

# Natural Gas Fact Finding

Workshop #4a: Regulatory Tools - Overview



# Meeting Objectives



Share information about existing and nascent regulatory tools



Deepen stakeholder understanding of tools and applicability



Updates on existing tools

# PUC Staff Introductions

- Staff Host/Facilitators:
  - Kim Herb - Utility Planning and Strategy Manager
  - JP Batmale - Administrator: Energy Resources & Planning Division
  - Zach Baker - Senior Energy Policy Analyst

Time	Topic
10:00 - 10:10	Introduction / Workshop Overview
10:10 - 10:30	Workshop 3 Summary
10:30 - 12:00	Regulatory Assistance Project - Regulatory Tools Overview and Q&A
12:00 - 12:30	DEQ Climate Protection Program Update and Q&A
12:30 - 1:30	Lunch
1:30 - 2:15	Existing PUC Tools and Activities
2:15 - 3:00	Next Steps - Preparing for Workshop 4b

# Agenda

# Participation Tips

- ❑ Please join audio by either phone or computer, not both
- ❑ Today's Zoom will be a "meeting" which will allow for direct interaction with presenters and participants
- ❑ For discussion and comments, use "Raise Hand" button to get in the queue; if joined by phone press \*9
- ❑ Rename yourself with your name and affiliation
- ❑ Say your name and affiliation before speaking

# Discussion/Comments Ground Rules



Honor the agenda and strive to stay on topic



Provide a balance of speaking time



Listen to understand and ask questions to clarify



Stay engaged and be open about your perspective and experience



Address issues and questions - focus on substance of comments without attacking others



Bring concerns and ideas up for discussion at the earliest point in the process

# Chat Availability

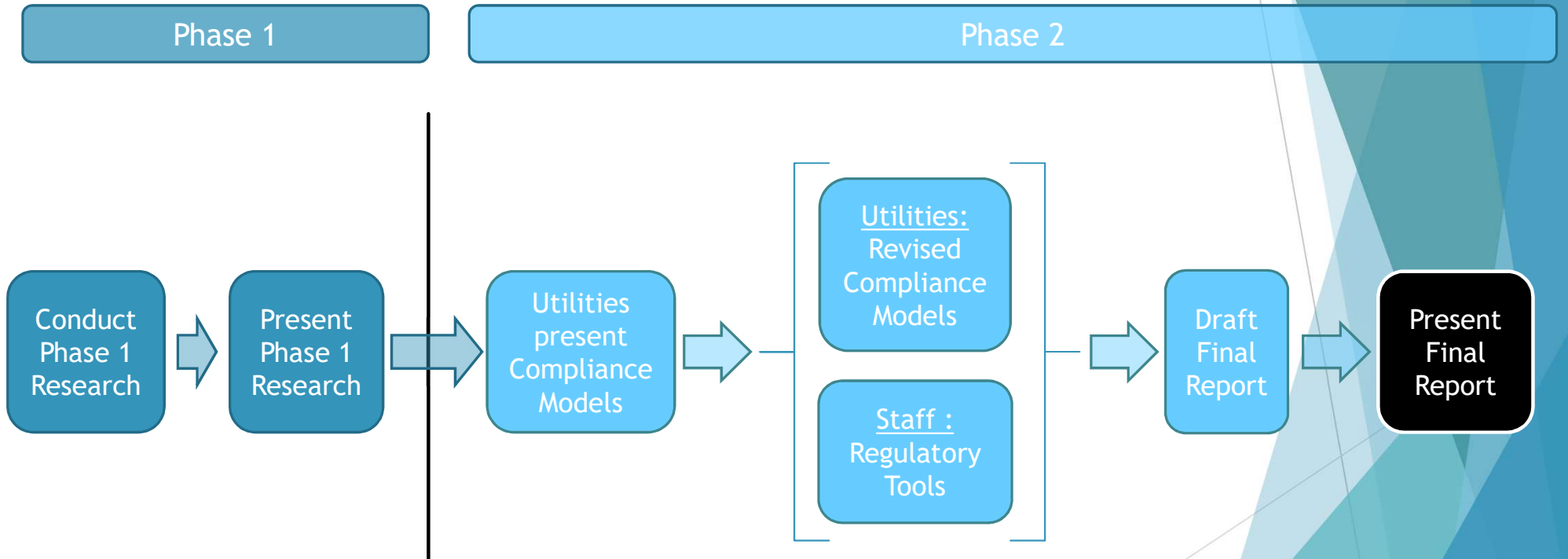


Chat is unavailable during presentations. Please raise your hand to *ask clarifying questions*.



Chat is available during the Q&A sessions and will be moderated by Staff - or raise your hand to verbally ask a question.

# Phases & Engagement





# Schedule Changes

Date	Event
Friday, September 24, 2021	Stakeholder Comments on Modeling and Alternative Scenarios
Monday, September 27, 2021	Workshop #4a: Regulatory Tools Overview
Wednesday, September 29, 2021	Alternative Scenario Proposals drafted and posted by staff
<b>Tuesday, October 12, 2021</b>	<b>Workshop #4b: Regulatory Tools Continued - Application - <i>Changed</i></b>
Wednesday, November 17, 2021	Alternative Scenario Compliance Models posted and associated data posted
Friday, December 10, 2021	Report Draft Posted
Monday, January 10, 2022	Workshop #5: Report Feedback
Monday, February 7, 2022	Final Report Posted
Thursday, February 24, 2022	SPM

## UM 2178 - Natural Gas Fact Finding Desired Outputs

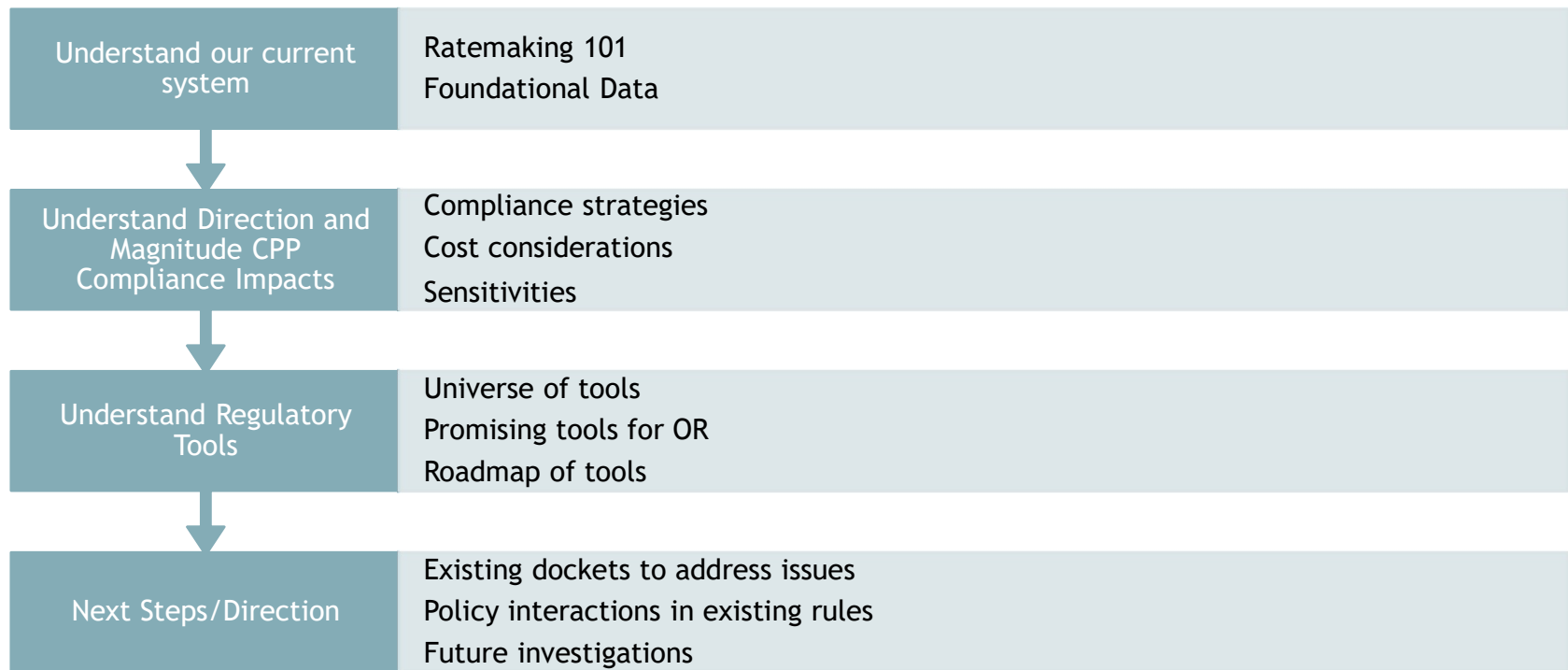
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An understanding of potential natural gas customer bill impacts associated with compliance with GHG emission targets from DEQs Climate Protection Program.

