

# UM2225 Investigation into Clean Energy Plans

Presentation and Discussion of  
Staff's Straw Proposals for  
Analytical Improvements

September 7, 2022

# Logistics



## Thank you for joining us today!

- For discussion and comments, use "Raise Hand" button to get in the queue; if joined by phone press \*9
- Include your affiliation in your Zoom name
- Say your name and affiliation before speaking
- Engage with the main dialogue
- Move around and take care of yourself as needed



# Agenda & Objectives for today

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## Objectives

- Review and discuss Staff's Straw Proposals on Analytical Improvements, including planning for decarbonization, treatment of fossil fuel resources, and additional data transparency topics.
- Review UM 2225 to date to build a common understanding of what has been developed throughout the docket and next steps.

## Agenda

- [15 min] Welcome & Check-In
- [50 min] Proposal on Decarbonization Planning
- [5 min] Break
- [25 min] Proposal on Treatment of Fossil Fuel Resources
- [35 min] Proposal on Additional Data Transparency
- [35 min] Docket Review & Next Steps

# Today's meeting agreements

**Be present in the meetings you attend.** Structure your spaces and screens to eliminate distractions and support your ability to focus on those you are with virtually. Keep your camera on if possible.

**Practice the equity of time.** If you are speaking a lot, consider asking someone else's thoughts. If you haven't spoken, find a way to contribute. We'll be deliberate about this in the way that we call on individuals – so for example, the facilitators may not call on you in the order you raised your hand or select your question from the chat in the order you asked your question so that we can balance who gets to ask their questions.

**Treat others with respect.** Consider the impacts of your words and actions on others. Examine and critique systems, not people.

**Accept other's lived experiences.** What someone says they experienced is what they experienced. No singular experience is representative of everyone's experience.

**Use a bike rack when needed.** Strive to stay on topic and use a bike rack to identify topics to come back to when helpful. As we get further into the docket, we may need to use a bike rack for foundational technical or policy questions that we don't have the time to answer in this workshop.

**Come ready to learn.** Question your assumptions. Make sure you understand others' perspectives so you can contribute to the discussion.



# Check-In

**When was a time when specificity helped you to better do your job or understand what someone was communicating to you? What made it helpful?**

1.

Individually journal on your response.

2.

Share your response in small breakouts.

# Staff's Straw Proposals on Planning for Decarbonization Targets, Treatment of Fossil Fuel Resources, and Additional Data Transparency Topics

## Chapter 1: Planning for Decarb Targets

- Topic #1: Clean Energy tech scenarios
- Topic #2: Demand scenarios
- Topic #3: Regional Development scenarios
- Topic #4: GHG emissions constrains in IRP modeling
- Topic #5: Key long term decarb planning questions

## Chapter 2: Treatment of Fossil Fuel Resources

- Topic #1: Fossil fuel retirements and conversions
- Topic #2: Fossil fuel operational changes

## Chapter 3: Additional Data Transparency Straw Proposal

- Topic #1: GHG emissions
- Topic #2: Renewable Energy Credits
- Topic #3: Fossil fuel resource operations
- Topic #4: Data standardization and accessibility

# Staff's Straw Proposal on Decarbonization Planning

# Review: Decarbonization Modeling & GHG Emissions Accounting Workshop (July 27)

## Key Scenario Analysis Questions

Are these the right questions? Are we missing any?

These are good / right questions

I like the critical questions and believe they should be specifically added to the IRP guidelines as required outputs.

These look good.

Mixes of EE and ★ High Penetration DG - esp as alt's to TX costs & risks

Cost of Pain = Outage Cost flowing through when bad things happen (what is capacity worth to prevent?)

Suggest scenario approach considers differing needs for pre-2030 versus 2040. For example, 'forks in the road' is mostly applicable to post-2030 outcomes.

Will Staff recommend that the OPUC consider the difficulties that the three presenters addressed during the meeting today: specifically the high costs and overbuild with the last mile towards achieving a 100% decarbonized (the last 5-10%)

What MUST we do in the near term, not just low regrets, but necessary actions

What are the consequences for failure of utility to meet the target

How should scenarios change or be required re: transmission schedules and costs?

Are there specific sub-questions that we should be assessing on these topics?

Under critical barriers, ★ given that transmission has a 10+ year lead time, we should probably highlight potential transmission needs

Forks in the road - when will we analyze the alternatives if transmission is not available? (e.g., high penetration DERs?)

