CEP – Community Learning Lab # 4

December 14, 2022

Agenda

10:00 – 10:10 am: Welcome & Meeting Logistics

10:10 – 10:20 am: Previous Clean Energy Plan (CEP) Learning Lab # 3 Recap

10:20 – 10:35 am: PGE's Approach to Community Benefit Indicators (CBIs)

10:35 – 11:05 am: Community Benefits Indicators (CBIs), **iCBI, rCBI, pCBI** in the IRP Modeling

11:05 – 11:40 am: Resilience Update & Potential Resilience Products

11:40– 11:55 am: Previous Integrated Resource Planning (IRP) November Roundtable Recap

11:55 – 12:00 pm: Next Steps & Closing Remarks

Meeting Objectives

- Socialize PGE's approach to Clean Energy Plan concepts.
- Request feedback on PGE's approach.
- Provide progress updates on the evolution of information presented in previous meetings & how community feedback has been considered.
- Share timelines & next steps.

Meeting Logistics


Audio


Microphone


Chat box


Video


Raise Hand


Closed Caption


Mural Board

Operating Agreements

Establishing norms with our communities is foundational to building trust.

To create a **safe space**, we established **common agreements** such as **respect, honoring diversity of thought** and **inclusivity**.

Practice curiosity and **seek to understand different perspectives**.

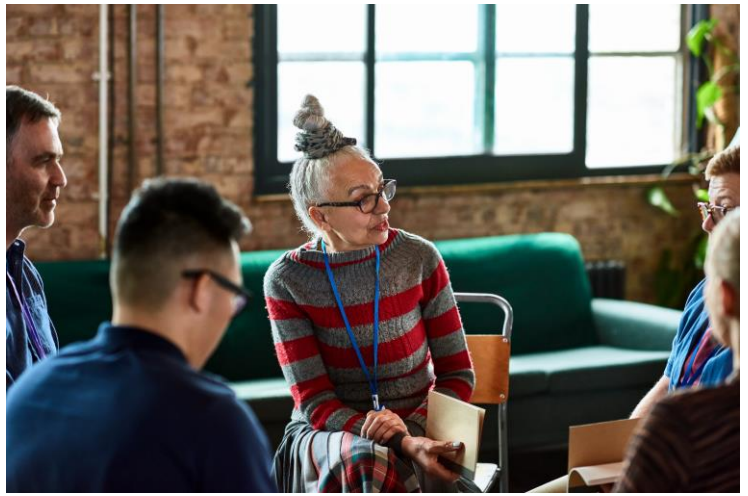
Stay Engaged

Be Willing To Experience Discomfort

Speak your Truth

Expect and Accept Non-closure

Share the Airtime



The courageous conversations framework
By Glenn Singleton and Curtis Linton

Acronym Key

Acronym	
IRP	Integrated Resource Plan
CEP	Clean Energy Plan
CERP	Clean Energy Resource Plan
DSP	Distribution System Plan
NWS	Non-wires Solution
CBRE	Community Based Resource
CBI	Community Benefit Indicator
iCBI	Informational CBI
rCBI	Resource CBI
pCBI	Portfolio CBI
RFP	Request for Proposal
CBO	Community Based Organizations
CSO	Community Service Organizations

CEP Community Learning Lab # 3 Recap

Presenter: Samantha Thompson, Energy Equity Partner, Distribution Resource Planning

CEP- Learning Lab # 4, December 14, 2022

Topics Covered in CEP Learning Lab #3

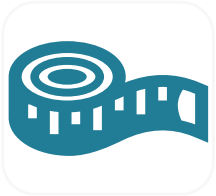
CBRE & CBIs (video, ppt)	• CBRE • CBIs Ranking
Resilience (video, ppt)	• Utility Metrics • Equity Data
Request for Proposal (RFP) 101(video, ppt)	• Potential CBRE RFP

What We Heard

CBI Ranking Priority	
10	Improve efficiency and housing stock in utility service area, including lower-income housing
10	Reduction in number of customers suffering from high energy burden
9	Reduction of GHG emissions
7	Improved access to reliable clean energy

What We Heard

Resilience



Utility metrics to understand & analyze resilience

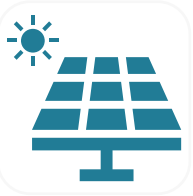
1. Community resilience hub
2. CBOs assist people connecting to resources to improve their resilience during an outage
3. Community heating/cooling center
4. Housing stability key to resilience, consider energy burden, shutoffs, and types of DER solutions

Ways to measure "Zone of Tolerance"

1. Identify number of community organizations, such as service groups and churches in area
2. Find out how long a home holds temperature when power is out
3. Data on heating source
4. Data on quality of housing stock

What We Heard

Potential CBRE-RFP



Examples of CBRE projects

1. Resilience hubs
2. Microgrids
3. Generation assets on public buildings (e.g., schools)

Considerations in the creation of a potential CBRE RFP

- Low income and BIPOC ownership
- The CBRE RFP should be community oriented
- Provide opportunities for non-profits, CBOs and others to lead to community-wealth building
- Innovative community aligned financing / funding models

Opportunities

- Community involvement in the CBRE RFP process
- Potential to make CBREs a part of HB 2021 compliance

PGE's Approach to Community Benefits Indicators (CBIs)

Presenter: Angela Long, Senior Manager Distributed Resources

CEP- Learning Lab # 4, December 14, 2022

UM 2225 Guidance for CBIs

1. The utility should develop interim community-benefit-indicators (CBIs)
   - in coordination with communities served by the utility &
   - with input from stakeholders & Staff

2. At a minimum, the interim CBIs should include at least one metric of
   (1) Informational CBIs (iCBIs),
   (2) CBRE-focused CBIs (rCBIs), &
   (3) Portfolio CBIs (pCBIs)