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Identification of strategies / tools to equitably mitigate potential harm to natural gas customers and/or incentivize action.

# NGFF Approach and Process



# Workshop 3

CCP Compliance Modeling Workshop



# Discussion Questions

1. What are your initial thoughts on the modeling results?
2. How do these results inform your thoughts about the upcoming webinars on regulatory tools?
3. What is one other alternative scenario you think would be important to model to inform the regulatory tools discussion?
4. If electrification is determined to be a scenario to be modeled, by either the utility or staff, what suggestions do you have for inputs and/or methodology?

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# Regulatory Tools Overview

Regulatory Assistance Project



September 27, 2021

# Regulatory Tools Overview

## UM 2178 Natural Gas Fact Finding – Public Workshop #4a

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Megan Anderson  
Associate

Mark LeBel  
Associate

Elaine Prause  
Senior Associate

The Regulatory Assistance Project (RAP)<sup>®</sup>



# 1 Issues and trends





BRIEFING ROOM

# FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies

APRIL 22, 2021 • STATEMENTS AND RELEASES

*Building on Past U.S. Leadership, including Efforts by States, Cities, Tribes, and Territories, the New Target Aims at 50-52 Percent Reduction in U.S. Greenhouse Gas Pollution from 2005 Levels in 2030*

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# Oregon HB-2021

- Retail electricity service provider must reduce greenhouse gas emissions:
  - 80 percent by 2030
  - 90 percent by 2035
  - 100 percent by 2040



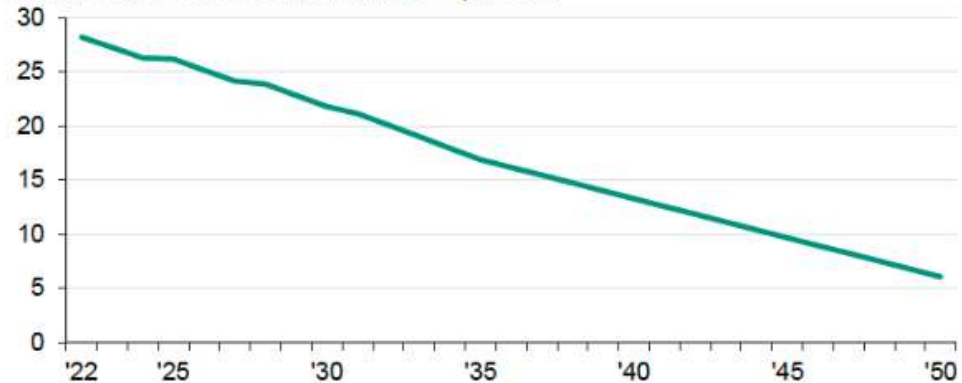
# Oregon Targets in EO-20-04

1990 GHG emissions baseline

45% reduction by 2035

80% reduction by 2050

Annual Caps on Covered Emissions from Covered Fuel Suppliers  
Million Metric Tons of Carbon Dioxide Equivalent



Source: DEQ, Climate Protection Program, Overview of Proposed Program (Sept. 2, 2021).

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## UM 2178: Natural Gas Fact Finding Investigation - Purpose

- Analyze the potential natural gas utility bill impacts that may result from limiting GHG emissions of regulated natural gas utilities under the DEQ's CPP
- Suggest appropriate regulatory tools to mitigate potential ratepayer impacts
- To inform future policy decisions and other key analyses to be considered in 2022

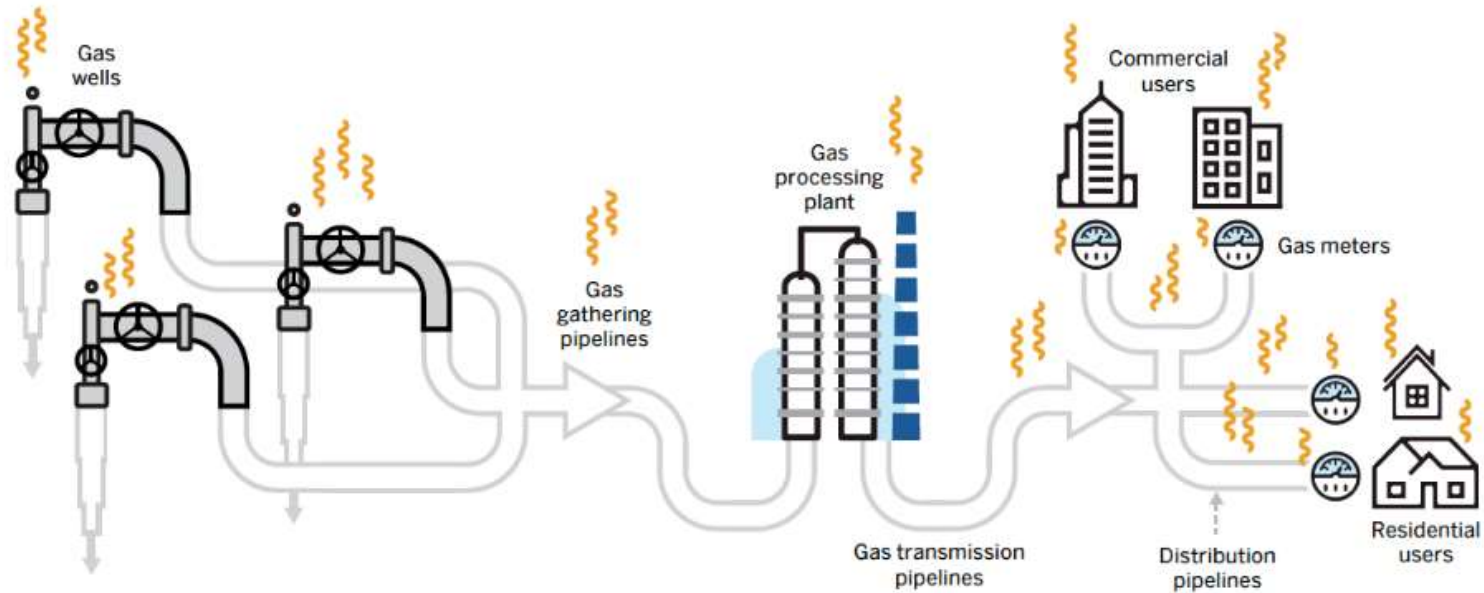
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## Other trends impacting customer base and throughput

- More stringent building codes and env. regulation
- Energy efficiency programs
- Energy-efficient gas appliances
- Electrification



# Sources of Trends: Climate Policy and Safety Concerns



Note: Methane is colorless, but for purposes of illustration, leakage is represented in yellow.