Realism about improbability of BPA ever joining a RTO.

with respect to the costs and risks regret - specify the costs and risks to rate payers - the cost of pain for ★★ LOLEs)

For high regrets: Any increased infrastructure for natural gas, especially if it can't handle pure hydrogen

## Tech Scenarios

What clarifying questions do you have about the proposed tech scenarios?

All of these scenario parameters need additions detail and definition. Electrification needs to be specified by residential, commercial and industrial sectors, even by building types, etc.

How will the Commission define "clean hydrogen" -- there are many definitions out there and they're not all equally robust

Is commercially available limited to domestic production or does it also include global availability?

These are emerging and new technologies. What about different scales - e.g. small scale and community renewables

Concern that hydrogen isn't actually non-emitting. New evidence indicating short-term climate forcing risk

How to manage IOU unrealistic proposals dominating/biasing models

What's missing?

Spot Check Limiters on assumptions re: Unachievable (eg NEPA timelines for new TX)

Low Run Rate Fossil Units

High Proliferation DG batteries

Overbudget & Delay Scenarios

Offshore wind should be included in the first round due to potential long lead time and need for clear off take signals

Important to know what the cost of not meeting the target is so that it can be fairly evaluated against the preferred portfolio

## Regionalization Scenarios

What clarifying questions do you have about the proposed regionalization scenarios?

How will we determine what's realistic?

Some attention to interconnection queue reform

The timing implications of state clean energy strategy implementation on workforce

If there is a change in regional grid control, how will that affect IRPs?

## Demand Scenarios

What clarifying questions do you have about the proposed demand scenarios?

What's missing?

How do we ensure IOUs aren't sole parties selecting scenarios?

Massive data center proliferation, including as competing with new generation supply available for IOUs

Demand response resources

electrolysis demands to support transportation & agg decarbonization

Major &/or targeted EE proliferation scenarios (and how they might avoid other needs or challenges)

# Planning for Decarbonization Targets Straw Proposal

Treatment of  
Fossil Fuel  
Resources Straw  
Proposal

Additional Data  
Transparency Straw  
Proposal

## Clean technology scenarios:

- **Clean hydrogen.** Staff recommends that the utilities test at least one scenario where clean hydrogen becomes available for selection before 2040.
- **Long duration storage.** Staff recommends that the utilities test at least one scenario where long duration storage (e.g. storage with several days of duration or seasonal storage) becomes available for selection before 2040.
- **Offshore wind.** Staff recommends that the utilities test at least one scenario where offshore wind becomes available for selection before 2040.

## Question:

- Is the phrase “Clean Hydrogen” clear enough about which types of hydrogen may be included while providing flexibility for utility implementation in consultation with DEQ’s determinations of emissions of forecasted resources?

# Planning for Decarbonization Targets Straw Proposal

Treatment of Fossil Fuel Resources Straw Proposal

Additional Data Transparency Straw Proposal

## Demand scenarios

- **Electrification.** Staff recommends that the utilities adopt realistic electrification assumptions in the IRP Reference Case and test at least one High Electrification scenario in which electric demand aligns with the electric technology adoption assumptions that the Company clearly articulates in their IRP
- **Climate change and extreme weather.** Staff recommends that the utilities test at least one scenario that accounts for the potential for more frequent extreme weather events, based on a publicly available forecast of climate change related weather impacts. (Utilities should also work toward including climate change in reference case long-term IRP forecasts. This scenario should look at a more extreme climate scenario than the reference case.) If a utility does not quantitatively evaluate such a scenario, Staff recommends that the utility describe the key weather events that drive resource adequacy challenges on their system and quantify how frequently those events have occurred across the historical record.

## Questions:

- Is requiring “realistic electrification assumptions” clear enough language? Staff’s goal is to recognize the uncertainty surrounding policies to decarbonize other sectors while also highlighting the need to begin testing the policies’ impact on the electric system to the extent feasible?
- Are electrification scenarios most useful for examining the preferred portfolio over time or comparing portfolios?

# Planning for Decarbonization Targets Straw Proposal

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## Regional development scenarios

- ***Participation in a regional Resource Adequacy (RA) program.*** Staff recommends that the utilities test a scenario that demonstrates the portfolio impacts of participation in a regional RA program. In this scenario, the utility should demonstrate how the load and resource diversity benefits of a regional RA program would affect their resource needs and resource decisions.
- ***Transmission utilization.*** Staff recommends that the utilities test a scenario where access to transmission is not limited by current transmission rights. This scenario could, for example, explore the implications of the establishment of a regional transmission operator, participation in a regional organized market, and/or other measures that could result in improved efficiency of transmission operations or contracts.
- ***Regional transmission expansion.*** Staff recommends that the utilities test a scenario where regional transmission expansion enables access to more diverse renewable resources.
- Staff recommends that the utility test at least one of the technology scenarios with and without participation in an organized market with liberalized transmission or in a regional transmission expansion scenario.