3. At a minimum, the utilities should use quantifiable & measurable interim CBIs in development of the first CEP/IRP that together address the following CBI topic areas:
   - Resilience (system and community)
   - Economic impacts
   - Health and community well-being
   - Environmental impacts
   - Energy Equity (distributional and intergenerational equity)

Community Benefit Indicators (CBI)

Must be quantifiable and measurable

Resiliency (Customer and System)

Economic

Environmental

Energy Equity

Health & Community Wellbeing

Community Benefit Indicators (CBIs)

Pathways

CBIs are the incorporation of community impacts and benefits into the CEP & **related planning activities, and it is a critical near-term priority for the implementation of HB 2021**

Staff expects utilities to prioritize the development & use of interim CBIs to inform **CBRE analysis, portfolio analysis, implementation actions, and tracking progress as the roadmap** is implemented

IRP Modeling

- Resource CBI - **rCBI**
- Information CBI - **iCBI**
- Portfolio CBI - **pCBI**

Procurement & Programs

- Potential CBRE RFP
- Non-wires Solutions
- Customer programs
- Cost-effectiveness
- HB 3141 (ETO)
- Capital planning

Analysis & Report

- Quantifiable & measurable
- Narrative in Clean Energy Plan
- Progress updates via IRP Update process
- Other reports and business processes (WMP, DSP)

IRP Pathway for CBRE CBIs

Informational CBI iCBI	Resource CBI rCBI	Portfolio CBI pCBI
• Provides transparency into topics of importance to communities • May or may not directly inform portfolio scoring in the IRP	• Informs and tracks progress on specific outcomes achieved through CBRE actions • Should be reflected in the CBRE potential study and in IRP portfolio scoring	• Addresses the impacts of the utility's portfolio on communities • May or may not be tied to CBREs, and should be reflected in IRP portfolio scoring

At a minimum, the interim CBIs should include at least one metric of each CBI type

Questions & Comments

Community Benefits Indicators (CBIs) iCBI, rCBI & pCBI in the IRP Modeling

Presenter: Nihit Shah, Principal Integrated Resource Planning

CEP- Learning Lab # 4, December 14, 2022

Objectives

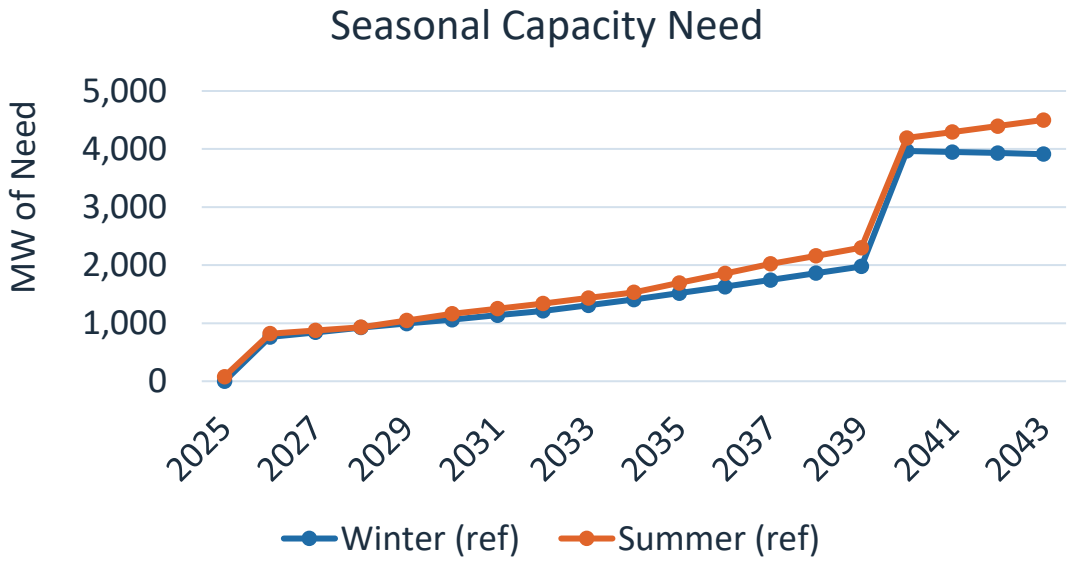
Community Benefit Indicators (CBI)

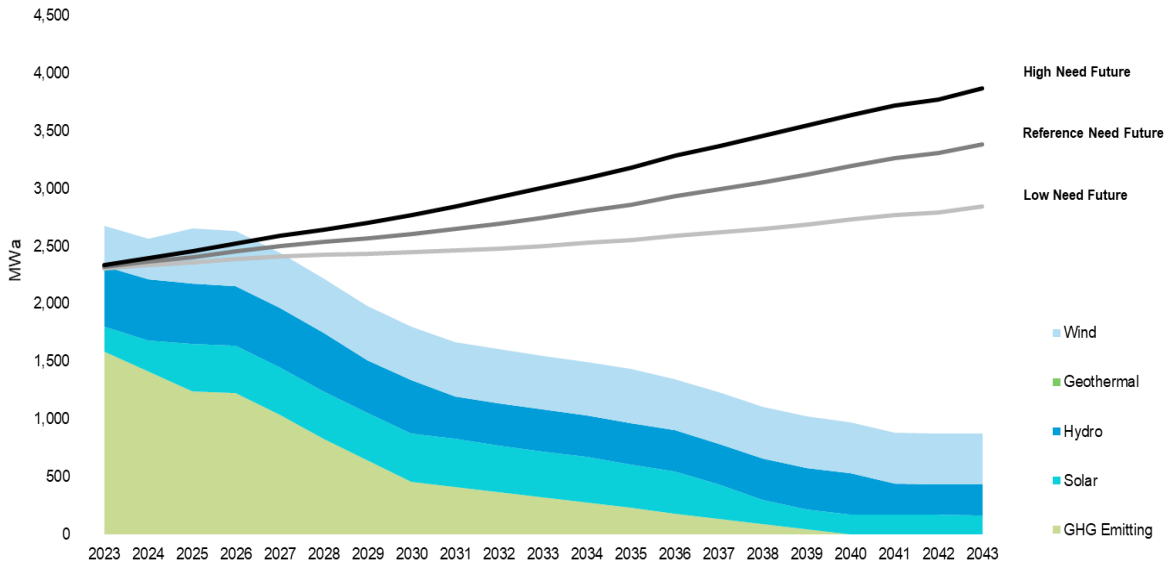
- Resource CBI - rCBI
- Portfolio CBI - pCBI
- Informational CBI - iCBI

How do CBIs impact portfolio analysis?