Source: The Gas Index. (2020). *The United States' Natural Gas System Has a Serious Problem: It Leaks*

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# Results: Potential increases in Oregon gas system costs

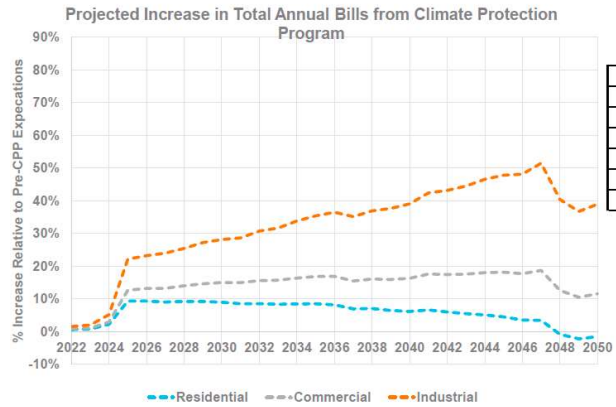
- Infrastructure and safety upgrades across the system to enable alternative fuels
- Infrastructure upgrades to address leakage
- Increased commodity prices of natural gas and/or other fuels
- CCIs





# Higher gas bills likely

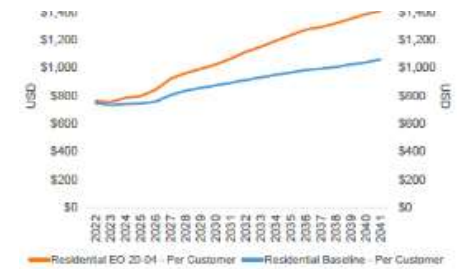
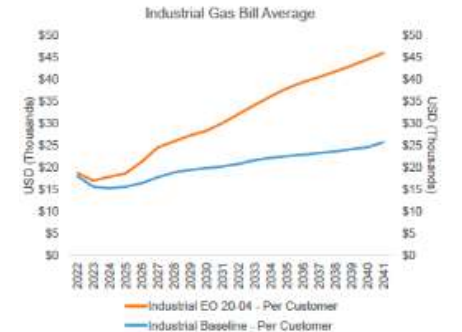
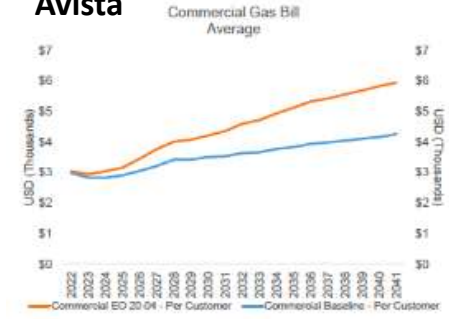
## NW Natural



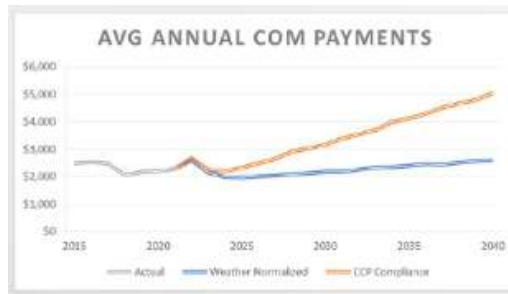
	Residential	Commercial	Industrial
2022	1%	1%	2%
2025	9%	13%	22%
2030	9%	15%	28%
2035	9%	17%	35%
2040	6%	16%	39%
2050	-2%	12%	39%

\*Impact shown relative to pre-CPP expectations, including SB 98 and expected energy efficiency action

## Avista



## Cascade Natural Gas



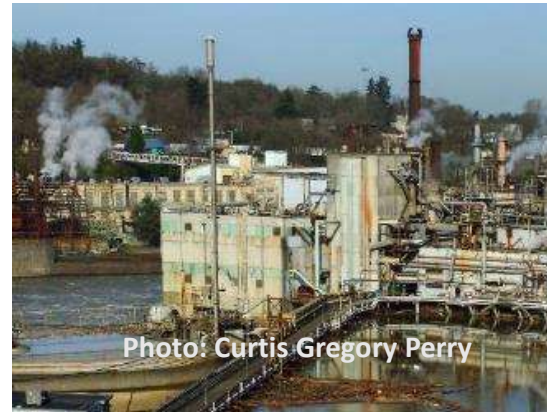
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# Potential gas customer impacts

- Higher cost of service likely due to changing system
- Potential for customer and load attrition
- Potential for stranded assets- who pays?

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# Meeting customer energy needs in the public interest



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# Categories of Regulatory Tools



**Planning**



**EE and Other Programs**



**Ratemaking**

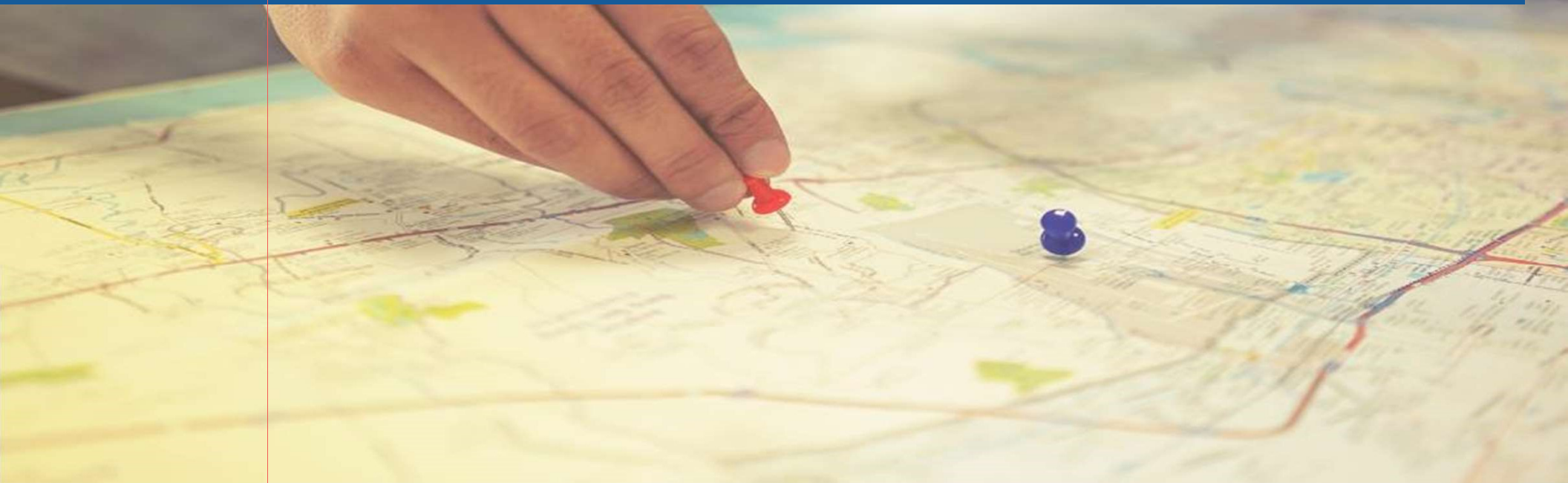
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# Equity Is Integral

