Equity in the Integrated Resource Plan

Public webinar

June 6, 2024

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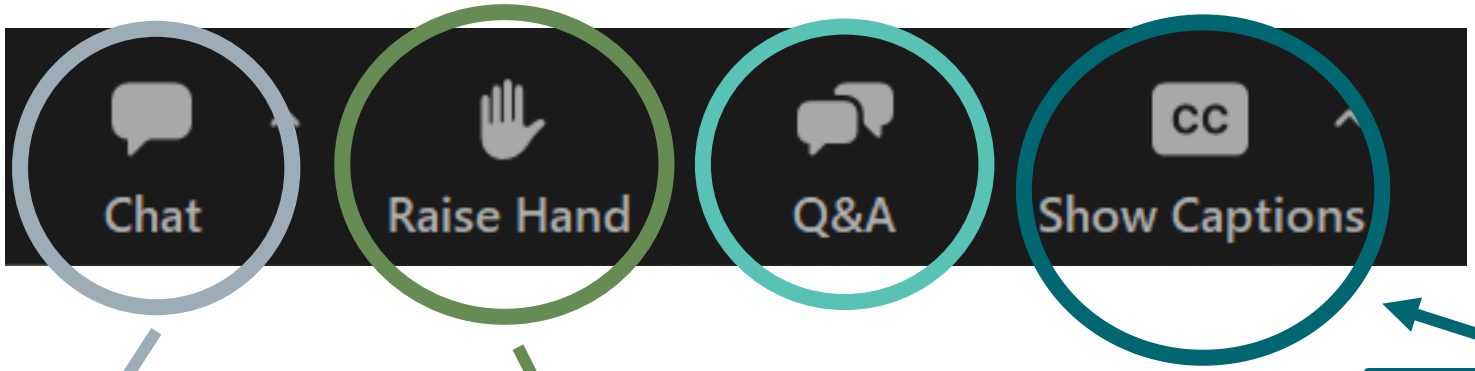
Use the Q&A tool to ask written questions throughout the webinar



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During the public comment period, raise your hand if you would like to make a verbal comment

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Facilitator requests

- Engage constructively and courteously towards all participants
- Respect the role of the facilitator to guide the group process
- Avoid use of acronyms and explain technical questions
- Advisory group members are encouraged to prioritize public input
- Use the Feedback Form or email irp@pse.com for additional input to PSE
- Aim to focus on the webinar topic
- Public comments will occur after PSE's presentations

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Safety moment

June is National Safety Month – safe home tips

- Never leave sharp objects or utensils misplaced or unattended.
- Ensure electrical cords are safely tucked away.
- Take precautions with flammable liquids, chemicals, and anything producing fumes.
- Always install stable and sturdy railings on both sides of the stairs.
- Check smoke detectors regularly and replace the batteries at least once a year.

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Today's speakers

Sophie Glass

Facilitator, Triangle Associates

Troy Hutson

Director, Energy Equity, PSE

Brian Tyson

Manager, Clean Energy Planning and Implementation, PSE

Alexandra Karpoff

Energy Resource Planning Analyst, PSE

Tyler Tobin

Senior Energy Resource Planning Analyst, PSE

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Agenda

Time	Agenda Item	Presenter / Facilitator
2:00 p.m. – 2:03 p.m.	Introduction and agenda review	Sophie Glass, Triangle Associates
2:03 p.m. – 2:07 p.m.	Welcome and engagement overview	Brian Tyson, PSE
2:07 p.m. – 2:15 p.m.	Energy equity program overview	Troy Hutson, PSE
2:15 p.m. – 2:25 p.m.	Equity in the Integrated Resource Plan (IRP)	Brian Tyson, PSE
2:25 p.m. – 2:45 p.m.	Benefits and burdens of generic electric resources	Alexandra Karpoff, PSE
2:45 p.m. – 3:05 p.m.	Electric portfolio benefits analysis improvements and Maximum Customer Benefit sensitivity	Tyler Tobin, PSE
3:05 p.m. – 3:20 p.m.	Gas portfolio equity analysis	Brian Tyson, PSE
3:20 p.m. – 3:30 p.m.	Next steps and public comment opportunity	Sophie Glass, Triangle Associates
3:30 p.m.	Adjourn	All