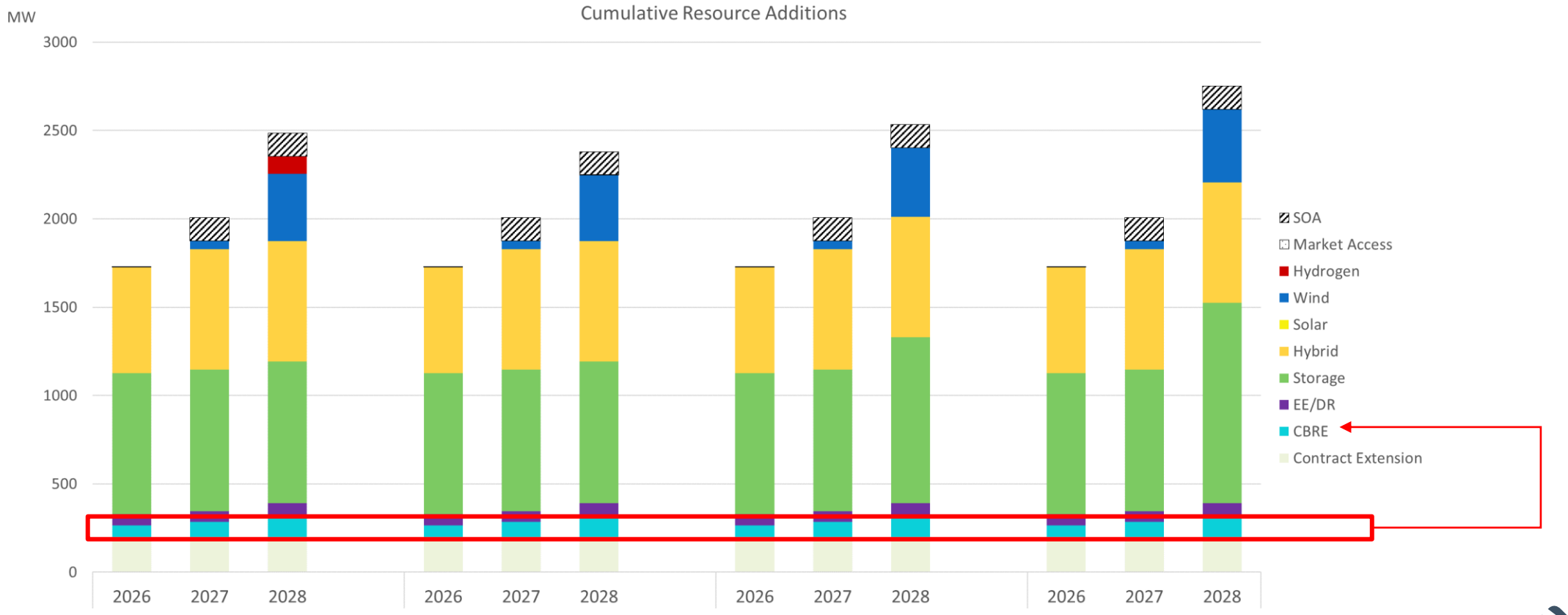
What Need Are We Solving?

Need	Value (DRAFT)
Energy	~155 MWa per year through 2030
Capacity	820MW in summer and 762MW in winter by 2026 growing to 1,162MW in summer and 1062MW in winter by 2030





Example Portfolios – Illustrative



Portfolio 1 **Portfolio 2** **Portfolio 3** **Portfolio 4**

Defining the CBIs for the CEP/IRP

Resource CBIs (rCBI) $/MW value assigned to each CBRE

Similar to the "Conservation Favored"[1] policy of the 1980 NW Power Act, PGE proposes a "CBRE favored" policy in the IRP/CEP to ***include 10% of the CBRE's fixed cost as an rCBI benefit***

Portfolio CBIs (pCBI) Scoring metrics that direct portfolio analysis

Community Benefits: Reflection in all portfolio benefits associated with the CBRE additions

Informational CBIs (iCBI) Data that supports community investment (*does not change results within portfolio analysis*)