- Robust and inclusive processes to ensure that everyone's needs are considered and planned for
- Programs that are accessible and put disadvantaged communities at the forefront of the transition to clean energy
- Rate-making reforms can mitigate risk of unsustainable rate increases and avoid unfair bill impacts on low-income customers

**Q&A**

## 2 Expand Planning



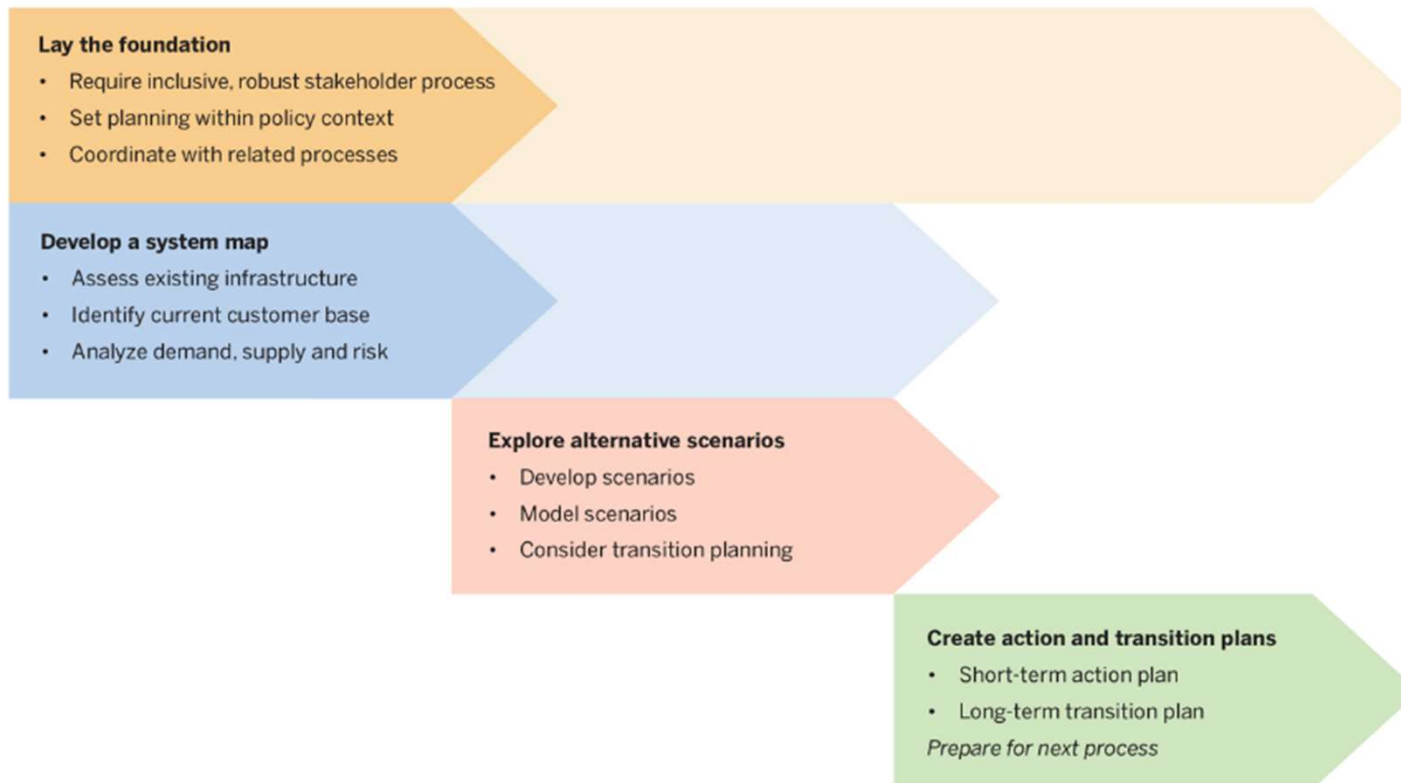
# Oregon Planning





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# Gas Planning Process



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# Expand and coordinate stakeholder processes

- Inclusive, robust stakeholder processes
- Set planning within policy context
- Coordinate with related processes



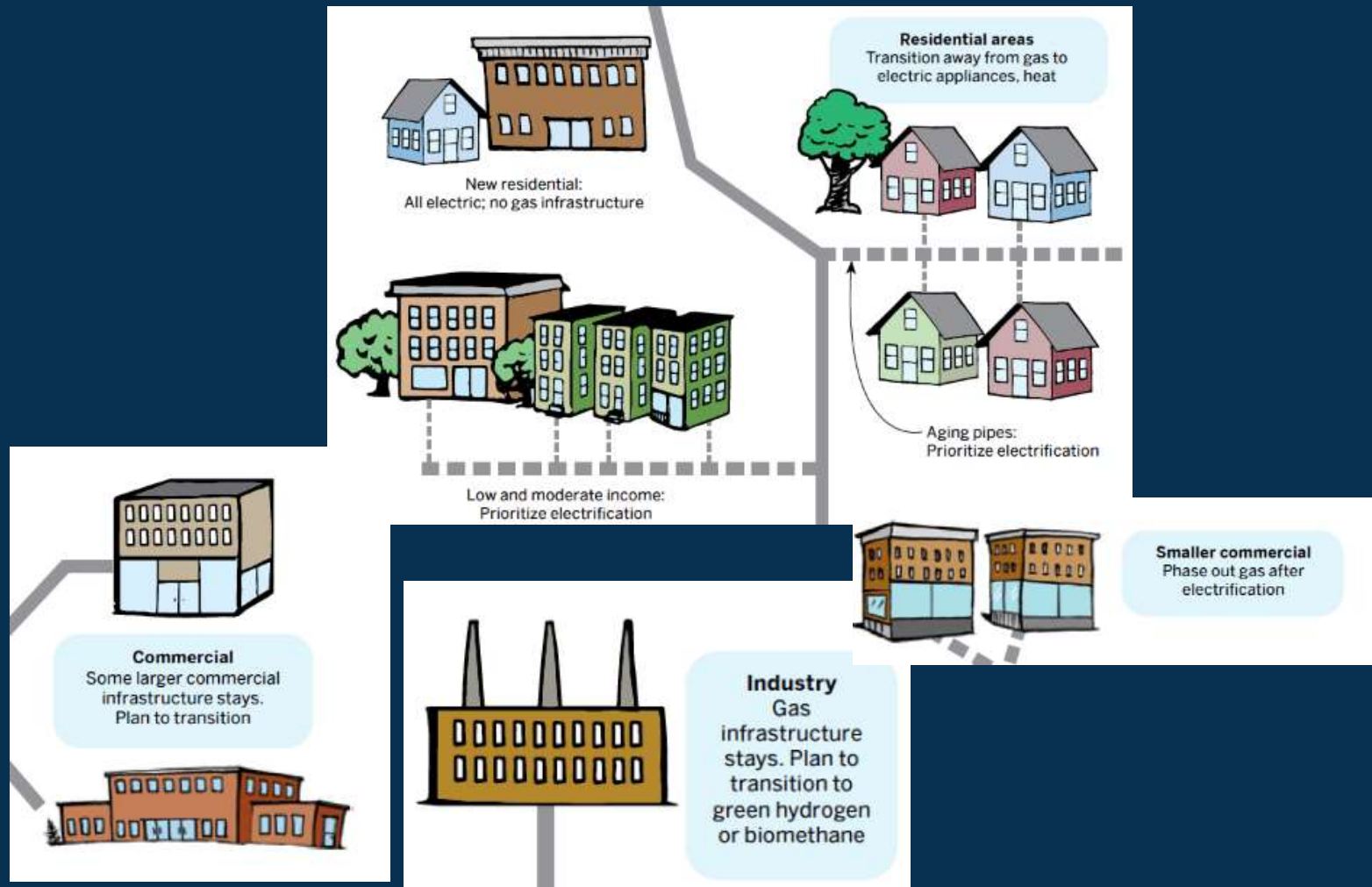
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# Develop a Dynamic System Map