Welcome

Brian Tyson

Manager, Clean Energy Planning and Implementation, PSE

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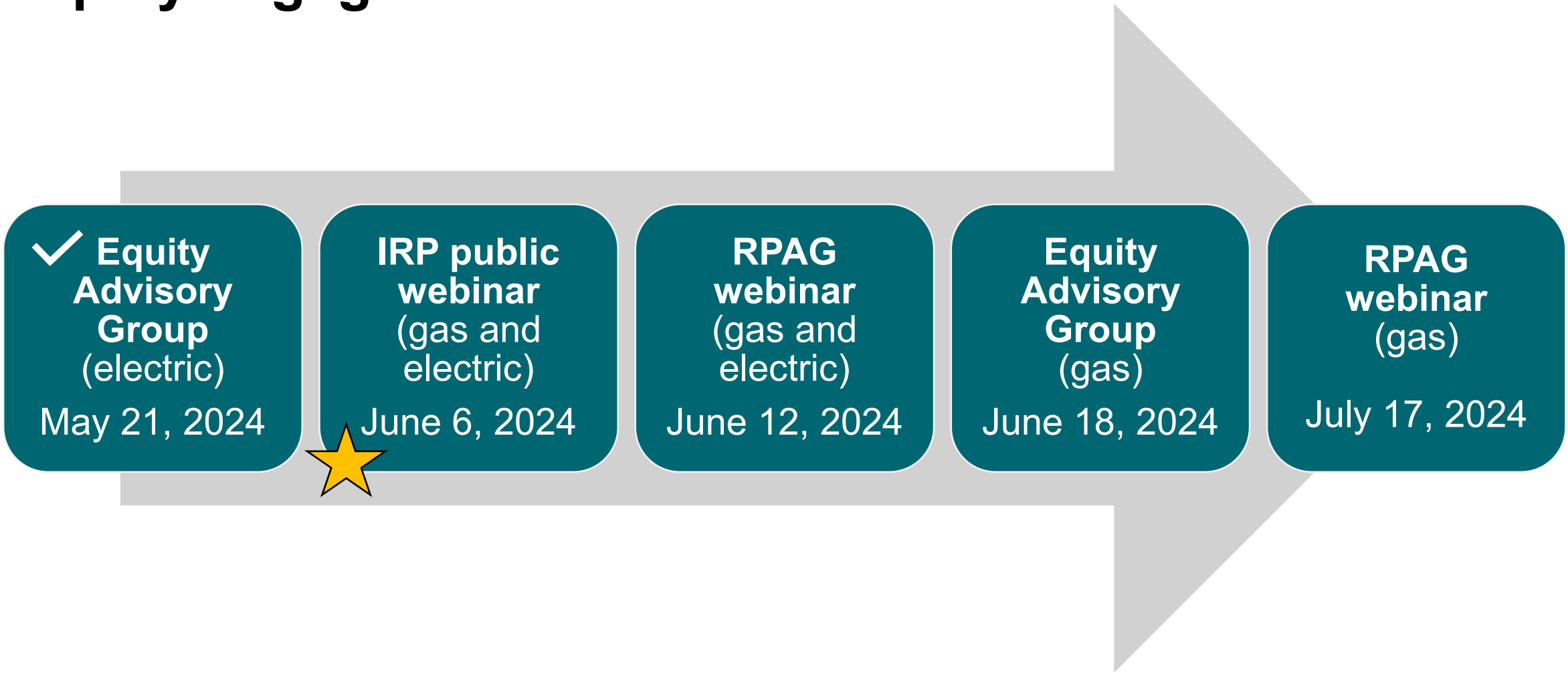
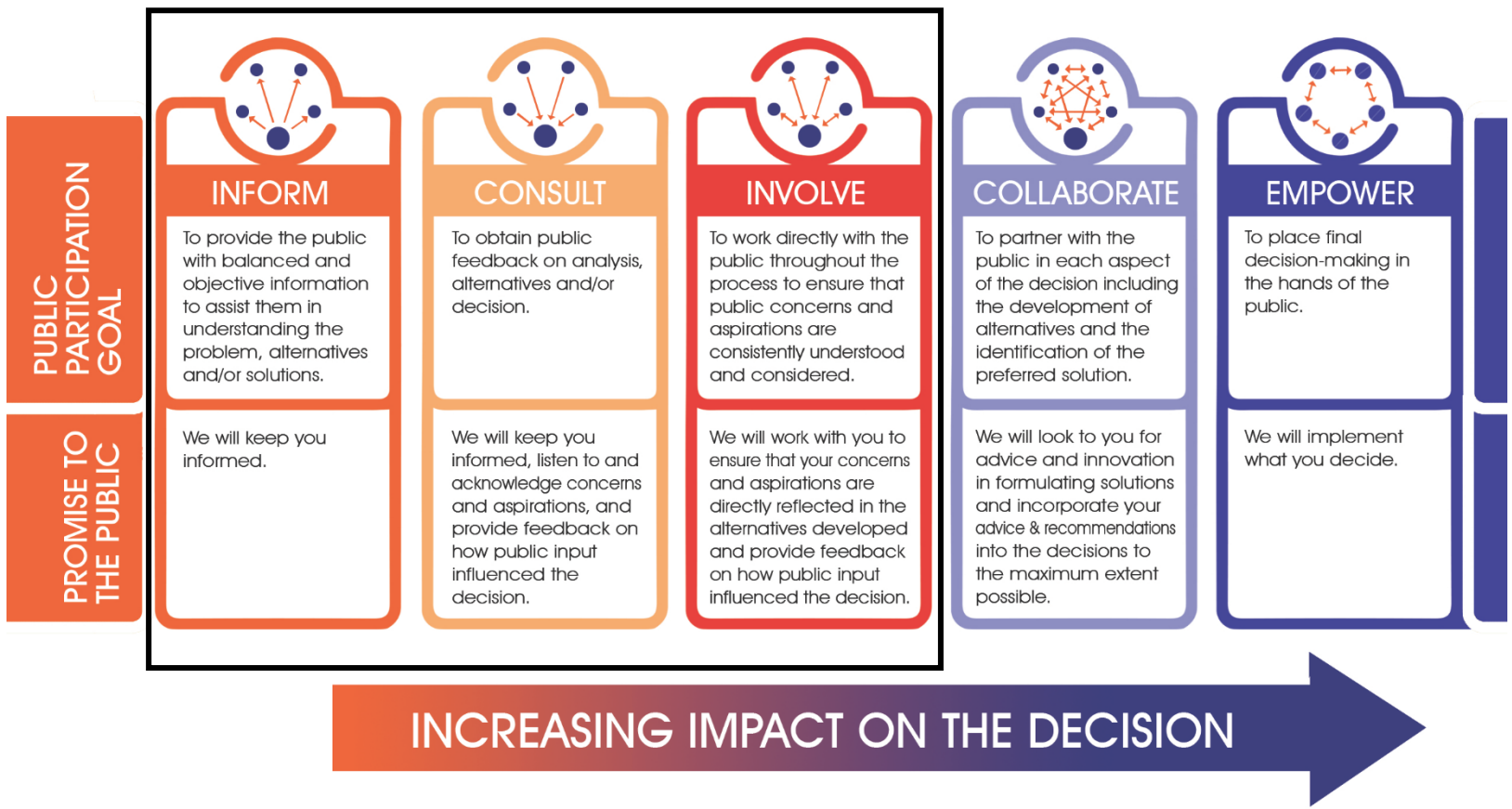
Equity engagement



IAP2 Spectrum



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Energy Equity Program

Troy Hutson

Director of Energy Equity, PSE

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Energy Equity Strategy

Key Outcomes

- Meaningful engagement with communities, resulting in equitable and streamlined clean energy project implementations
- Clean energy benefits are distributed to named communities
- Energy equity incorporated in PSE's processes
- Energy equity maturity measurably improves across enterprise

Mission

Connect energy equity to 2030 and 2045 goals, ensure compliance and provide consistency and alignment across PSE

Strategic Goals

- Meet regulatory commitments
- Operationalize Equity
- Strengthen Partnerships and Enhance Engagement

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Energy justice framework

Recognition

Requires an understanding of historic and ongoing inequalities and prescribes efforts that seek to reconcile these inequalities

Procedural

Focuses on inclusive decision-making processes and seeks to ensure that proceedings are fair, equitable, and inclusive for participants, recognizing that marginalized and vulnerable populations have been excluded from decision-making process

Restorative

Utilizes regulatory government organizations or other interventions to disrupt and address distributional, recognitional or procedural injustices and to correct them through laws, rules, policies, orders and practices.

Distributional

Distribution of benefits and burdens across populations. Aims to ensure marginalized and vulnerable populations do not receive inordinate share of the burdens or are denied access to benefits

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Equity in the customer journey

Customer relationships

- Focused and extensive direct engagement with customers in named communities
- In language experience (online, in-person)
- “Meet them where they are”

Billing

- Bill Discount Rate (BDR)
- Emergency bill assistance
- Arrearage management (coming soon)
- Climate Commitment Act bill credits

Programs

- Weatherization assistance
- Income-qualifying energy efficiency upgrades
- Income-eligible community solar
- Home energy generation and storage incentives
- Home Energy Lifeline Program (HELP)

Watch our Ask an Expert webinar to find out more

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Equity in energy planning and delivery

Resource acquisition

- Requests for proposals
- Equity considerations integrated into project selection

Customer programs

- Program ideation and design
- Program development and delivery

Delivery system

- Needs assessment
- Community engagement
- Clean energy resource integration
- Project implementation
- Service reliability
- Equity advancement

Integrated Resource Plan

- Customer engagement
- Generic resource selection
- Maximum customer benefit scenario
- Evaluate and consider customer benefits and burdens

Facility design, siting, and construction

- Community engagement
- Energy system resiliency

Clean Energy Implementation Plan

- Specific actions
- Customer programs goals and targets
- Equitable distribution of burdens and benefits

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Equity in Resource Planning (IRP)

Brian Tyson

Manager, Clean Energy Planning and Implementation, PSE

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PSE has two utilities

Electric utility

- Used for heating, cooling, lighting, cooking and general power
- Current sources include:
  - Coal
  - Natural gas
  - Hydroelectric
  - Solar and wind
- CETA applies to the electric utility only

Gas utility

- Sources include natural gas and renewable natural gas
- Hydrogen is currently being piloted
- Used for space heating, cooking and water heating

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Overview of resource plans

All resource plans are updated or refiled biennially.