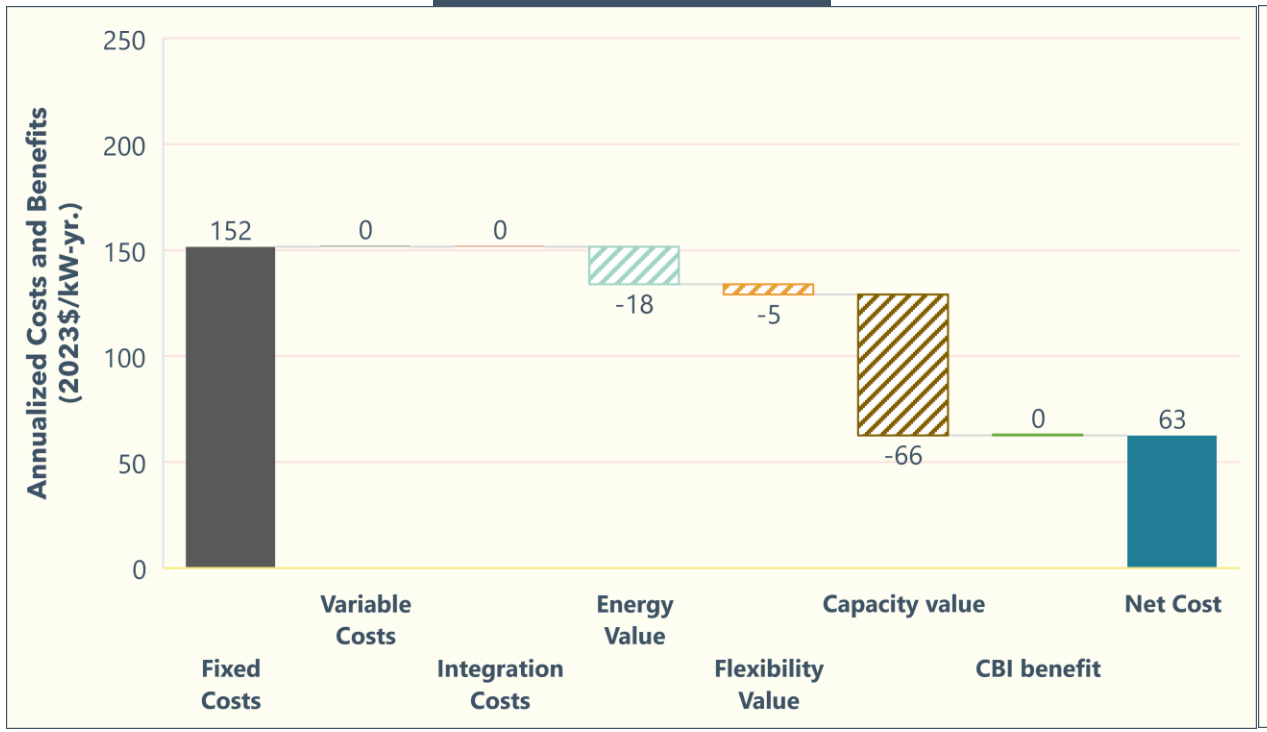
[1] Page 81 of The NW Power Act details "Conversation favored", available online: https://www.nwcouncil.org/media/filer_public/9c/3e/9c3eaa2f-57be-44e4-92b4-14319f2ae3c3/poweract.pdf#page=4

How is the rCBI Applied?

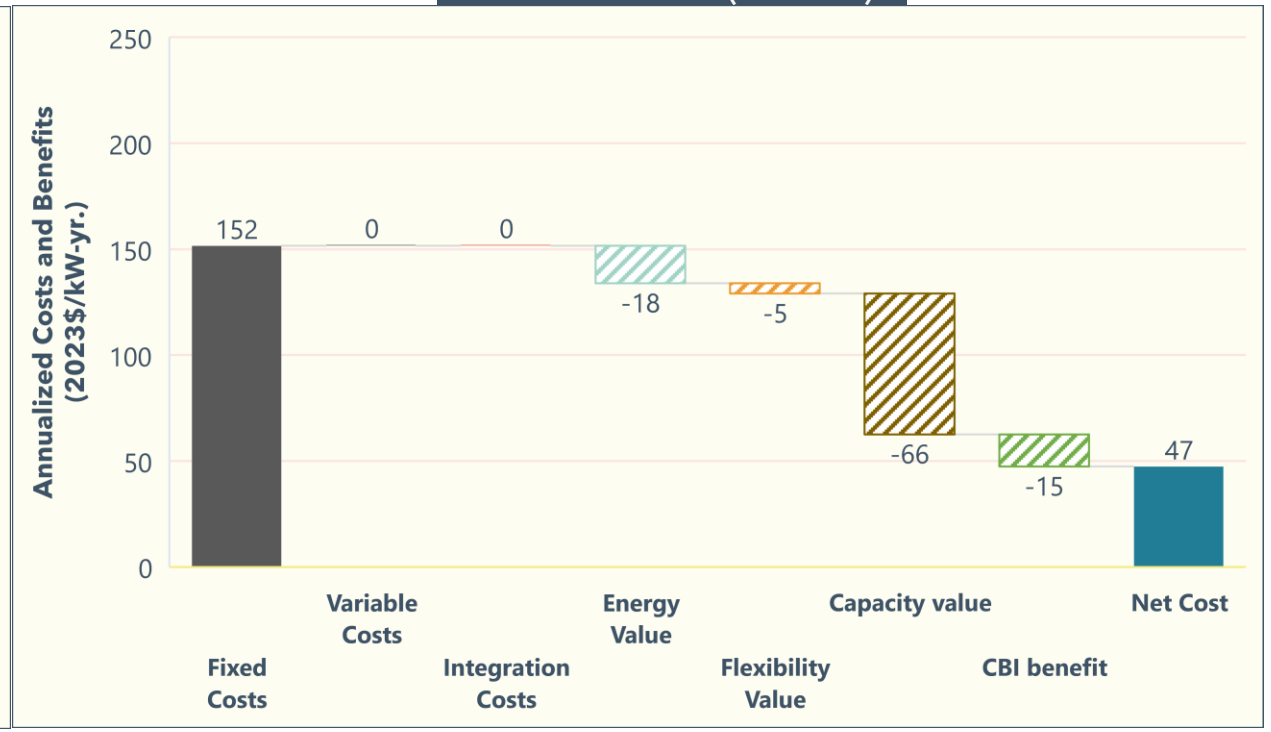
Illustrative Example

- When selecting resources to meet capacity, energy, or flexibility needs, ROSE-E will choose the resource with the lowest net cost
- rCBIs decrease the net cost of the CBRE making it more competitive during resource selection