*Layers of information can facilitate system planning*

- Assessment of existing infrastructure
- Identification of current customer base
- Analysis of demand, supply and risk

# Explore Alternative Scenarios



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# Develop Decarbonization Plans

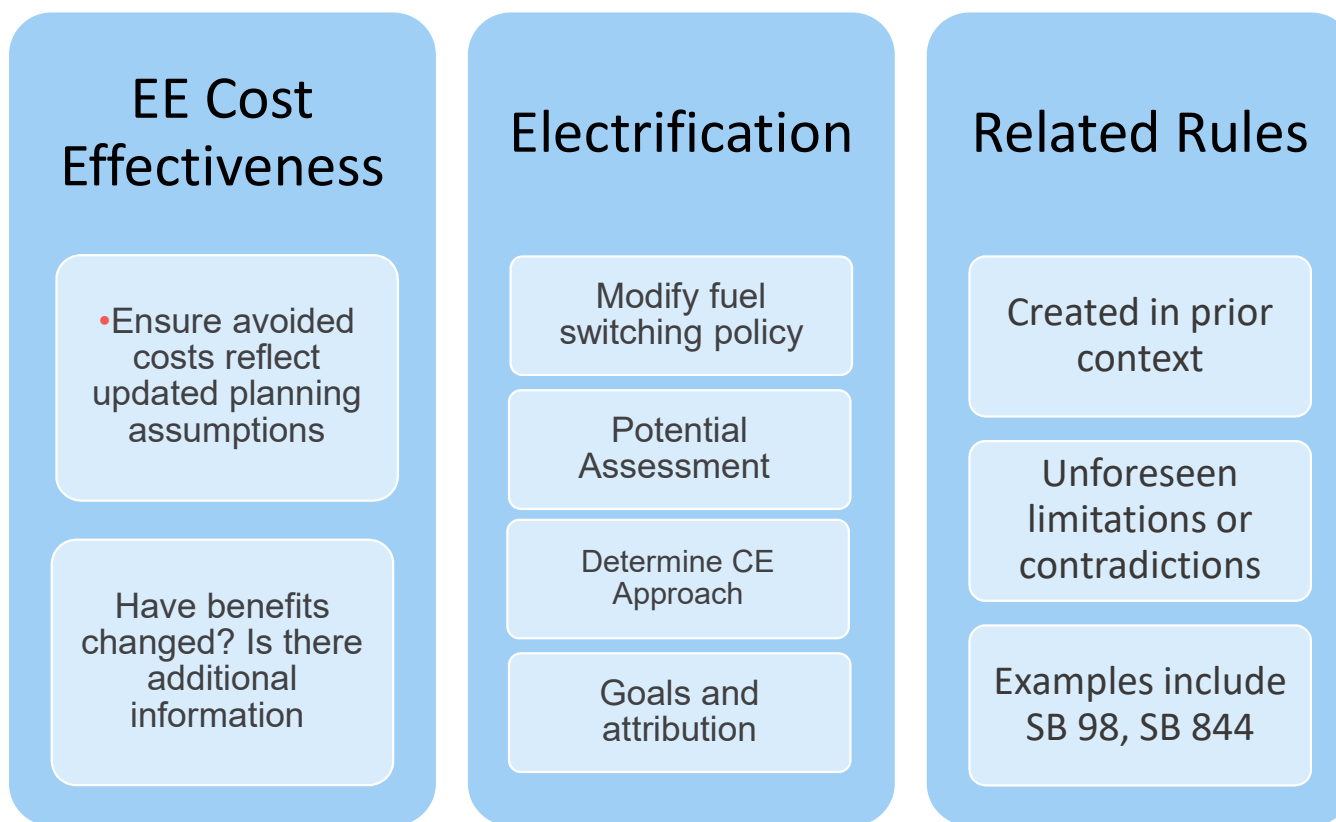
- Develop decarbonization plans within the IRP process to incorporate changing circumstances
- Consider ways to integrate gas and electric planning to consider all options together
- Planning is a “no regrets” tool – ensures that regulators have the info they need to make decisions about utility filings

**Q&A**

# Programs and Policies



# Revisit Underlying Policies to Unlock Compliance Options





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# Coordination of Electrification

- Set goals in terms of primary energy or in terms of emission reductions
- Allow gas utilities to earn credit for contribution to electrification goals



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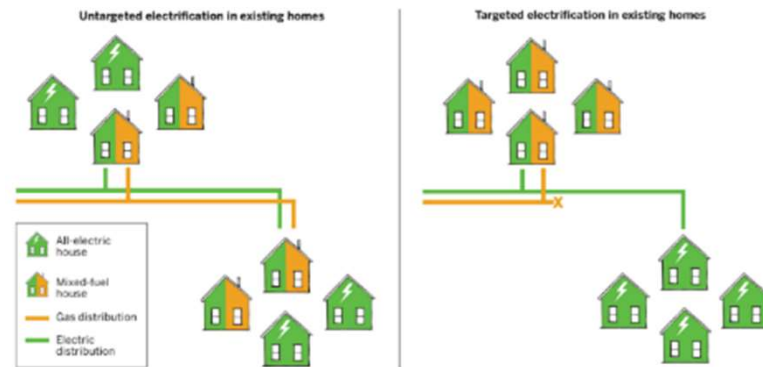
# Target Programs for Equity

- Focus on weatherization
- Equitable access to new technologies
- Consider changing cooling and heating needs

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# Target Programs for Locational Impact

- Integrated with more granular planning
- Expand “non pipeline” alternatives
- Demand response
- Minimize new infrastructure capital investment and operational expense



Source: Graphic concept inspired by Aas, D., Mahone, A., Subin, Z., MacKinnon, M., Lane, B., & Price, S. (2020). The Challenge of Retail Gas in California's Low-Carbon Future: Technology Options, Customer Costs, and Public Health Benefits of Reducing Natural Gas Use; graphic modified by RAP.

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# Expand Programs to Transport Customers

- Assess the potential for EE in Transport
- Currently no funding mechanism in place, limiting factor

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# Explore Pilots and Studies to Test Key Uncertainties

- What's the research question?
  - Technical, programmatic, customer acceptance, joint gas/electric approaches, safety, H2 end use applications...
- Small cost/risk endeavor with potential for scaling cost effectively
- Limited time and budget
- What can we learn quickly by doing?

**Q&A**

# 4 Reform Gas Rate-Making



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# Full Universe of Contributors

- Current and future gas customers
- Other customers served by a future restructured “gas” utility
- Electric customers
- General funds and tax incentives
- Gas utility shareholders
- Others?



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# Key Rate-Making Principles

- Effective recovery of revenue requirement and access to reasonably priced capital
- Customer understanding, acceptance, and bill stability
- Equitable allocation of costs
- Efficient forward-looking price signals
- Achievement of public policy goals
  - Efficient competition and control of monopoly pricing
  - Reliable provision of service
  - Societal equity (e.g., affordability)
  - Environmental and public health requirements

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# PUC General Powers

## OR Stat. § 757.400(1)

In addition to the powers and duties now or hereafter transferred to or vested in the Public Utility Commission, the commission shall represent the customers of any public utility or telecommunications utility and the public generally in all controversies respecting rates, valuations, service and all matters of which the commission has jurisdiction.