# Planning for Decarbonization Targets Straw Proposal

Treatment of  
Fossil Fuel  
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## Questions:

- Is it more meaningful to model participation in a regional RA program as a scenario or reference case assumption?
- Are there specific assumptions required to make the RA program scenario meaningful e.g., constrain capacity need to the level assigned by the WRAP program?
- Would it be meaningful to discuss the difference between a forward showing RA program and an operational/reserve sharing program?
- Are there other high priority transmission scenarios or combinations of transmission and technologies?

# Planning for Decarbonization Targets Straw Proposal

Treatment of  
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## GHG emissions constraints in IRP modeling

- The IRP should achieve the 2030 and 2035 clean energy targets under typical or expected weather and hydro conditions in those years. The utility should demonstrate this for the Preferred Portfolio, any alternative portfolios that were considered for selection or in designing the Action Plan, and in all of the technology, demand, and regional development scenarios tested by the utility.
- The IRP should achieve the 2040 clean energy target across the same weather and hydro conditions that are considered within the utility's resource adequacy analysis. More specifically, the utility must show that in 2040, the portfolio can achieve resource adequacy with no GHG emissions. The utility should demonstrate this for the Preferred Portfolio, any alternative portfolios that were considered for selection or in designing the Action Plan, and in all of the technology, demand, and regional development scenarios tested by the utility.

# Planning for Decarbonization Targets Straw Proposal

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## Key long-term decarbonization planning questions

Staff recommends that the utilities use the scenarios described in Topics #1-3 to explore the following long term planning questions and to include narrative (and quantitative where possible) answers to these questions within the CEP:

1. What low regrets near term actions perform relatively well across all of the scenarios?
2. What near term actions might have large negative consequences (in terms of cost, risk, GHG emissions, or community impacts or benefits) under one or more of the scenarios?
3. Are there any critical junctures in relation to the scenarios at which the utility's strategy would materially change and what indicators will the utility use to identify whether those junctures are approaching?
4. Does the utility's long-term plan or the expected performance of the long-term plan have any critical dependencies related to the uncertainties explored through scenarios (e.g. availability of a technology or transmission infrastructure, or the expansion of regional coordination)? What would the implications be for the long-term plan if one or more of these scenarios were to occur?
5. What barriers to implementation would need to be addressed to implement the utility's long-term plan under each scenario? Which of these barriers can be addressed by the utility or the Commission and which of these barriers are out of the utility's or the Commission's control? Which of these barriers would need to be addressed in the next 5- 10 years?