Resource A



Resource B (CBRE)



Summary

In developing a single portfolio, rCBIs will help CBRE proxy resources become more competitive

CBREs up to the available potential can be chosen
(~150MW of CBREs by 2030)

When comparing portfolios, pCBIs will make portfolios with CBRE proxy resources more attractive

Questions & Comments

Resilience Update

Presenter: Erik Anderson, Sr Principal Policy Integrator, Transmission & Interconnections

CEP- Learning Lab # 4, December 14, 2022

UM 2225 Guidance for Resiliency

The first CEP must include **narrative** which describes its **resiliency-related analysis**, including at minimum:

1. How it was developed
   - in coordination with communities served by the utility, including EJ communities &
   - with input from stakeholders & Staff
2. How resiliency risks were considered, examined & weighted
3. How resiliency opportunities were identified, measured, & weighted
4. The key resiliency-related actions the utility will prioritize in the action-plan window to support its **CBRE acquisition targets**

Approach

Clean Energy Plan (CEP) Guidelines & Definitions

Develop in partnership with our Communities

In our last CEP Learning Lab, we worked on expanding our understanding of

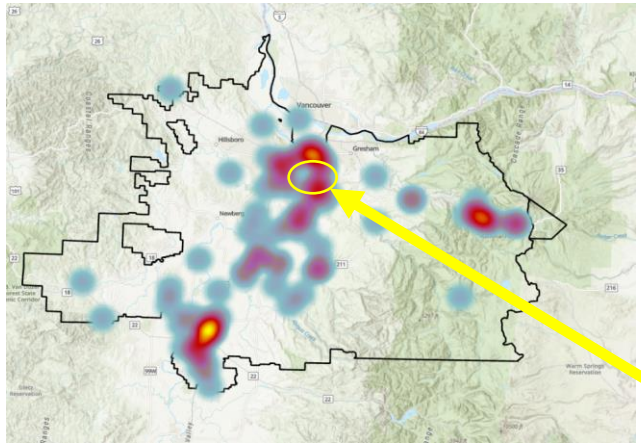
- **Utility Reliability Performance & Risks**
- **Customer "Zone of Tolerance"**

During today's CEP Learning Lab, we will share a potential strategy in development

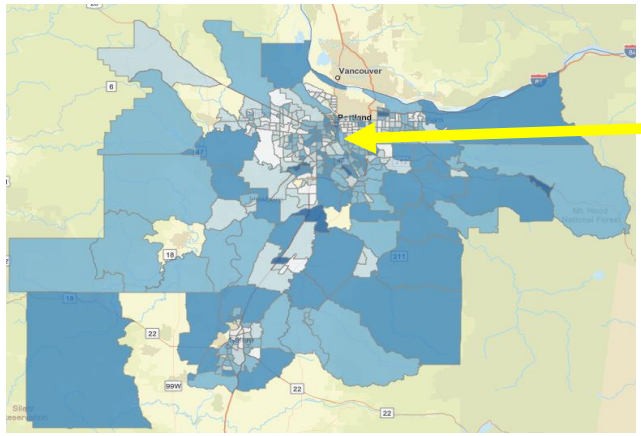
- **Strategies to Support Community Resiliency**
- **Methodology for Prioritizing & Weighting Strategies & Projects**

Resilience Prioritization Layers

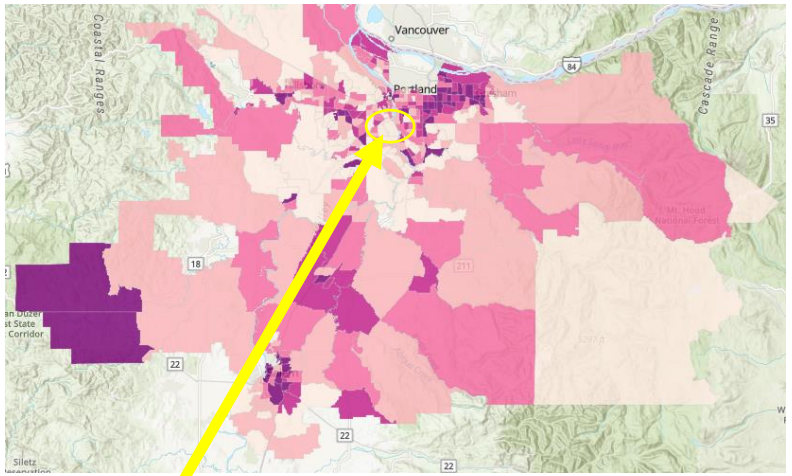
Heat map representing CEMI/CELID
(Darker area = more interruptions)



Percentage of Residents 65+
(Darker area = more older residents)



Equity Index Map
(Darker area = more disadvantaged)



Arleta-Holgate Neighborhood in SE Portland

Quantitative Resilience Analysis

- Identify prioritized risk categorizes by location
- Wildfire-Risk modeling, Climate-Change modeling
- Disadvantaged communities, energy equity mapping, community engagement survey to define Zone of Tolerance
- Historic outage analysis at feeder and premise level (SAIDI, SAIFI, CAIDI, CELIDt, CeMIn)