In respect thereof the commission shall make use of the jurisdiction and powers of the office to protect such customers, and the public generally, from unjust and unreasonable exactions and practices and to obtain for them adequate service at fair and reasonable rates.

The commission shall balance the interests of the utility investor and the consumer in establishing fair and reasonable rates. Rates are fair and reasonable for the purposes of this subsection if the rates provide adequate revenue both for operating expenses of the public utility or telecommunications utility and for capital costs of the utility, with a return to the equity holder that is:

- (a)** Commensurate with the return on investments in other enterprises having corresponding risks; and
- (b)** Sufficient to ensure confidence in the financial integrity of the utility, allowing the utility to maintain its credit and attract capital

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## Approaches to Lower Rate Base and Decrease Risks of Long-Term Rate Impacts

1. Update customer contributions to line extensions
2. Accelerate depreciation timelines
3. Improve planning and decision criteria for new investments (and contracts)
4. Explore alternative funding sources or authorization for securitization

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## Update Customer Contributions to Line Extensions

- Line extension allowance formulas dictate how much a utility is allowed to invest in new infrastructure for new customers
- Updated calculations would likely reflect changes to expected gas usage and different probability of **changes in gas system customers**

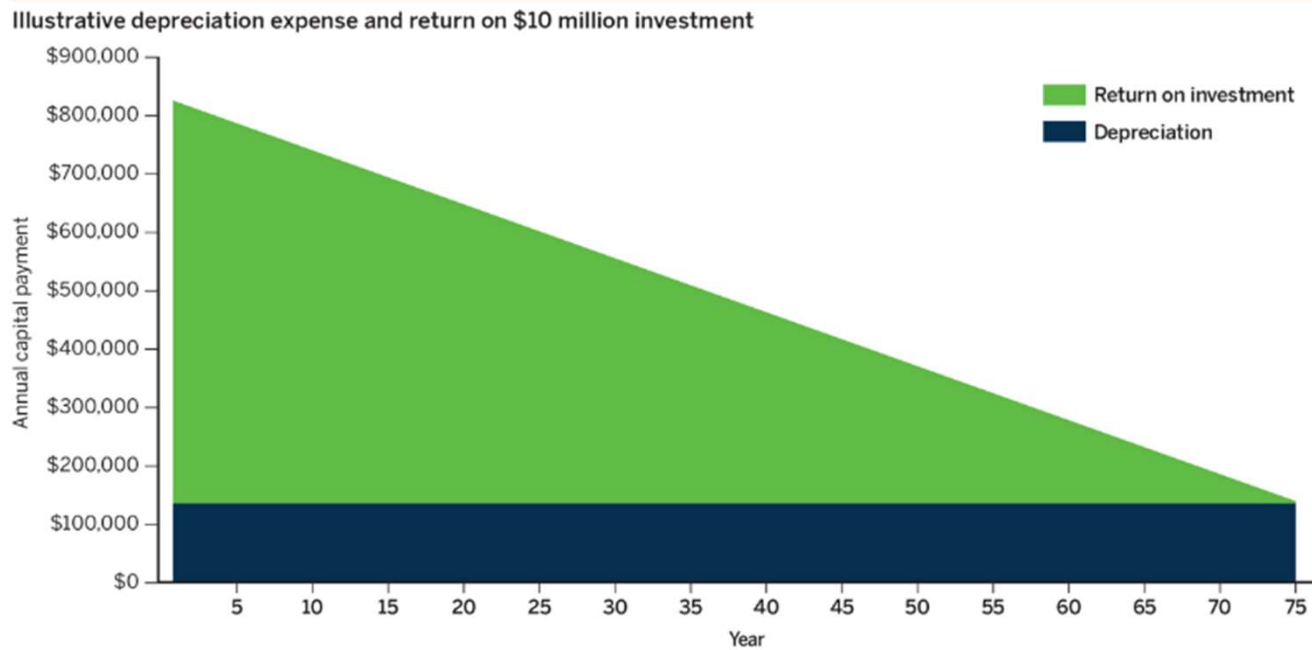
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# Repaying Utility Capital Investments

- Depreciation expense is based on the original cost of each investment, which is spread over the asset's projected lifetime
- Return on investment is based on the rate base and the weighted average cost of capital
  - Rate base is defined as original cost minus accumulated depreciation

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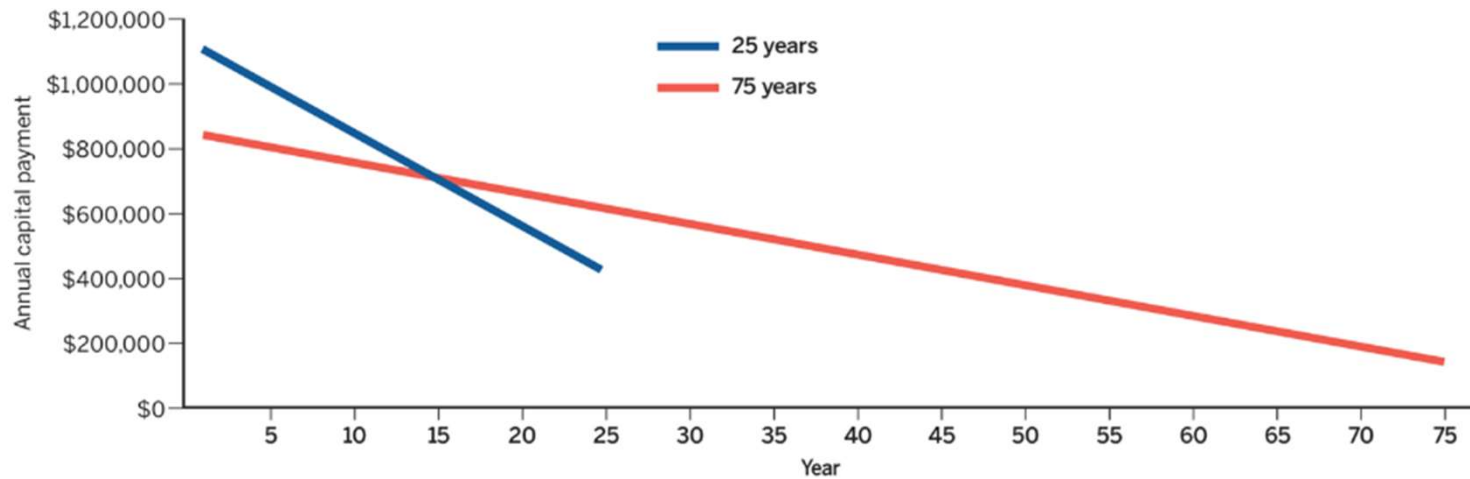
# Payments for a Long-Lived Utility Capital Investment