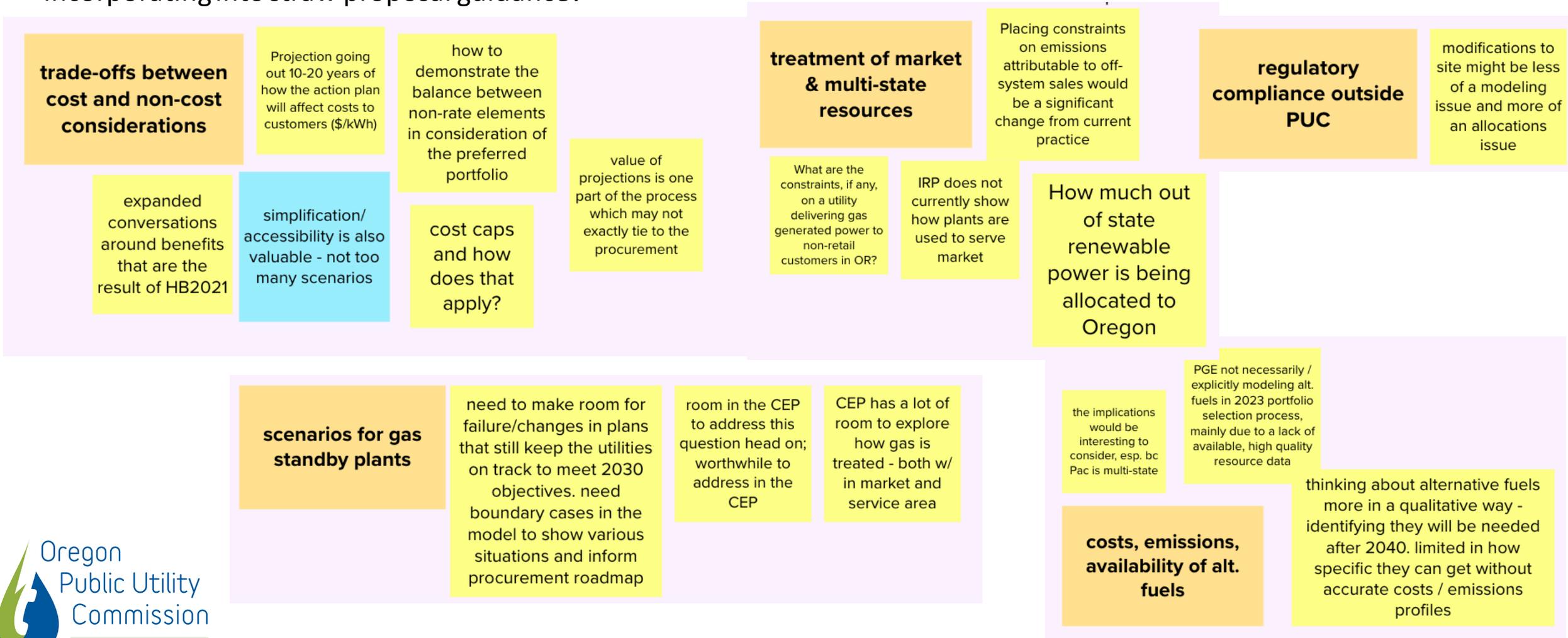
**Quick break: 5  
min**



# Staff's Straw Proposal on Treatment of Fossil Fuel Resources

# Review: Treatment of Fossil Fuels and Operational Resources Workshop (8/10)

We discussed: "What expectations do you have for how utilities treat fossil resources in the CEP, that staff should consider incorporating into straw proposal guidance?"



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## Treatment of Fossil Fuel Resources Straw Proposal

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### Fossil Fuel Retirements and Conversions

- Staff proposes that specific requirements for modeling retirements or conversions does not need to be prioritized for the first IRP/CEP but expects that this capability be adopted for future planning cycles.
- Staff also encourages the utilities to be clear about their rationale for including or not including conversions in this first IRP/CEP.

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## Treatment of Fossil Fuel Resources Straw Proposal

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### Fossil fuel resource operational changes

- If the Preferred Portfolio relies on operational constraints or other non-market-based reductions to the dispatch of fossil fuel resources within the Action Plan window, the utility should describe how it intends to implement those operational changes within the Action Plan. Will operational constraints be placed on individual units, or on the system as a whole?
- If the Preferred Portfolio relies on sales of fossil fuel-based generation to out-of-state counterparties to achieve the clean energy targets set forth in HB 2021, the utility should quantify those sales and the associated GHG emissions.
- If the Preferred Portfolio relies on sales of fossil fuel-based generation to out-of-state counterparties within the Action Plan window, the utility should describe how it intends to make those sales within the Action Plan.