Strategies to support community resilience

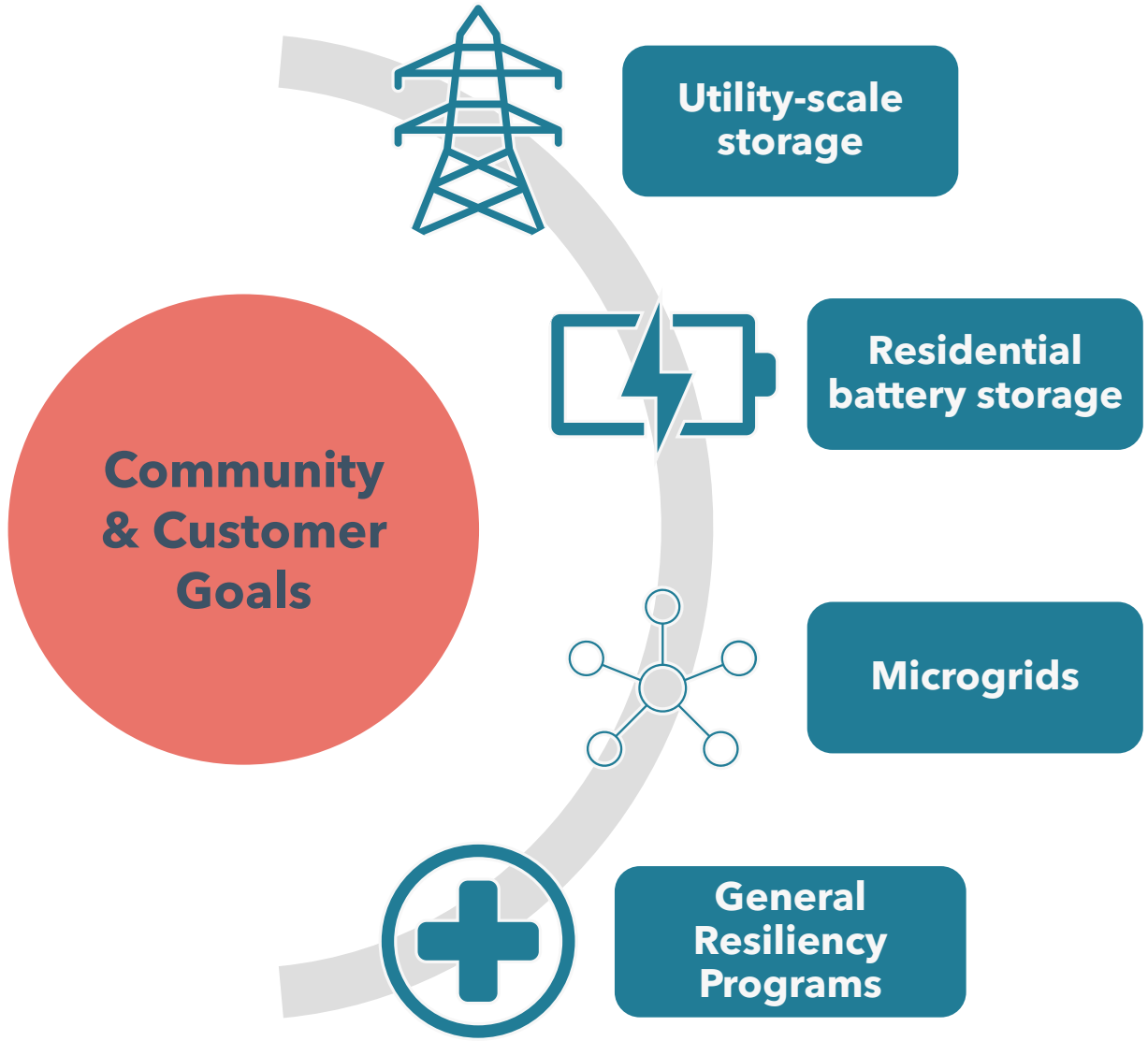
Potential CBRE Program: Community Resilience Hubs

Presenter: Hannah Porter, Staff Product Development Specialist

CEP- Learning Lab # 4, December 14, 2022

PGE Resilience Product Development

Your input is at the heart of everything we do!



Objectives for Designing a CBRE

Provide resilience to the community & critical facilities serving that community	Community voices must be at the center of decisions regarding placement and use of CBREs
Create a high value product that serves the public interest	CBREs must be designed to serve many customers or targeted to serve the most vulnerable customers
Design an accessible solution	Resiliency projects can be expensive & complex, any solution must consider the impacts that a utility project has on all ratepayers

Possible CBRE Design Solution:

Community Resilience Hubs with Microgrids

What is a Microgrid?

"A group of **interconnected loads** and **distributed energy resources** within clearly defined electrical boundaries that acts as a single **controllable** entity with respect to the grid.

A microgrid can connect and disconnect from the grid to enable it to operate in both grid-connected or **island mode.**"

US DOE definition of a microgrid

Typical Features	Example Applications
Energy generation	Single buildings
Energy storage	Campus facilities
Electric vehicle charging stations	Critical facilities

Example # 1

Beaverton Public Safety Center

Single-Premise Microgrid

"As a police facility, we're operating 24/7, and so we need to make sure we have power all the time.

The battery storage gives us a green option as a backup so we're able to continue providing services to the community if there's a power outage."

- Eric Oathes, Captain, Beaverton Police

Beaverton-Public-Safety-Center-1-2020.png (1570×1188) (a-rsolar.com)

Example # 2

Salem Smart Power Center

Multi-Premise Microgrid *Demonstration*

"Our hope is that this battery will be able to help people do the basic things, like keep the refrigerator on or operate their home medical equipment that they need to survive…so that way they can stay in their homes for a little bit longer."

- Trevor Smith,
Public Information Office, City of Salem

Example # 3

FH Faunteroy, Washington D.C.