Integrated Resource Plan (IRP)

- 20+ year resource plan, updated every two years, for Electric and Gas
- Identifies long-term needs and resources

Clean Energy Action Plan (CEAP)

- 10-year strategy for clean energy supply
- Filed jointly with IRP

Clean Energy Implementation Plan

- 4-year roadmap for clean electricity
- Includes targets and actions

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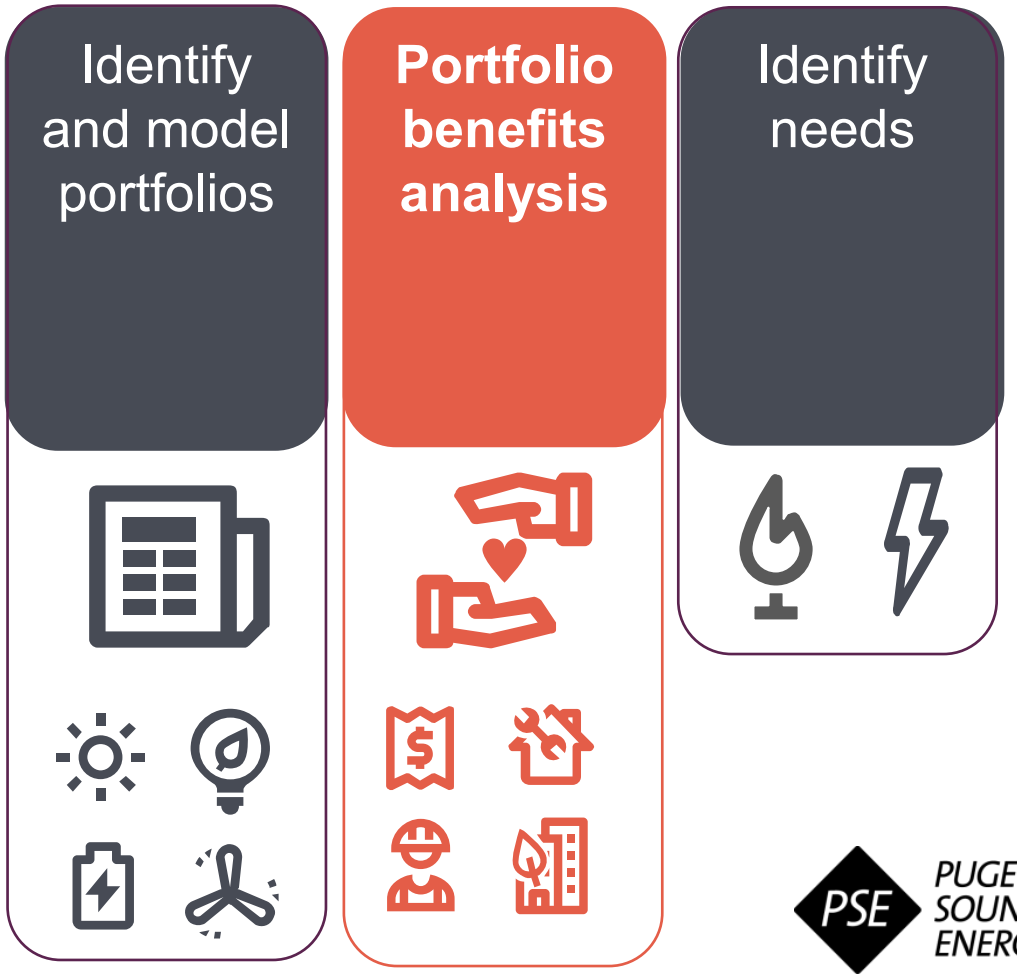
Integrated resource plan (IRP) process

Resource planning (IRP) activities

Gather data

- What resources can serve our customers?
- Where would the resources come from?

Engage interested parties



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Integrating equity into resource planning

Previous engagement (2022/23)

- Engaged EAG and IRP parties in portfolio analysis design
- Used portfolio benefit analysis to inform selection of the 2023 electric utility preferred portfolio
- Initiated conversations regarding gas utility next steps

What we heard

- General support for the portfolio benefits analysis concept
- Interest in a cost-benefit analysis (incorporated)
- Importance of understanding benefits and burdens (discussing today)
- Interest/concern regarding weighting benefit categories and inherent trade-offs (considering, informed by today's discussion)
- Interest in adding a climate change resilience indicator (considering through CEIP process)

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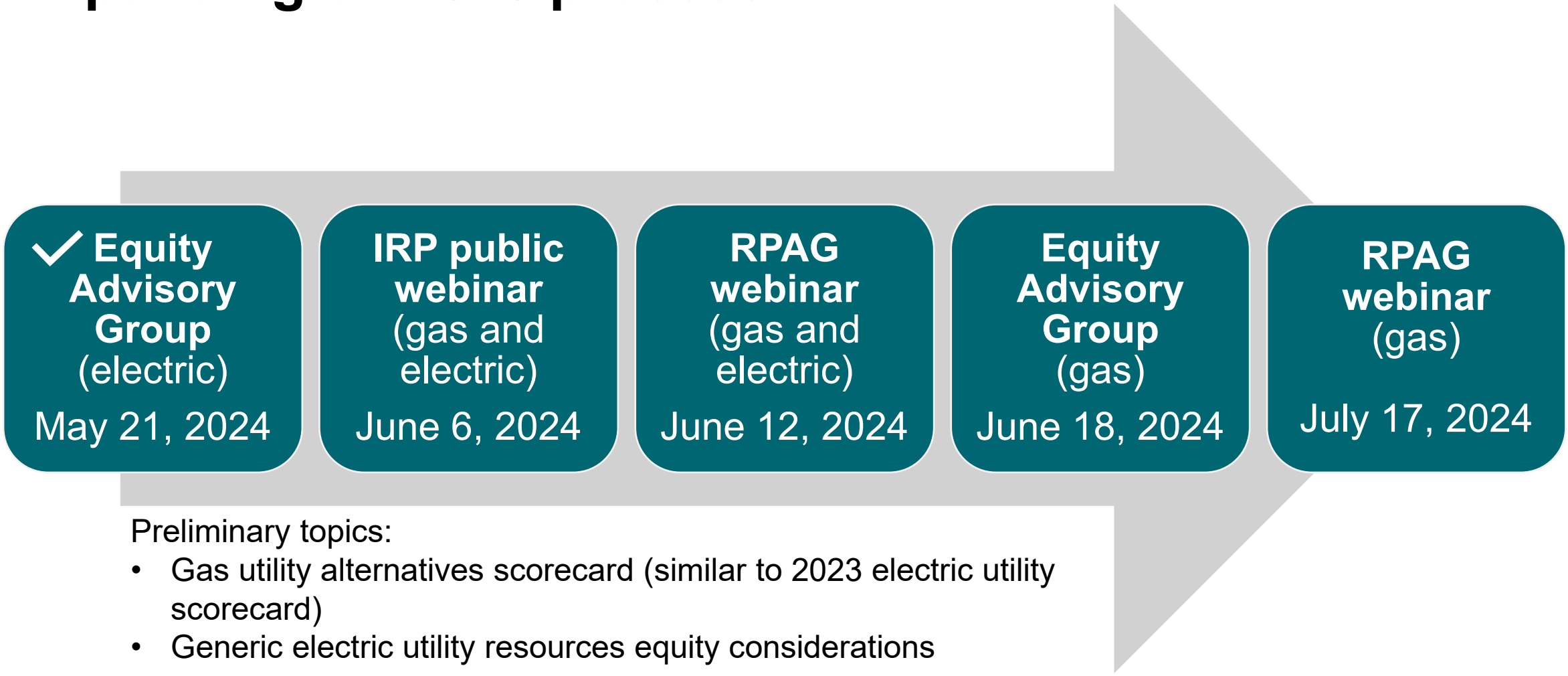
Expanding on 2023 process