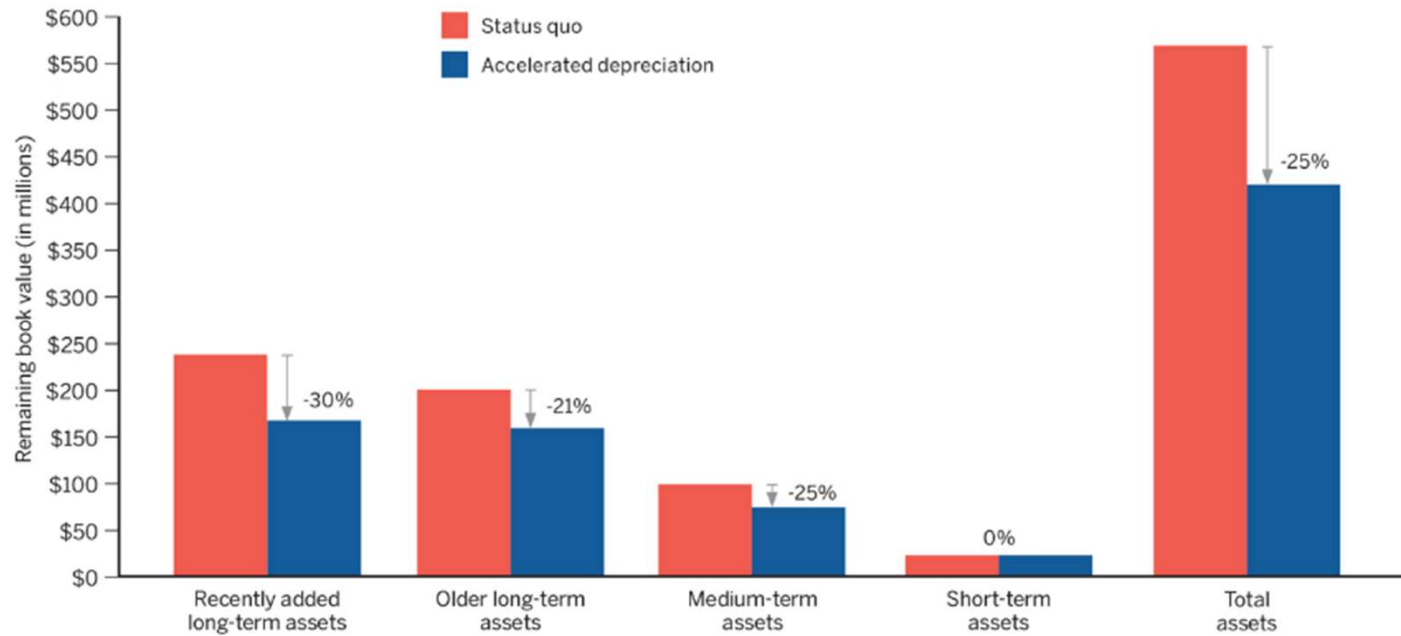
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# Changing the Depreciation Timeline

Illustrative trajectory of capital payments for two amortization periods

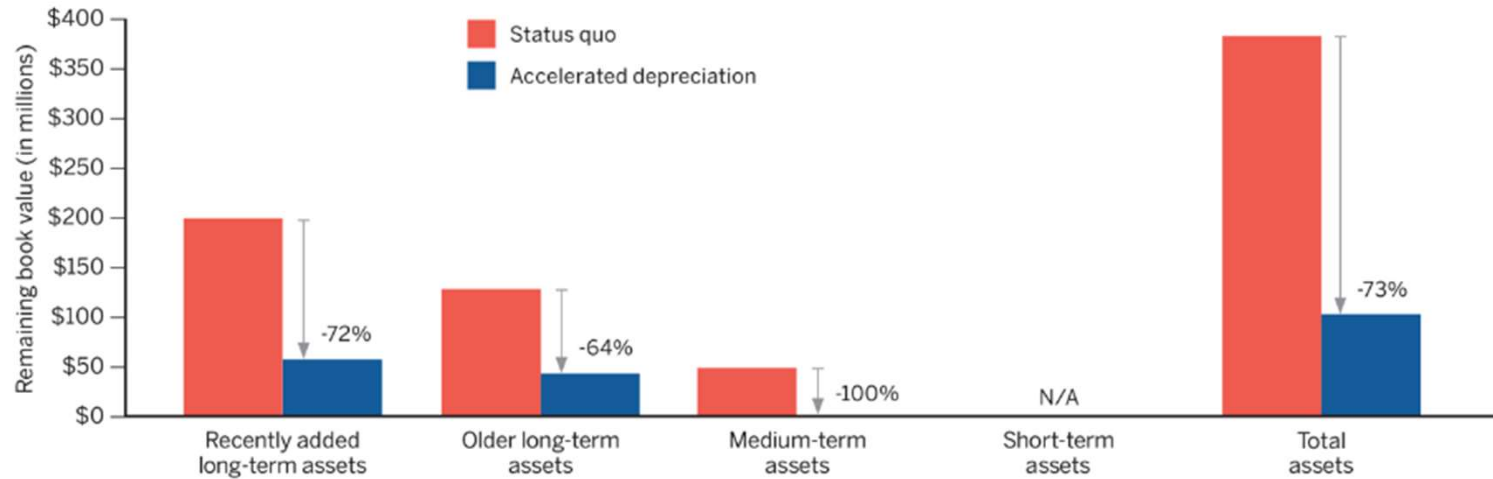


# Pre-2021 Asset Book Value in 2031





# Pre-2021 Asset Book Value in 2041



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# Equitable Cost Allocation

- Customer-related costs should be determined using the basic customer method, not the minimum system method
- Recovery of shared capacity costs should be balanced between energy throughput and peak demand based on load patterns
- Program costs can be allocated based on the benefits provided by the investments
  - For some programs, a split between electric customers and gas customers is appropriate when feasible

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# Efficient Rate Design

- Higher prices in peak seasons are appropriate
- Even higher prices or incentives to reduce on peak days are appropriate for many customers
- Inclining block structures with higher levels of inexpensive usage in the winter can balance efficiency and concerns about bill impacts for low-income gas heating customers

	Summer	Winter
First 20 therms	\$0.50 per therm	N/A
First 60 therms	N/A	\$0.50 per therm
Additional usage	\$1.29 per therm	\$1.29 per therm

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# Low-Income Rate Structures

- Separate class/subclass with own allocation and rates
- Discount on general residential rates
  - Percentage discount (e.g., 25% off of bill)
  - Flat monthly \$ discount (e.g., \$20 off of bill)
  - Tiered percentage or monthly \$ discounts
- Percentage of income payment plan
  - Cap bill at 6% of household income

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# Change Gas Utility Incentives

- Adopt decoupling using overall revenue target, not revenue per customer
- Implement performance-based regulation
  - Multi-year rate plans
  - Eliminate unnecessary trackers
  - Performance incentives for achieving important consumer and public policy outcomes

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# Potential Structural Reforms

- Green gas delivery
- Fusion with electric utility
- Add zero-GHG district energy
- Become a heating services provider
- Convert to publicly owned entity or coop
- Others?

**Q&A**

# 5 Takeaways





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## What to Keep in Mind

- An elevated and expanded focus on utility planning and regulation is required with GHG reduction targets.
- Impact of changes will be significant, regardless of chosen pathway
- PUCs will need to:
  - Evaluate alternatives based on evidence
  - Protect gas customers in short and long term
  - Avoid unneeded investment

# Climate Protection Program Update

Colin McConnaha, Oregon Department of Environmental Quality



Lunch Break 12:30 - 1:30 Pacific



# PUC Existing Regulatory Tools and Activities: Programs & Planning

# PUC Existing Regulatory Tools and Activities



## Programs

- Energy Efficiency
- Targeted Demand Side Management
- Demand Response
- Pilots for new supply
- New technologies



## Planning

- Intergrated Resource Plans
- Policy Interactions

# Programs

## Energy Efficiency

- UM 1893 Investigation Into the Methodology and Process for Developing Avoided Costs Used in Energy Efficiency Cost-Effectiveness Tests.