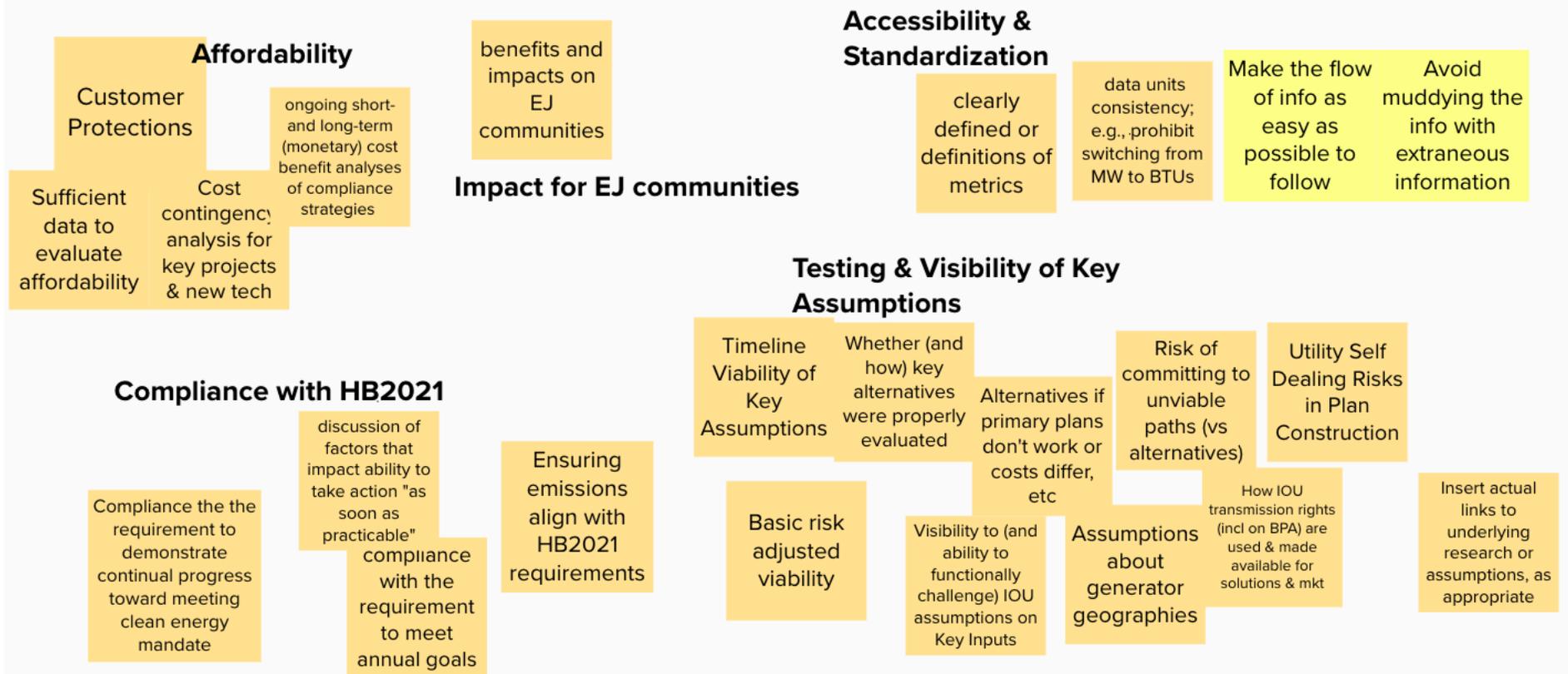
**Energizer: 10 min**



# Staff's Straw Proposal on Additional Data Transparency Topics

# Review: Data Transparency & Attribution Policy Workshop (8/26)

## Part 1: What outcomes of the Clean Energy Plan will you want data to be able to evaluate?





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Treatment of Fossil  
Fuel Resources  
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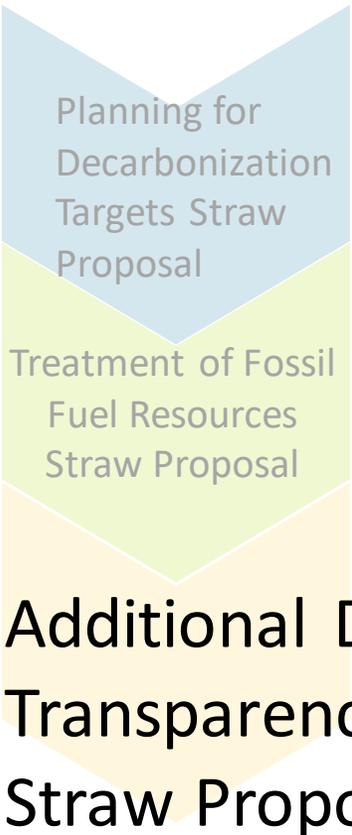
## Additional Data Transparency Straw Proposal

### GHG Emissions

- Utilities should report the total estimated annual GHG emissions across the Western Interconnect under various portfolios, including the Preferred Portfolio.
- Utilities should include a table that lists the emissions assumptions for each existing and proxy resource modeled in the IRP, developed in partnership with DEQ.
- Utilities should include in the CEP a graph of portfolio GHG emissions by year for the preferred portfolio, important sensitivities, and each scenario in Chapter 1 of this straw proposal.

### Questions:

- Is it more useful to see how the regional emissions change over time or compare regional emissions between different portfolios
- Simplified way to convey the impacts on regional emissions?
- Relevant portfolios?



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## Renewable Energy Credits (RECs)

- In the IRP, utilities should report the expected number of RECs that will be generated or acquired by the utility for all existing and projected resources in the preferred portfolio. Utilities should specify the RECs that will be retired on behalf of the utility/all customers, retired on behalf of voluntary customers, banked, or sold or otherwise transferred to customers in another state or an entity that is not captured by the previous list.
- Utilities should report this for each year for the Preferred Portfolio (for Oregon-allocated RECs).