Preliminary topics:

- Gas utility alternatives scorecard (similar to 2023 electric utility scorecard)
- Generic electric utility resources equity considerations

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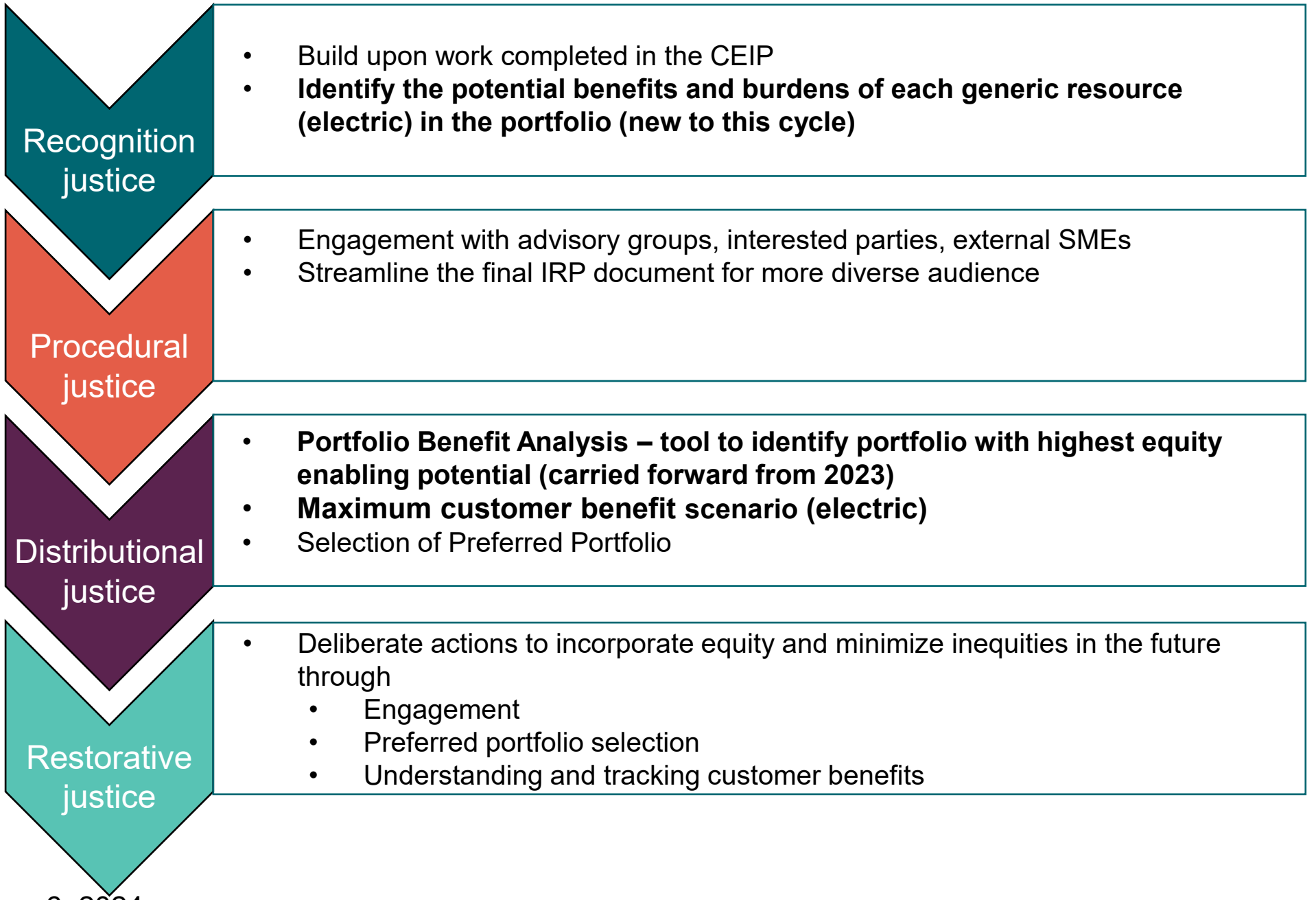
2025 IRP Energy Justice Core Tenets



- Build upon work completed in the CEIP
- **Identify the potential benefits and burdens of each generic resource (electric) in the portfolio (new to this cycle)**

- Engagement with advisory groups, interested parties, external SMEs
- Streamline the final IRP document for more diverse audience

- **Portfolio Benefit Analysis – tool to identify portfolio with highest equity enabling potential (carried forward from 2023)**
- **Maximum customer benefit scenario (electric)**
- Selection of Preferred Portfolio

- Deliberate actions to incorporate equity and minimize inequities in the future through
  - Engagement
  - Preferred portfolio selection
  - Understanding and tracking customer benefits

Benefits and burdens of generic electric resources

Alexandra Karpoff

Energy Resource Planning Analyst, PSE

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Today's feedback questions

- **What do you think of the proposed approach to evaluating benefits and burdens of generic electric resources?**
- **Are there other considerations you would like to see included?**

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2025 IRP: Deepening our understanding

How do we further address potential burdens & benefits in our portfolios?

Suggested Approach

Assess potential burdens & benefits of **generic resources**

Merits:

- Qualitative considerations
- Location considerations (to an extent)
- Furthers recognition justice

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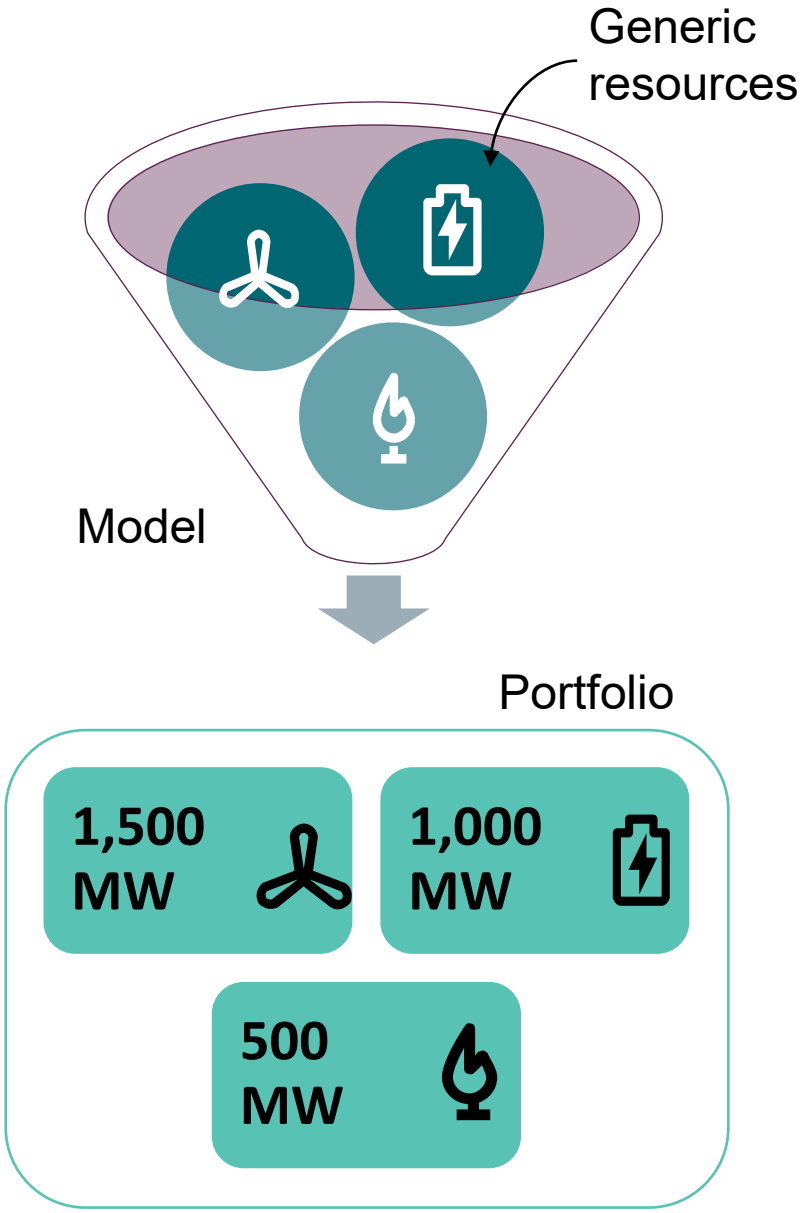
Generic resources

