downstream processes.

The U.S. Environmental Protection Agency (EPA) on May 9, 2024, finalized its Standards and Guidelines for Fossil Fuel-Fired Power Plants, issuing new requirements under rule 111(d). The rule addresses emissions from existing coal-fired power plants and ensure that new combustion turbines are constructed to minimize GHG emissions by requiring those plants to achieve emissions reductions equivalent to those possible through use of carbon capture and sequestration (CCS). For the 2025 IRP and the CEIP, Pacific Power will continue to evaluate a number of options for each thermal resource (coal and gas) on the current system. In recent IRPs, the company has already evaluated carbon sequestration options and carbon capture technologies. The requirements under 111(d) may require that modeling additional options and constraints. The company also models the conversion of coal-fueled to gas-fueled operations, and alternative fuels. Constraints on unit operations imputed by 111(d) will impact which options are modeled and the cost-effectiveness of each option.

In the 2023 IRP and 2023 IRP Updates, Pacific Power modeled early retirement options for gas plants in addition to coal. No early gas retirements were selected, however policy drivers such as 111(d) might contribute to a different outcome in future studies.

Meeting Discussion:

- Jaclynn Simmons – Staff would encourage Pacific Power to review UTC's policy statement on the IRA/IIJA in Docket 240013 posted on 5/03/2024
- Katie Warren – There is potential and existing pushback on proposed legislation, does Pacific Power plan to pushback as well?
    - Randy Baker shared that currently, there is no knowledge of plans to pushback.

WAC 480-100-620.10 statute mandates Pacific Power to run a study for Maximum Customer Benefits. For the Maximum Customer Benefits scenario, like any other sensitivity, the analysis begins with base case assumptions and makes changes appropriate for the new analysis. Outlined below are key changes

for the maximum benefits case proposed for the 2025 IRP and CEIP, which would be similar to the analysis performed for this study in the 2023 IRP:

- Changes in options from a fully optimized system modeled portfolio include:
  - No transmission upgrades in Washington are allowed to be selected
    - Transmission upgrades are often the most cost-effective way and flexible way to bring on needed resources, including renewables. However, increasing community focus for generation and delivery can avoid building potentially disruptive transmission projects in vulnerable areas. There are pros and cons: higher cost, less system reliability but increased local reliability, reduction of wires
  - Requires selection of all Energy Efficiency and Demand Side Management programs regardless of cost
  - The highest forecasted level of customer generation will be included
    - The company assumes a very high rate of private generation develop such as private solar and wind. Any time a customer adds their own generation, it reduces the energy load for Pacific Power customers.
- A portfolio will be developed in the 2025 IRP as outlined above
- Pacific Power is also looking at ways to enhance reporting:
  - Examine typical mix of end uses for key customer types, including vulnerable populations:
    - E.g., Heating, cooling, water heating, refrigeration, cooking, lighting, "always on"
  - Energy efficiency selections in the Maximum Customer Benefits portfolio reduce these end use demands

The primary goals of an IRP portfolio are minimizing cost and risk. Pacific Power has interpreted it as a need to examine what benefits might accrue to customers if cost were no object. This is not to say cost does not matter, but rather that it would be good to understand what additional benefits are available and what would it cost to pursue them.

This analysis results in a new, more expensive, portfolio, but which may help make informed decisions about achievements at a higher cost.

Mr. Baker explains non-energy impacts (NEIs) as an additional benefit, not included in the actual energy cost savings at the end of the day, for participants in energy efficiency programs beyond the energy cost savings. Some of those benefits might be reduced emissions, water savings, comfort or productivity improvements, or reduced risk of utility service disruptions or price spikes.

Pacific Power mapped NEIs to energy efficiency measures for Washington, including additional impacts specified by the Regional Technical Forum.

- NEIs were primarily sourced from a study performed by DNV for Washington. Includes revisions to valuation made with the DSM (Demand Side Management) advisory group in 2022.
- Recently calculated NEI of resiliency for weatherization measures will be included in the 2025 Conservation Potential Assessment.

However, regarding demand response a literature review found no quantifiable NEIs for demand response, even though, Washington staff has directed Pacific Power to account for NEIs for demand response. In the last IRP demand response costs were de-rated by 10% in Washington to reflect non-quantifiable NEIs

NEIs can impact different interests depending on which program or measure is being considered. 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

For the state of Washington, nearly all energy efficiency and demand response are already selected, and capturing NEIs by increasing DSM may prove expensive in future analysis. However, NEIs help the model select which demand side management programs should have top priority.