### Questions:

- Does this capture the transparency needed from PacifiCorp as a multi-state utility?
- Is there any information related to the impact of participation in CAISO's extended day-ahead market (EDAM) or energy imbalance market (EIM) on the attribution of emissions to Oregon customers under HB 2021 that can or should be reported in the first IRP/CEP?

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## Fossil Fuel Resource Operations

- Utilities should report total annual generation and average heat rate for each fossil resource, explaining any impacts on generation and heat rate of operational changes and/or emissions constraints.
- Utilities should provide graphs in the CEP with 3 years of historical generation and average heat rate data for its fossil fuel resources.

### Questions:

- Would it still be useful for the utility to report projected data on an aggregate level by fuel type?



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## Data Standardization and Accessibility

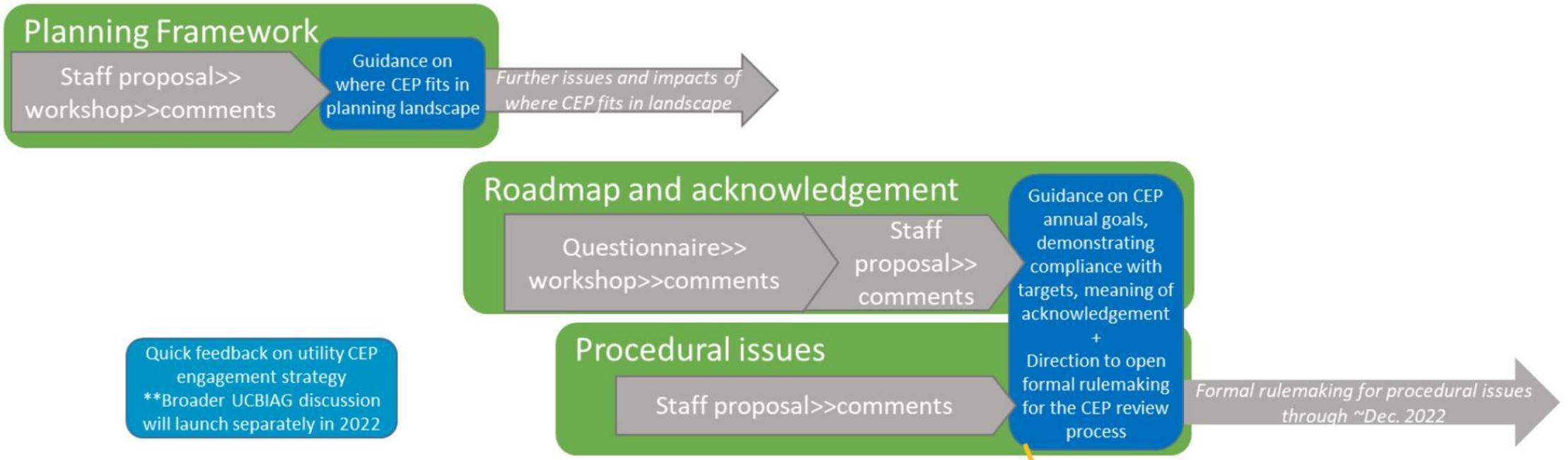
- Staff, utilities, and all interested stakeholders should collaboratively develop by February 1, 2023 an agreed upon approach to capturing standardized information and data related to their CEP and how they will make it publicly available in a similar fashion on their websites.
- The IRP/CEP, or a designated section that contains all of the information required by HB 2021, should be written for an introductory audience and include definitions of all key terms.