Community Resilience Hub

Structure	Programming	Operation	Communication	Power
Steady State: Provides regular community programming	**Steady State:** Promotes community preparedness	**Steady State:** Provides regular community programming	**Steady State:** Builds community trust	**Steady State:** Receives energy from power grid
Disruption: Built / enhanced to withstand extreme weather & accommodate extra demand	**Disruption:** Provided community refrigeration, charging, information, communication, etc.	**Disruption:** Enhanced personnel, augmented by volunteers and emergency supplies	**Disruption:** Facilitates emergency communications through trusted channels	**Disruption:** Islands from the grid with back-up power supplemented by a generator

Source: faunteroycenter.org/resilience-hub-implementation

Intended Outcomes of a Community Resilience Hub or Single-Premise Microgrid

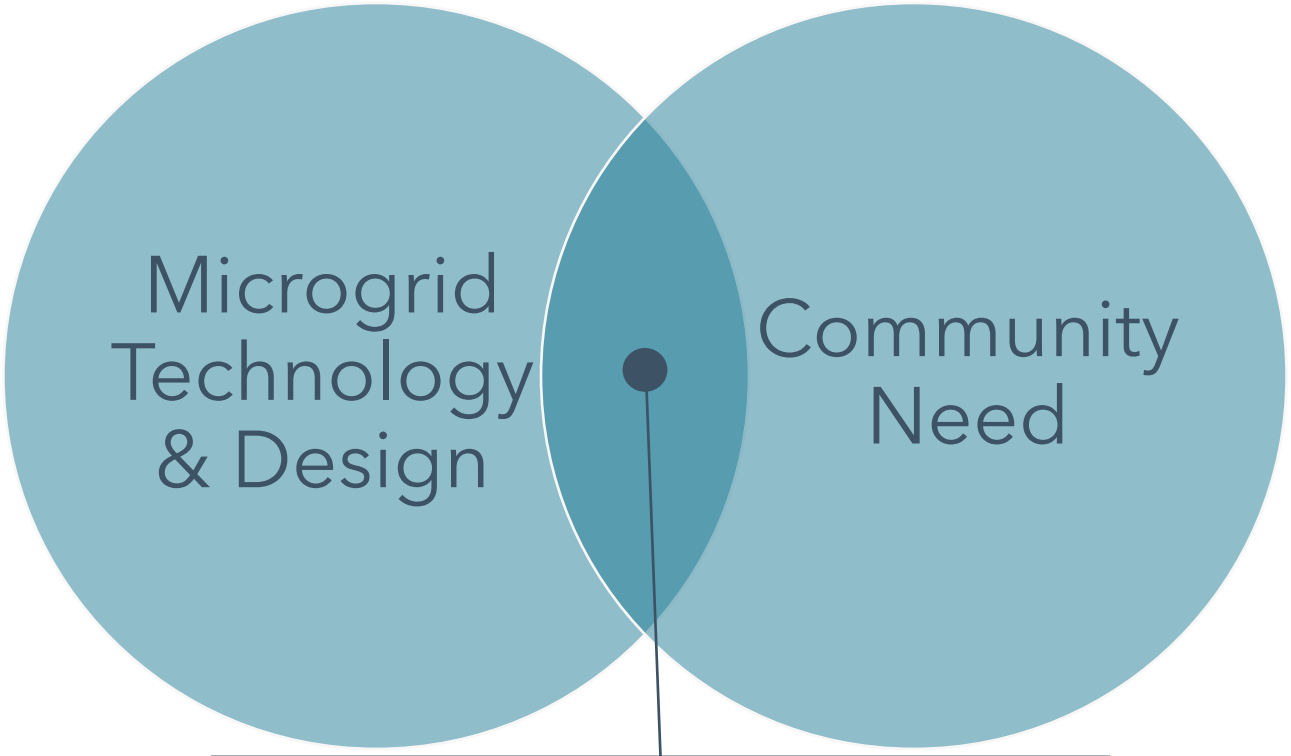
☑	**Provide resilience to the community & critical facilities serving that community**	Microgrid installations are built with **direct community input**, designed to deliver on specific outcomes set by the community.
☑	**Create a high value product that serves the public interest**	Microgrids provide **meaningful resilience** to whole communities or targeted at high-impact customers/critical facilities.
☑	**Design an accessible solution**	Microgrid projects put the **community in partnership with the utility** who can help to overcome financial and implementation challenges.

Mural Exercise Here

Community Resilience Hub Microgrid

- How would a microgrid best serve your community?
- What critical facilities are in your community that would benefit from resilience?
- What features would you most like to see in a community resilience hub?

Defining the community need comes from you!