Meeting Discussion:

- Jaclynn Simmons – Are NEI's being incorporated into the Max Customer Benefit Scenario? If so, how?
    - Mr. Baker shared that the two primary components are NEI measures incorporated into energy efficiency & the 10% discount
- Jaclynn Simmons – Which day will the DNV be presenting in IRP 2-day session?
    - Mr. Baker offered to follow up with that information.

In addition to Demand Side Management (DSM), NEI benefits can accrue to other kinds of resources, including generating resources such as wind and solar renewables. All resources in the IRP are evaluated using the social cost of greenhouse gas emissions (SCGHG) as a cost adder equal to the cost per metric ton of carbon dioxide emissions.

The SCGHG value can be considered a non-energy impact in that it is an externality associated with certain energy resources. The SCGHG is a monetary value of the net harm to society from greenhouse gas emissions. In principle, it includes the value of all climate change impacts, (but not limited to):

- Changes in net agricultural productivity, including
- Human health
- Effects, property damage from increased flood risk natural disasters,
- Disruption of energy systems,
- Risk of conflict,
- Environmental migration,
- And the value of ecosystem services.

Pacific Power has made considerable progress in evaluating NEI benefits and continues to consider improvements in capturing and reporting.

Meeting discussion:

- Jaclynn Simmons – Earlier it was mentioned that no new transmission would be selected. Is this due to the company assuming costs are not an issue?
    - Mr. Baker explained the assumption that while transmission is cost effective, it can be disruptive. There are pros and cons to building transmissions as opposed to engaging in other solutions. It is more expensive not to do transmission, the portfolio operates on least cost, least risk solutions. Under the maximum customer benefit scenario those willing to pay more can avoid the downsides of transmission. Transmission options are always available to the model and the model picks the best feasible option.
    - Elijah Cetas – Is analysis of new transmission separated from existing?
        - Mr. Baker shared that all options supplied to model are considered internal to the model, simultaneously reconductoring opens question of a kind of transmission upgrade that may or may not be included in what is modeled. It is impractical to include them all.

To wrap up, Mr. Baker shared the 2025 IRP public input meeting schedule emphasizing the addition of July meetings and the removal of the November and December meetings.

2025 IRP Upcoming Meeting Dates and Milestones ***Calendar Year 2024[1,2]***
Wed-Thurs June 26-27, 2024 – General Public Input Meeting 4
Wed-Thurs July 17-18, 2024 – General Public Input Meeting 5
Wed-Thurs August 14-15, 2024 – General Public Input Meeting 6
Wed-Thurs September 25-26, 2024 – General Public Input Meeting 7
• September timeframe – Assumptions are locked down for November and December model runs
Calendar Year 2025
• January 1, 2025 - Distribution of the 2025 Draft IRP
Wed-Thurs January 22-23, 2025 – General Public Input Meeting 8
Wed-Thurs February 26-27, 2025 – General Public Input Meeting 9
• March 31, 2025 – Filing of the 2025 IRP

The stakeholder feedback form (SFF) process has recently been updated for the 2025 IRP and will be ramping up as the IRP cycle builds momentum. Typically, SFFs are received in response to topics covered in the public meetings but feedback is encouraged for all IRP related questions or concerns.

Distribution System Planning

Ian Hoogendam, Distribution Systems Planning (DSP) Manager at Pacific Power, introduced the company's plan to advance DSP within Washington service areas. In the last workshop, the group discussed significant changes in the distribution grid, including the integration of modern technologies and generation, increased measurement capabilities, and emerging opportunities for non-wires/nontraditional solutions. Additionally, the DSP team reviewed baseline data of the Washington service area, highlighting key statistics such as substations, circuits, and customer counts. The group also explored the role of SCADA and customer metering technology in enhancing distribution planning efforts. Lastly, Mr. Hoogendam provided an overview of the current state of Distribution System Planning in Washington, focusing on traditional planning processes and what is being required for future distribution system planning advancements by the CEIP settlement condition that was agreed to by all parties.