### Questions:

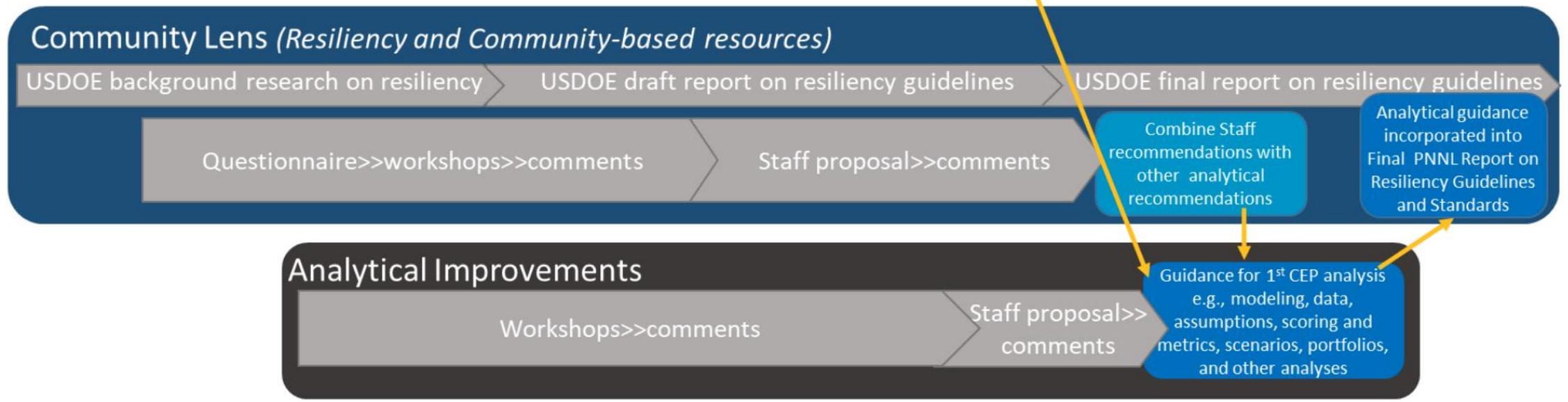
- Who can facilitate this process? Does it need to be done separately for each utility?
- What are parties' preferred processes for addressing issues related to the designation of confidential information?