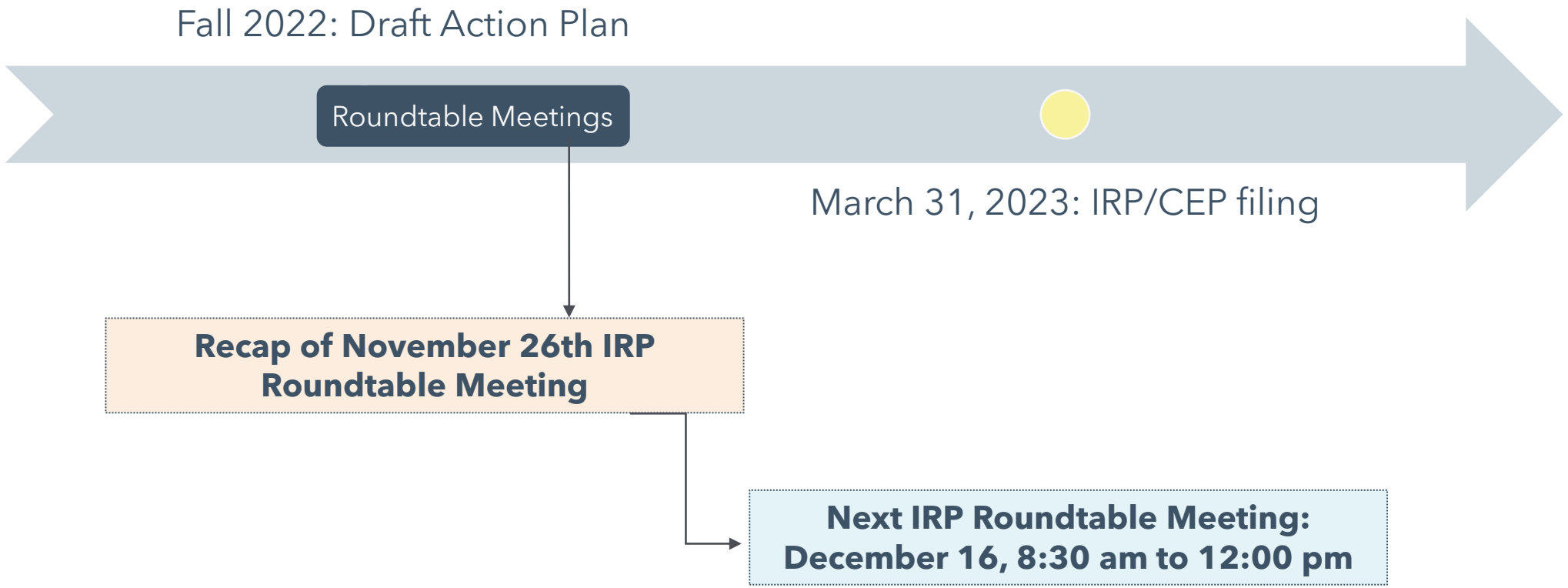


IRP November Roundtable Recap

Presenter: Rainbow Wong, Senior Integrated Resource Planning Analyst, Integrated Resource Planning

CEP- Learning Lab # 4, December 14, 2022

Current IRP Timeline



November IRP Roundtable Meeting Recap

Non-Cost-Effective Distributed Energy Resources

Per Commission Order 20-152

PGE worked with Energy Trust and stakeholders to explore the potential for PGE's portfolio modeling to select incremental energy efficiency that is least cost, least risk, and beyond Energy Trust's baseline forecast.

IRP team described the modeling approach in exploring demand-response and energy-efficient programs that were previously not cost-effective

November IRP Roundtable Meeting Recap

Emissions Forecasting

PGE reports GHG emissions associated with power served to retail customers in Oregon on an annual basis to the Oregon Department of Environmental Quality (ODEQ).

OPUC will use the reported data to determine whether PGE is on track to meet Oregon legislature, HB 2021.

The legislature set requires GHG reduction targets for emissions associated with retail sales of 80% below baseline by 2030 and 100% by 2040 for PGE and other IOUs.

- IRP team is exploring various pathways of reaching HB 2021 GHG reduction goals
- IRP 2023 employs a new modeling methodology to reflect current and future operational practice and to support the annual reporting of GHG emissions for the retail load.

November IRP Roundtable Meeting Recap

CBRE & Community Benefit Indicators Overview

HB 2021 requires utilities to incorporate **Community-Based Renewable Energy (CBRE)** analysis into their Clean Energy Plans (CEPs).

PGE performed a CBRE potential study that is informed by communities, especially Environmental Justice communities, OPUC staff, and stakeholders. The potential study should inform and identify annual megawatt (MW) or megawatt-hour (MWh) targets related to CBRE.

PGE developed three categories of Community Benefit Indicators (CBIs). **Two of which, Resource CBIs and Portfolio CBIs, will be included in IRP portfolio analysis.**

November IRP Roundtable Meeting Recap

Transmission (continued)

PGE Structuring and Origination Team performed a cost-benefit analysis of two transmission expansion proxy paths to meet PGE customers' energy and capacity needs

Two proxy paths were created:

1) Generic Proxy Transmission (Tx Proxy) that assumes access to solar and wind resources in Desert Southwest and Wyoming, respectively, &

2) South of Allston Expansion (SOA) that assumes an increased transfer capacity of PGE's share in SOA via upgrade in 2027.

ROSE-E is employed to select the least-costs set of resources to meet energy and capacity needs from amongst the transmission expansion options.

November IRP Roundtable Meeting Recap

Portfolios

IRP team described the process of portfolio analysis to derive a **Preferred Portfolio** through the Resource Capacity Expansion Model, ROSE-E

Portfolio construction
Fixed set of resource decisions set in all scenarios, customer actions, targeted policy, emerging technology, transmission, optimization of cost, and accelerated decarbonization

Resource buildout
Different features of the portfolios result in multiple resource buildouts

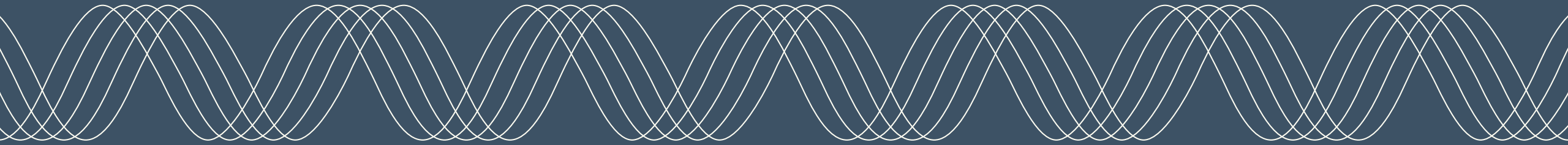
Portfolio scoring
Each portfolio is evaluated across all resource buildouts to develop a portfolio score

Preferred portfolio
Derived from finding a portfolio that balances cost, risk, and community-based indicators

Topics to be Discussed in December 16 at IRP Roundtable

- Transmission (continued)
- Emissions Forecasting (continued)
- Draft Portfolio Results
- Scoring (with pCBIs)

Next Steps & Closing Remarks



Next Steps and Closing Remarks

Please share your feedback via our survey

Next CEP Learning Lab will be **Thursday, January 19 from 10:00am – 12:00pm**

Please visit our new CEP web page at Clean Energy Planning (CEP) | Portland General Electric

For more information or if you have questions, please email us at CEP@pgn.com

Let's meet the future together.