In fall 2022, Pacific Power filed a Distribution System Plan outlining advancements in Oregon. Since then, the company has been implementing this plan. Here are some key changes to the planning process:

- Nontraditional Solutions:
    - 10-year study horizon
    - Nontraditional solution evaluations and pilots
        - Leveraging energy programs to reduce system loading during peak demand hours, deferring the need to increase system capacity.
    - Modeling multiple technologies/programs as a nontraditional solution
    - Resilience metrics and Community-Based Renewable Energy
- Advanced uses of AMI data
    - Aggregation of AMI data as substitute for SCADA
    - Load allocation for peak load events
    - Forecast disaggregation
    - Model validation
    - Power quality monitoring
- Forecasting advancements
    - Weather normalization
    - Estimating the impact of Solar and Electric Vehicle adoption
- Process improvements
    - Stakeholder engagements
    - Leveraging partnerships for nontraditional solutions

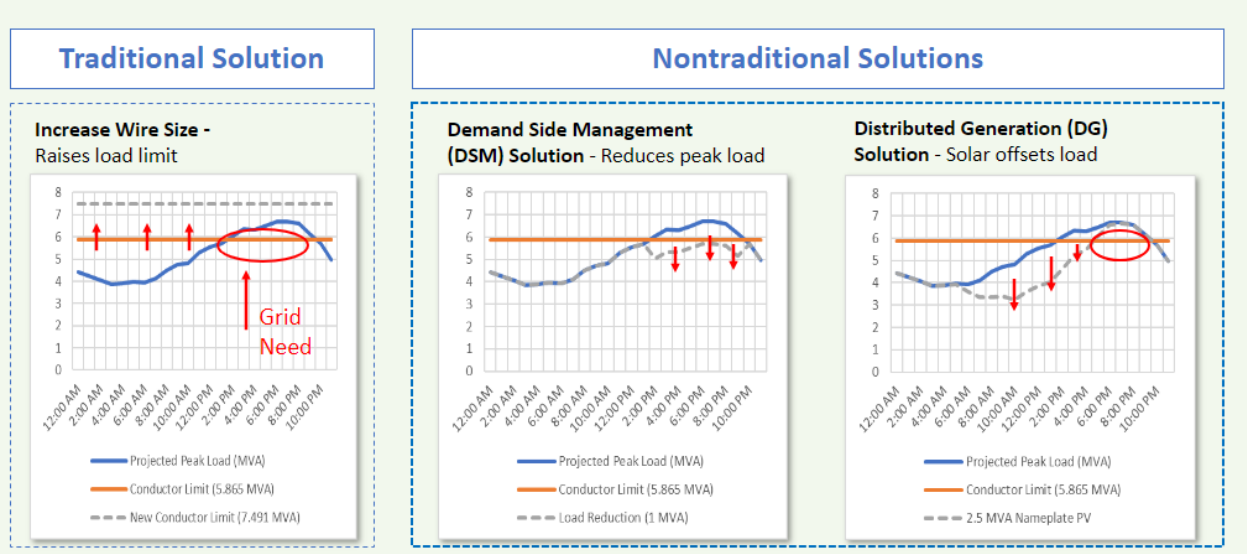
Below is an example comparing a traditional solution to nontraditional solution alternatives.

The left side represents grid need in traditional solutions. The orange line represents the capacity of a wire on the distribution circuit while the blue line represents the anticipated demand being served by that wire on a hot summer day. The demand exceeds the capacity of the wire from about 2PM until late

in the evening. This period, when demand exceeds the capacity of the wire, is called a grid need. The traditional solution involves increasing the capacity of the wire by replacing it with a larger one. The new wire would be sized so that its capacity exceeds the peak demand, with some buffer for future growth.

The two charts on the right represent nontraditional solution alternatives. The first chart on the right represents a demand-side management solution. This approach involves customers signing up for programs that allow the utility to shift demand to off-peak hours, which would result in higher loading during off-peak hours and lower loading during on-peak hours. An example of a DSM solution is a smart thermostat program.

The second chart considers increasing the amount of solar generation on the distribution circuit. In this case, solar alone is insufficient to address the grid need, as the wire remains overloaded in the evening hours when the sun is down. However, a solar solution could be part of a multi-layered approach that includes demand-side management. The optimal and most cost-effective solution is likely a combination of these two nontraditional approaches.



The general process of evaluating and developing nontraditional solutions is based on grid need screening, program feasibility, program effectiveness, nontraditional solution development, and nontraditional solution screening.

Screening Criteria:

- **Cost Threshold:** A grid need must meet two screening criteria before it can be evaluated for nontraditional solutions. First, the cost of the traditional solution should exceed $200,000 for a nontraditional solution to potentially be more cost-effective.
- **Timing:** The second criterion is the timing of the solution. Nontraditional solutions require more time to implement and have greater uncertainty in their effectiveness initially. To allow for this, the company targets grid needs that are 5–10 years in the future, providing sufficient time for implementation and, if necessary, a pivot to a traditional solution.