What is a generic resource?

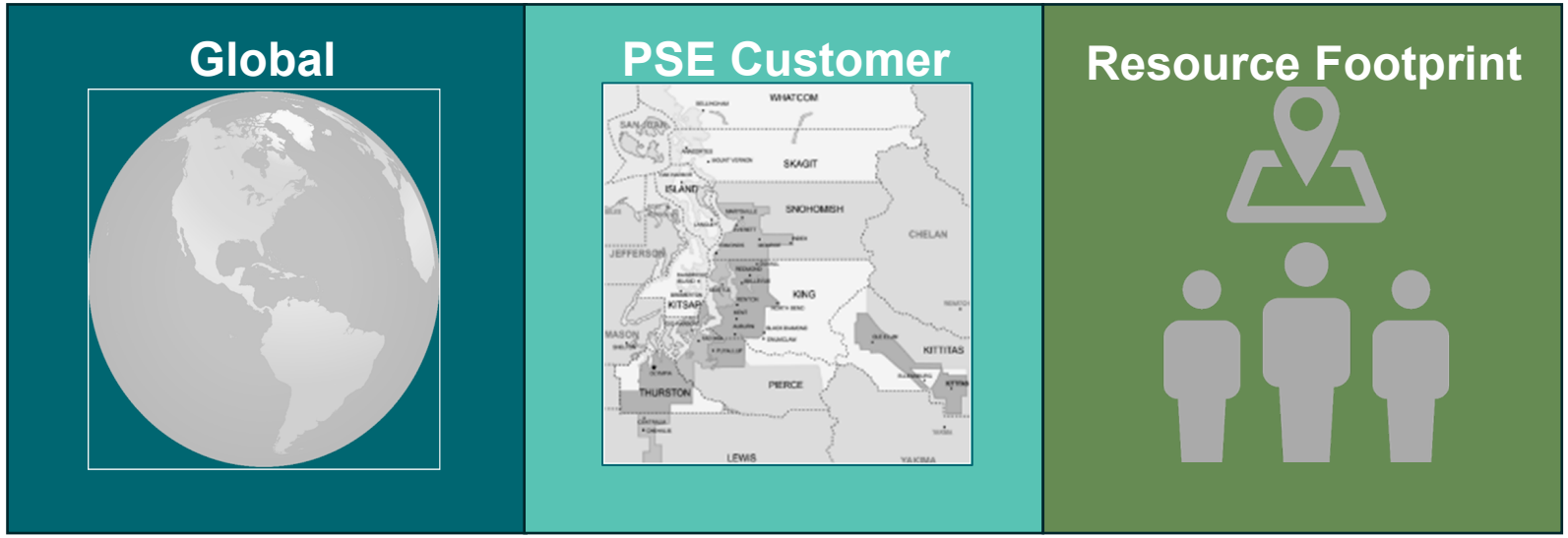
- A generating (e.g., wind) or storage (e.g., battery) resource
- Generic resources are place holders to help us model and plan for future customer needs
  - **No specific site/location associated**
- A portfolio is a mix of generic resources
  - Optimal size in megawatts (MW) for each type
  - Optimal schedule over time for adding each type



Methods to assess burdens and benefits

1. Reviewed existing literature
2. Identified equity metrics
3. Will use metrics to guide impact assessment

Generic Resources Burdens & Benefits Assessment



Global scale metrics

Burdens and benefits

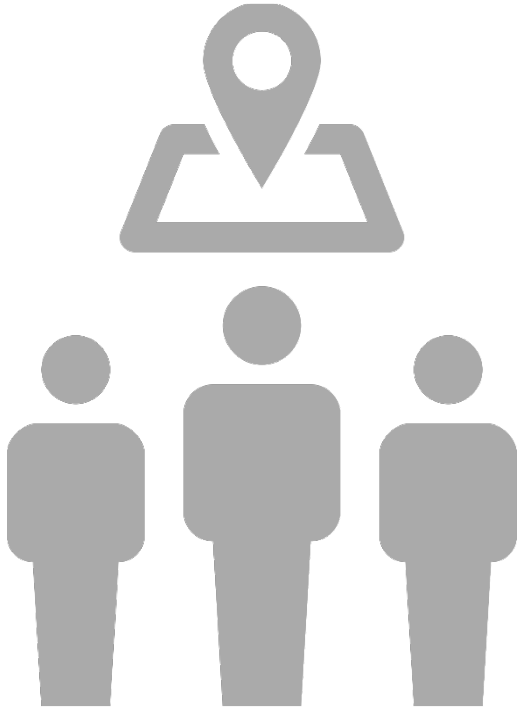
- Green house gas emissions (emitting / non-emitting)
- End of life effects

PSE customer scale metrics

Burdens and benefits

- Participation in clean energy programs
- Home comfort
- Frequency and duration of outages
- Access to reliable clean energy
- Energy cost burdens

Resource footprint scale metrics



Burdens and benefits

- Sited in a disproportionately impacted community
- Local energy serviced provided
- Change in land use/viewshed
- Change in noise exposure
- Community safety
- Outdoor air quality
- Community health
- Creation of jobs
- Decommissioning effects
- Wildlife & plant community impacts

How will we use this assessment?