## Targeted Demand Side Management

- UM 2155 NWN Application for Authorization to Defer Certain Costs Associated with Phase 3 of the Geographically Targeted Energy Efficiency Pilot

SB 98 / SB 844

## Demand Response

- Last NWN IRP

# Planning

## Policy Interactions

- HB 2021 impact on IRPs and EO 20-04 work
- RNG Rules (AR 636 - OAR Chapter 860, Div 150)
- Voluntary GHG reduction (SB 844)

## Integrated Resource Plans

- Northwest Natural
- Avista
- Cascade
- Portland General Electric
- Idaho Power
- PacifiCorp

# Planning - Gas IRPs

Company	Docket	Status	Anticipated Next Filing Date	How to get involved
NW Natural	LC 71	2018 IRP Update <a href="#">Order No. 21-274</a>	July 29, 2022	Engage with NWN to participate in 2022 IRP Technical Working Group.
Avista	LC 75	Seeking acknowledgment of 2021 IRP at October 14, 2021 Public Meeting.	Feb 2023	See most recent <a href="#">Staff Report</a> recommended interim actions and engage with Avista to participate in future IRP working groups.
Cascade	LC 76	2020 IRP Acknowledged April 28, 2021. See <a href="#">Order No. 21-127</a>	Aug 2022	Engage with Cascade to participate in 2022 Technical Advisory Group.



# Planning - Electric IRPs

Company	Docket	Status	Anticipated Next Filing Date	How to get involved
PacifiCorp	LC 77	2021 IRP filed on September 1, 2021	Summer 2023	<ul style="list-style-type: none"> <li>Join service list for LC 77.</li> <li>Join PacifiCorps IRP list on their <a href="#">website</a></li> <li>Participate in 10/1/2021 post-filing public-input meeting</li> </ul>
Portland General Electric	LC 73	2019 IRP Update <a href="#">Order No. 21-129</a> filed May 3, 2021.	Spring 2022	<ul style="list-style-type: none"> <li>Join PGE IRP list on their <a href="#">website</a></li> <li>Participate in their next Roundtable on 10/21/2021.</li> <li>Join PUC service list for next IRP when filed.</li> </ul>
Idaho Power	LC 74	2020 IRP Acknowledged June 4, 2021. See <a href="#">Order No. 21-184</a>	December 31, 2021	Engage with Idaho Power to participate in 2021 IRP Advisory Council meetings.

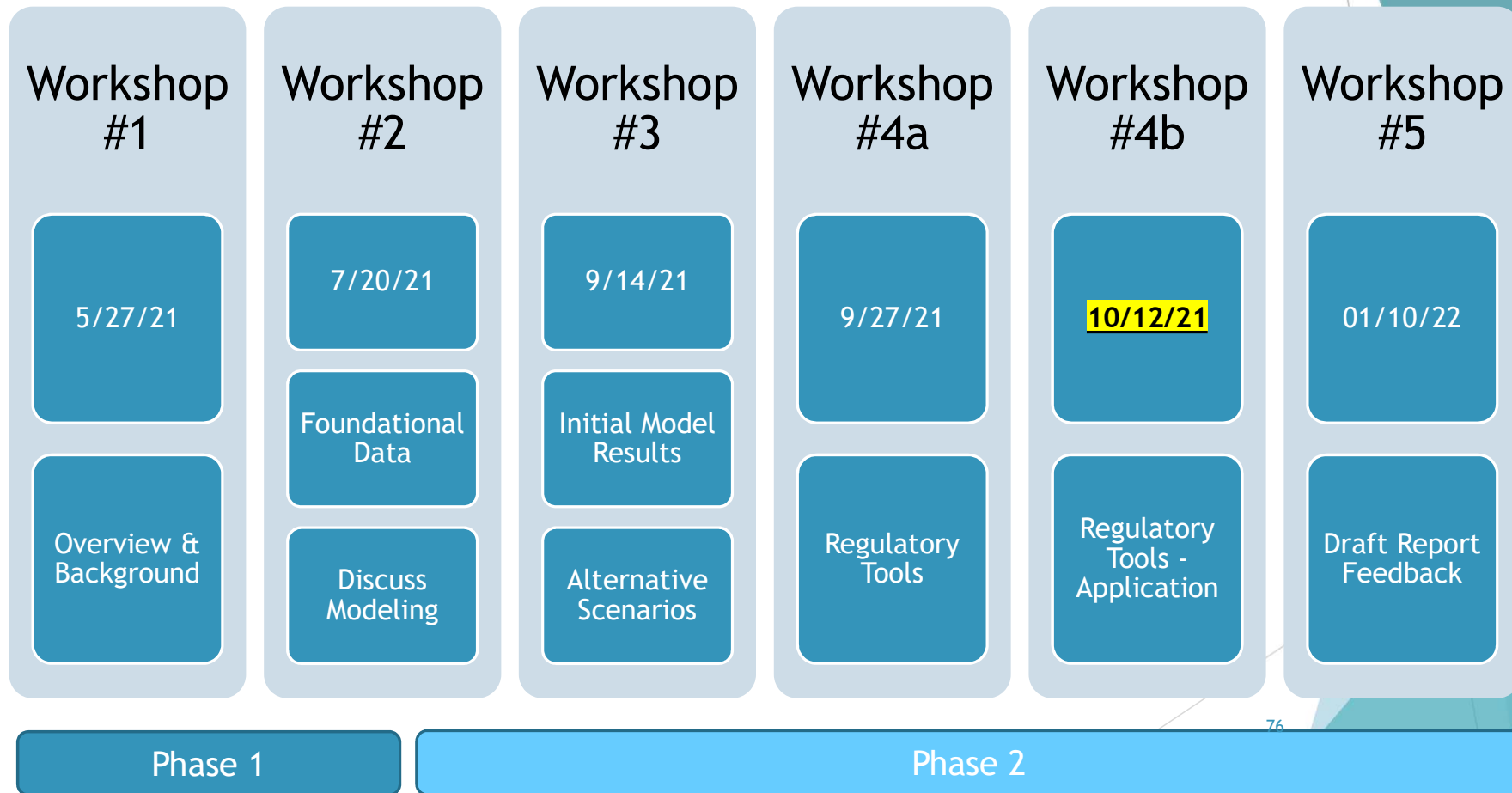
# Ratemaking

Futher discussion in October 12, 2021 Workshop



# Next Steps

# Workshop Details



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# Workshop 4B – October 12

We want to hear from you:

- What tools are missing?
- Which tools are most relevant/important to Oregon? Now vs. later?
- How would you prioritize which tools to advance and when?

# Closing Remarks and Feedback

# Thank you!

## EO 20-04 Website

<https://www.oregon.gov/puc/utilities/Pages/ExecutiveOrder20-04.aspx>

## Comments or Questions

Email Staff with questions at one of the addresses below. Comments can be emailed to staff or directly to [PUC.PUBLICCOMMENTS@puc.oregon.gov](mailto:PUC.PUBLICCOMMENTS@puc.oregon.gov). Comments will be posted in the docket.

## Contacts:

- Kim Herb: 503.428.3057 [kim.herb@puc.oregon.gov](mailto:kim.herb@puc.oregon.gov)
- JP Batmale: 503.551.9926 [jp.batmale@puc.Oregon.gov](mailto:jp.batmale@puc.Oregon.gov)
- Zach Baker: 503.881.4072 [zachariah.baker@puc.oregon.gov](mailto:zachariah.baker@puc.oregon.gov)