Feasibility Assessment:

- Once a grid need passes the screening criteria, the company will assess the feasibility of various nontraditional programs in the area.
- A program is considered feasible if the company understands its operational mechanics and have local partners available to assist with implementation.

Impact Estimation:

- The next step is to estimate the potential impact of each feasible program on the grid need.

Solution Development:

- The company will develop solution options combining various programs to fully address the grid need. For example, one option might include solar power combined with home battery control, while another might involve energy efficiency measures and smart thermostat control.

Final Screening:

- Before comparing solutions, a final round of screening is conducted:
    - **Cost-Effectiveness:** Solutions must be cost-effective for both the utility and the customer.
    - **Participation:** The estimated participation in the energy programs must be sufficient to resolve the grid need.

Here are some of the distinct types of energy programs and technologies considered in nontraditional solutions:

Solar Panels:

- Solar panels can help reduce the net load on distribution equipment by offsetting power demand during the middle of the day when solar output is highest.
- Pacific Power collaborates with partners to conduct targeted marketing campaigns, inform customers about available incentives, and connect them with trusted installers.

Energy Efficiency:

- One of the most cost effective and beneficial solutions for the customer and utility.
- Increasing energy efficiency involves focused engagement and marketing to educate customers about incentives and the benefits of improving home energy efficiency.
- Examples of energy efficiency improvements include replacing old appliances with newer, more efficient ones and enhancing home insulation.

Demand Response Programs:

- Demand response programs are more complex and are being increasingly established.
- These programs provide incentives to customers in exchange for allowing the utility to control behind-the-meter devices such as home batteries, smart thermostats, water heaters, and electric vehicle chargers.
- During periods of grid strain, the utility can control these devices to reduce power consumption. For example, the utility could raise the temperature set point on smart thermostats a few degrees during peak demand periods to reduce air conditioner usage.

Partnerships:

- Unique solutions that involve partnering with individual customers or smaller groups of participants.
- Partnerships can encompass a variety of tailored approaches, depending on the specific needs and opportunities within a community.

Pacific Power offers the following customer programs to leverage nontraditional solutions:

Optimal Time Rewards

- Smart thermostat program
    - Smart thermostat rebates through Energy Trust of Oregon
- Water heater program (multi-family only)
    - Initial enrollment incentive
    - Ongoing annual incentive

Commercial & Industrial Demand Response

- Commercial and industrial customers agree to curtail load during peak events in exchange for financial incentives
- Incentives vary by:
    - Average available load for curtailment during product hours
    - Advance notification timing

Time of Use Rate

- On-peak: about 12¢ per kilowatt-hour (kWh)
- Off-peak: about 7¢ per kWh
- First year guarantee:
    - Bill will be no more than 10% more than it would have been under standard rate

DSP is pushing for more transparency in program planning by hosting local and state workshops, leveraging external partners such as Washington Advisory Groups and internal stakeholders such as Clean Energy Implementation Planning, Demand Side Management, Integrated Resource Planning, and Wildfire Mitigation Planning groups. Local workshops aim to display forecasts for area circuits and projected grid needs and review potential traditional and nontraditional solutions. State workshops review DSP processes and strategies and share findings and progress. Additionally, the DSP website is constantly being updated with the latest information on Oregon DSP filings, the DSP map, and other relevant resources. For DSP related questions or concerns, reach out to dsp@pacificorp.com.

CBI metrics are being tracked to increase community efforts and focused investments, increase participation in company energy efficiency and billing assistance programs, improve efficiency of housing stock and small businesses (including low-income housing), and reduce frequency and duration of energy outages. Metrics are based on workshops on energy related programs, number of households or businesses, including named communities, who participate in company energy efficiency programs, and System Average Interruption Data Index (SAIDI), System Average Interruption Frequency (SAIFI), and Customer Average Interruption Duration Index (CAIDI).

Public Comment

There was no public comment

2024 Engagement Opportunities

- Equity Advisory Group Meeting
    - July 11, 2024 (Online) 1pm – 4pm
    - Zoom: https://esource.zoom.us/j/88196579339?pwd=KBUjcPIMrH3m1zotqttIPKAUESjUH1.1
- Vulnerable Populations Workshop #2

    - August 2024 (Online)
    - Time & Date: TBD
- CEIP Engagement Series Meeting #3
    - August 2024
    - Time & Date: TBD