Results

1. Will be presented in future resource planning documents
2. Inform the Portfolio Benefit Analysis
3. Assist in preferred portfolio selection

Next steps

- Incorporate feedback
- Perform assessment of each generic resource technology

Benefits of approach

- More comprehensive approach to building an equity-enabling portfolio
- Incorporate qualitative & location-based considerations

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Electric Portfolio Benefits Analysis

Tyler Tobin

Senior Energy Resource Planning Analyst, PSE

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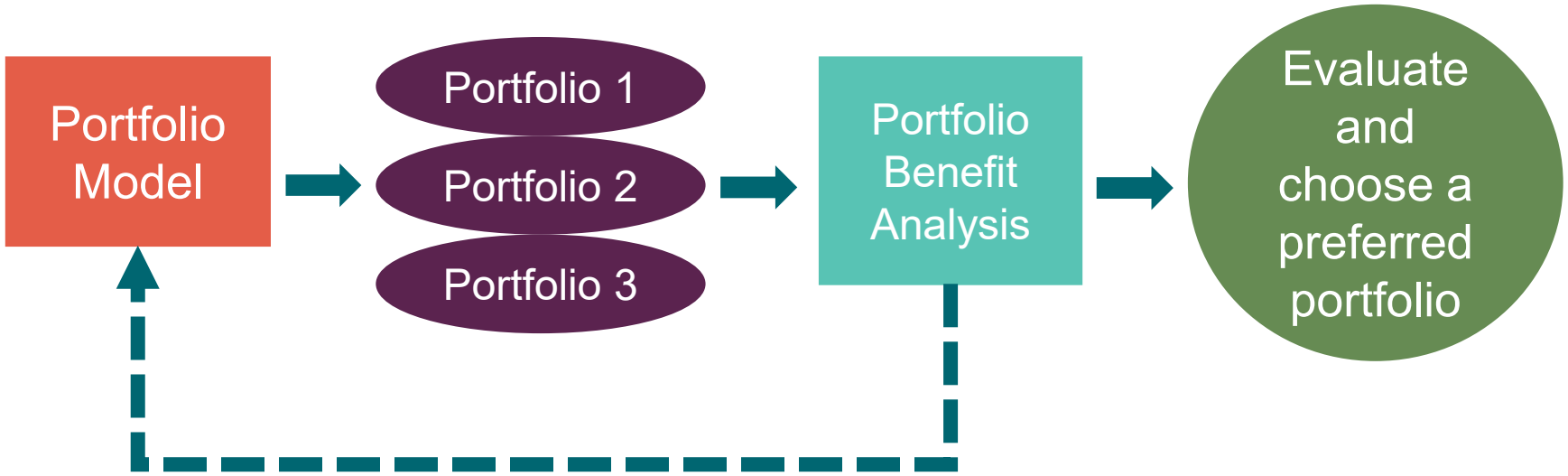
Distributive justice

Portfolio Benefits Analysis

Objective: to develop a tool to allow us to see which portfolios developed in the IRP modeling are the most “equity enabling”



Feedback from the 2023 Electric Progress Report

Feedback	Response
Uncertainty over conversion from raw data to portfolio equity score	Created generic resource scoring system to more transparently allocate burdens and benefits to resource types
Inability to incorporate qualitative burdens and benefits	Binary scoring (0,1) allows for qualitative metrics
Portfolio scores were dependent upon which portfolios were included in the study	Moved to an absolute portfolio score, so every portfolio is independent of one another
Incorporate portfolio benefit scoring as a cost metric into the portfolio model (Aurora)	Retained a post-process approach to keep a clear division between economic and equity modeling
Concerns over metric weighting	Incorporated more metrics to reduce influence of any related metrics, retained 'unweighted' methodology

Feedback from: 2023 EPR Portfolio Benefit Analysis Drop-in Sessions

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Portfolio Benefit Analysis Updates

Burdens and Benefits Assessment

Informs generic resource equity measures

Portfolio Model

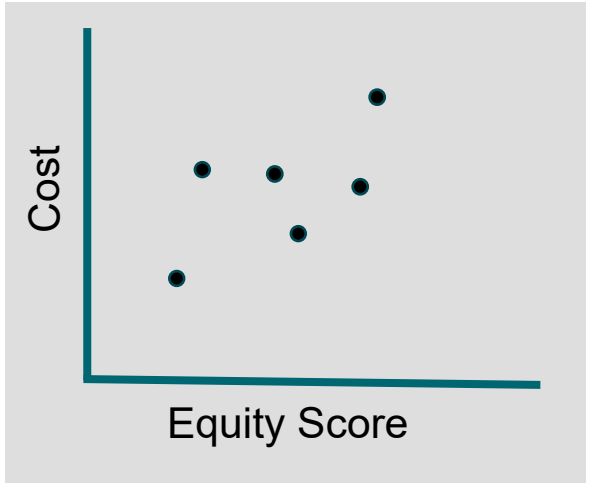
Portfolio 1

Portfolio 2

Portfolio 3

Portfolio Benefit Analysis

Evaluate and choose a preferred portfolio



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Maximum Customer Benefit Sensitivity

Tyler Tobin

Senior Energy Resource Planning Analyst, PSE

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Regulatory framework

The Maximum Customer Benefit sensitivity is set forth in:

WAC 480-100-620 (10) (c): At least one sensitivity must be a maximum customer benefit scenario. This sensitivity should model the maximum amount of customer benefits described in RCW 19.405.040(8) prior to balancing against other goals.

RCW 19.405.040(8): In complying with this section, an electric utility must, consistent with the requirements of RCW 19.280.030 and 19.405.140, ensure that all customers are benefiting from the transition to clean energy: Through the equitable distribution of energy and nonenergy benefits and reduction of burdens to vulnerable populations and highly impacted communities; long-term and short-term public health and environmental benefits and reduction of costs and risks; and energy security and resiliency.

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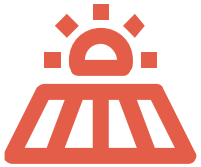
Benefits to maximize

Category	Metric
Energy Benefits	• Improve participation in clean energy programs • Local energy service provided
Non-energy Benefits	• Improved home comfort • Increase in quality and quantity of clean energy jobs
Public Health	• Improved community health • Improved community safety
Environmental Benefits	• Reduced GHG Emissions • Reduced land use change • Reduced noise exposure • Improved outdoor air quality • Reduced wildlife/plant community impacts
Cost and Risk Reduction	• Reduce energy cost burdens
Energy Security and Resiliency	• Decrease in frequency and duration of outages • Improved access to reliable clean energy

Conservation

Demand Response



Distributed Solar and Storage

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Recommended sensitivity

Maximize Distributed Energy Resources, Demand Response and Conservation

- Customer surveys suggest interest in local, distributed resources are desirable
- This sentiment is also reflected in the Portfolio Benefit Analysis, which scores distributed energy resources, demand response and Conservation higher than other resource groups
- What is maximized:
  - Distributed Energy Resources – full market potential of distributed energy resources as determined by National Renewable Energy Laboratory's Distributed Generation Market Demand (dGEN) model
  - Demand Response – select all demand response programs identified in 2025 IRP Conversation Potential and Demand Response Assessment (CPA)
  - Conservation – select highest cost conservation bundle from 2025 IRP CPA

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Gas Portfolio Equity Analysis

Brian Tyson

Manager, Clean Energy Planning and Implementation, PSE

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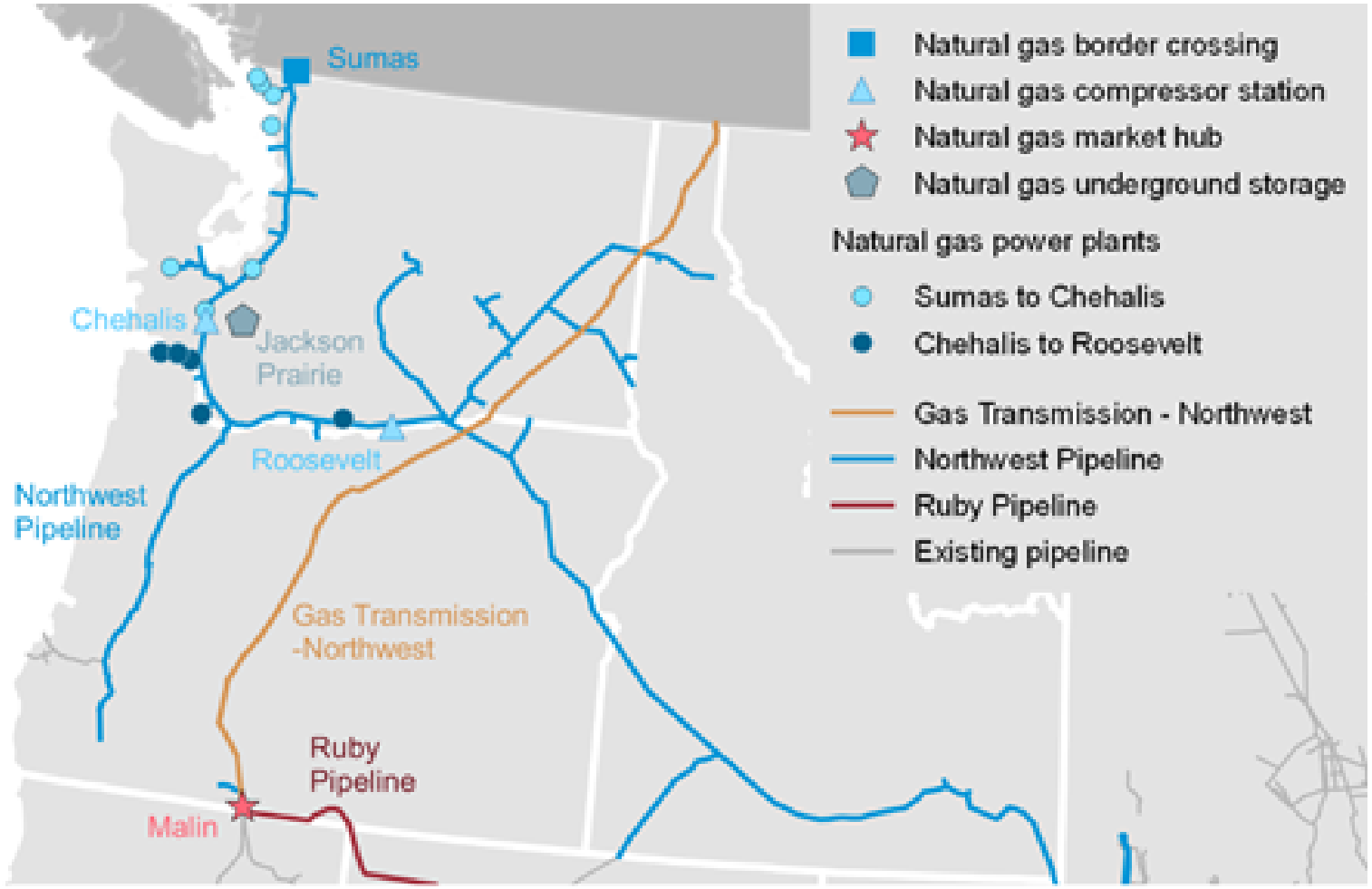
Regional overview scope of the Gas IRP

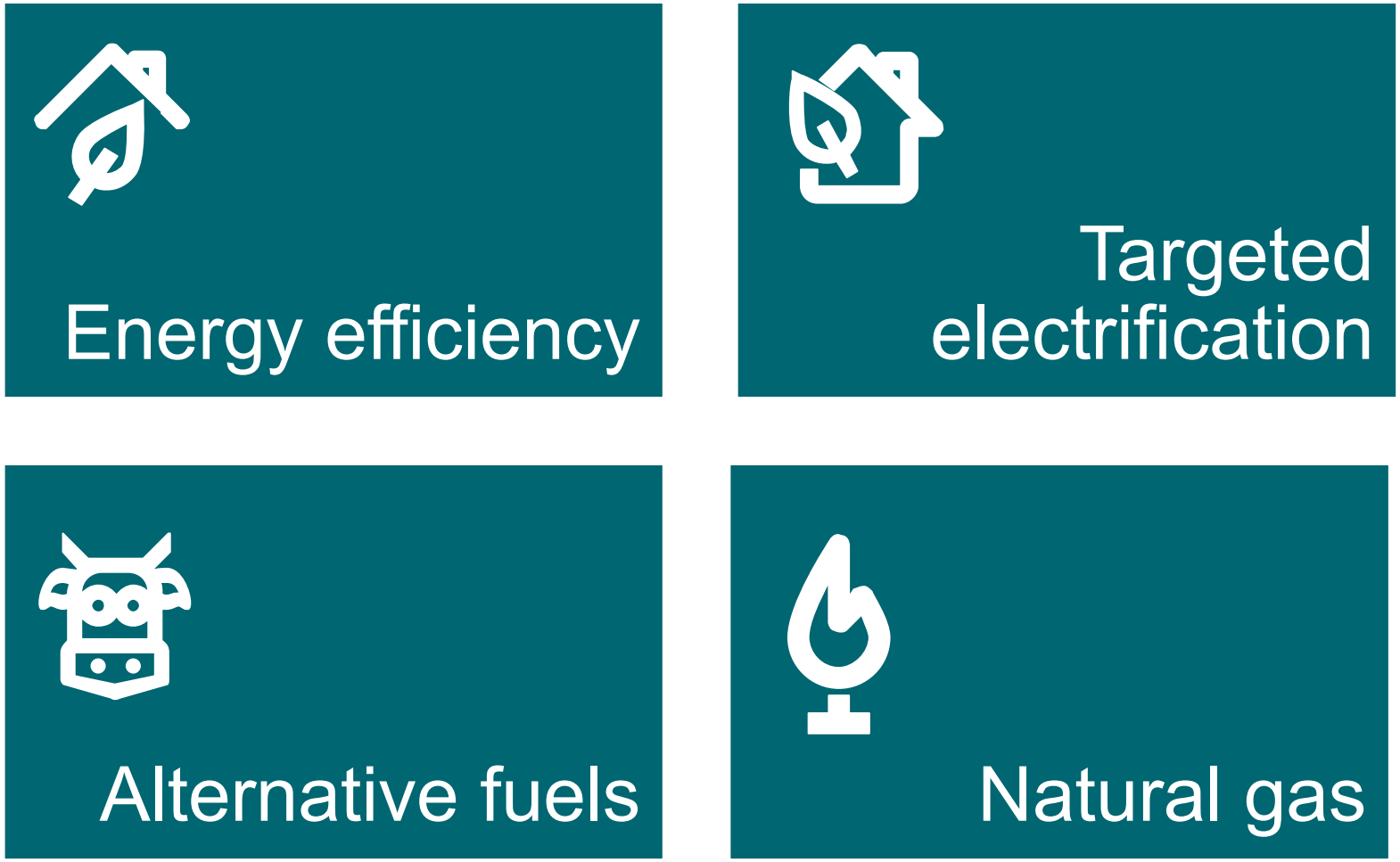
- Evaluates the least cost approach for delivering gas
- Performs equity analysis of regional pipelines and availability of fuels

Learn more in our November 6, 2023 Equity in Delivery System Planning public meeting



Source: U.S. Energy Information Administration

Resource alternatives of the Gas IRP



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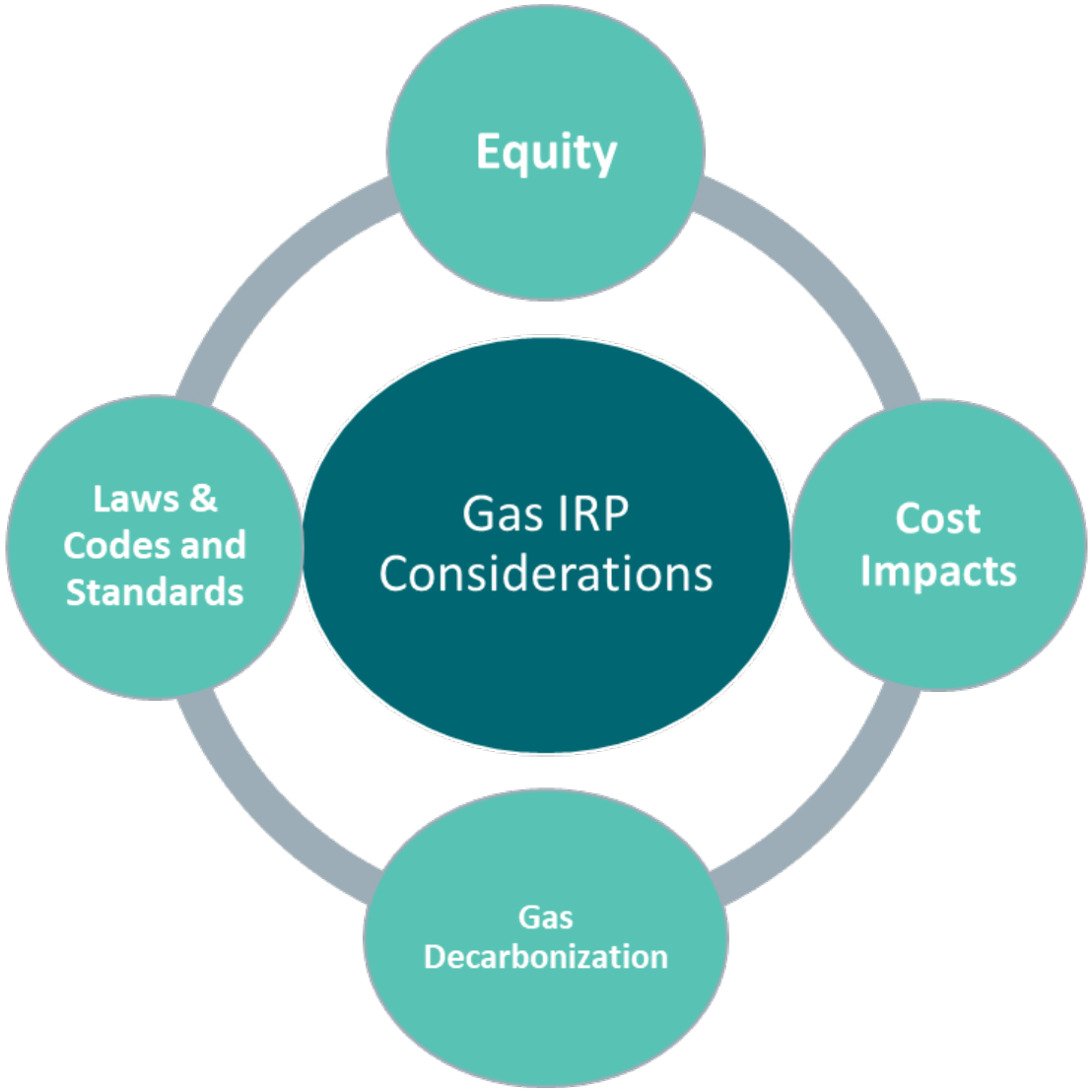
Equity as input to IRP decision framework



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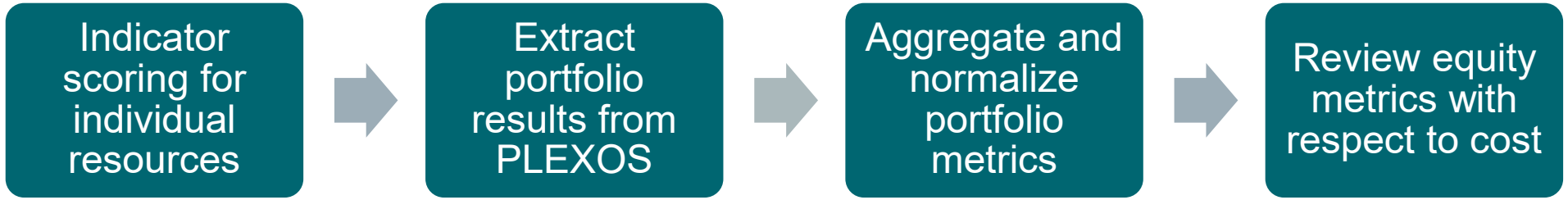
Gas Equity Scorecard Assessment

Distributive justice

- The Gas Equity Scorecard Assessment will predict how well a portfolio will enable distribution of burdens and benefits
- Same methodology as Electric Portfolio Benefit Analysis with different set of CBIs and resources
- Aligns with distribution system planning for consistency within PSE
- Trackable across future IRPs



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Customer Benefit Indicators

CETA category	Indicator	Metric
Energy Benefits Non-energy Benefits Reduction of burdens	Improved participation in clean energy programs from highly impacted communities and vulnerable populations	Number and percentage of participation in energy efficiency and electrification programs or services by PSE customers
Non-energy Benefits	Increase in quality and quantity of clean energy jobs	Quantity of clean energy jobs available in the region
Non-energy Benefits	Improved home comfort	Dollar in net present value (NPV) for energy efficiency programs
Environment	Reduced Greenhouse gas emissions	Quantity of greenhouse gas emissions emitted by a resource
Resilience	Decrease frequency and duration of outages	Total system reliability
Risk Reduction Energy Security	Improved access to reliable, clean energy	Increase in reliable energy

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Feedback questions

- **What do you think of the proposed approach to evaluating benefits and burdens of generic electric resources?**
- **Are there other considerations you would like to see included?**

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Next steps

Sophie Glass, Triangle Associates

June 6, 2024

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Upcoming activities

Date	Activity
June 12, 2024	RPAG meeting: Equity in the IRP
June 13, 2024	Feedback form closes for this webinar
July 17, 2024	RPAG meeting: Gas modeling process, scenarios, and resource alternatives
September 11, 2024	RPAG meeting: Draft results and decision process, decarbonization update


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Public comment opportunity

Please raise your “hand” if you would like to provide comment.

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Thanks for joining us!

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Appendix

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Acronyms

Acronym	Meaning
BDR	Bill discount rate
CBI	Customer benefit indicator
CCA	Climate Commitment Act
CEIP	Clean Energy Implementation Plan
CETA	Clean Energy Transformation Act
DER	Distributed Energy Resources
EAG	Equity Advisory Group
EPR	PSE's 2023 Electric Progress Report
HELP	Home Energy Lifeline Program
IAP2	International Association of Public Participation
IRA	Inflation Reduction Act
IRP	Integrated Resource Plan
NG	Natural gas
MW	Megawatt
MWh	Megawatt hour

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