# Big Picture Docket Review

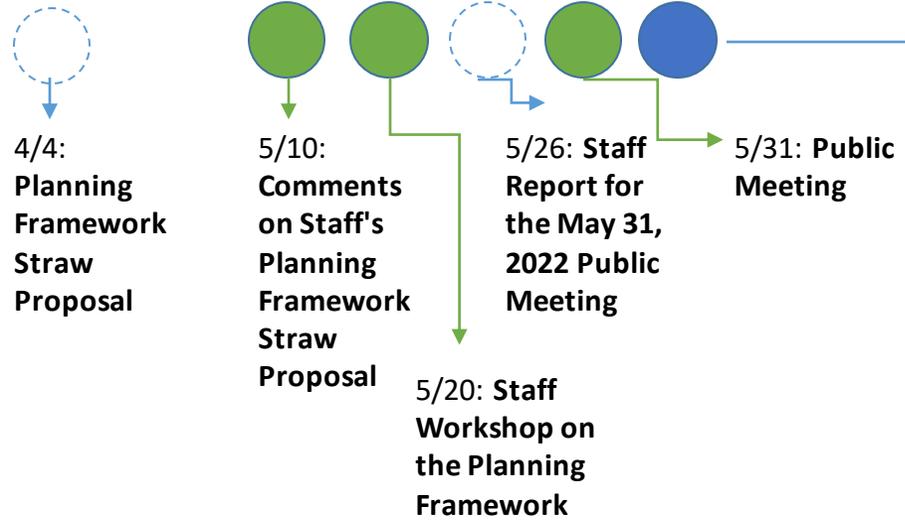
CEP purpose, format, process



CEP analytical requirements



CEP purpose, format, process



**6/3: Order 22-206**

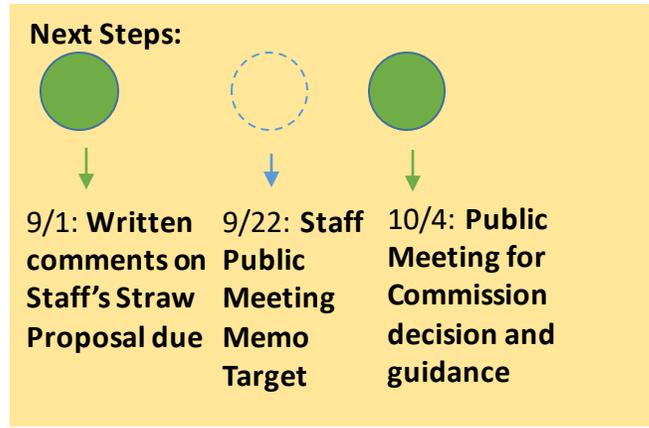
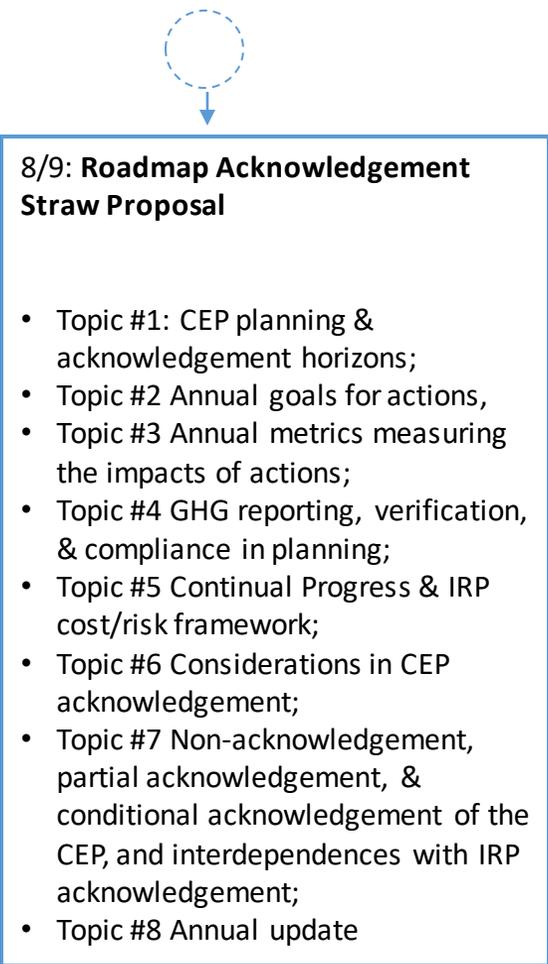
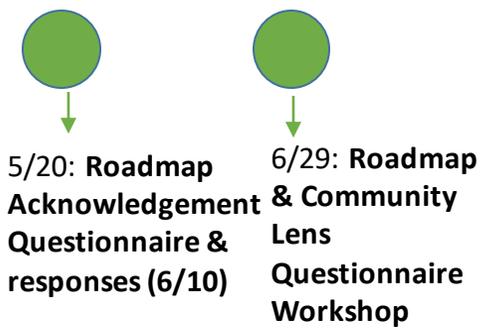
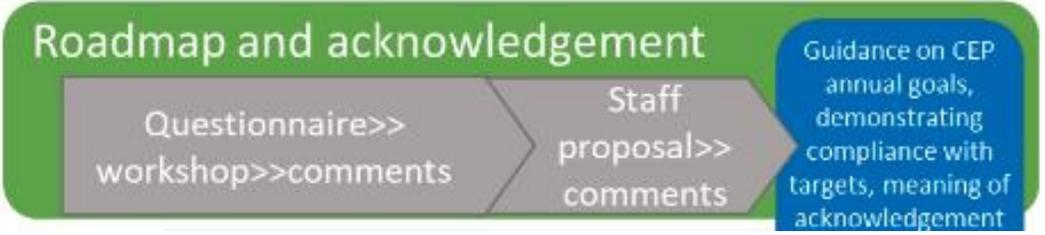
- Direct PacifiCorp (PAC or Company) and Portland General Electric Company (PGE or Company) to take the following actions for the first CEP filing:
  - File the CEP with the utility's next IRP, as a chapter, appendix, or accompanying filing. Upon request, the Commission may authorize either utility to file the CEP, or specific components of the CEP, within up to 180 days of filing the IRP if the utility demonstrates that filing the CEP with the IRP would create an undue burden.
  - File a CEP that is consistent with the IRP analysis and IRP Action Plan.
  - File a CEP that describes how the IRP and CEP have met the planning requirements of HB 2021.
- Direct PAC and PGE to file IRP Updates, after the first CEP filing, that include updates on utility actions and progress toward the annual goals described in the CEP.
- Take no action on compliance penalties at this time.

**Next Steps:**

- None

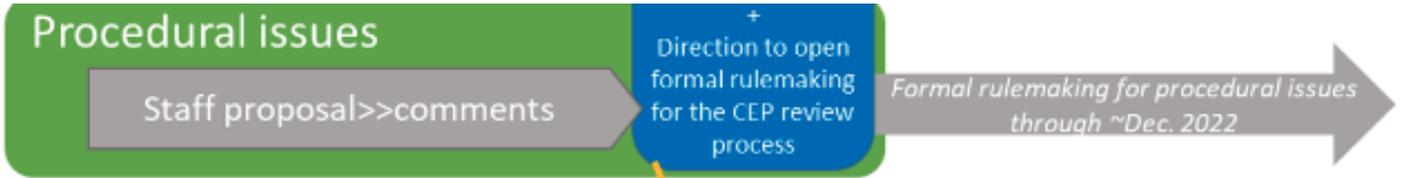
- Opportunity for stakeholder input
- Interim staff product
- Final workstream outcome

CEP purpose, format, process



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CEP purpose, format, process



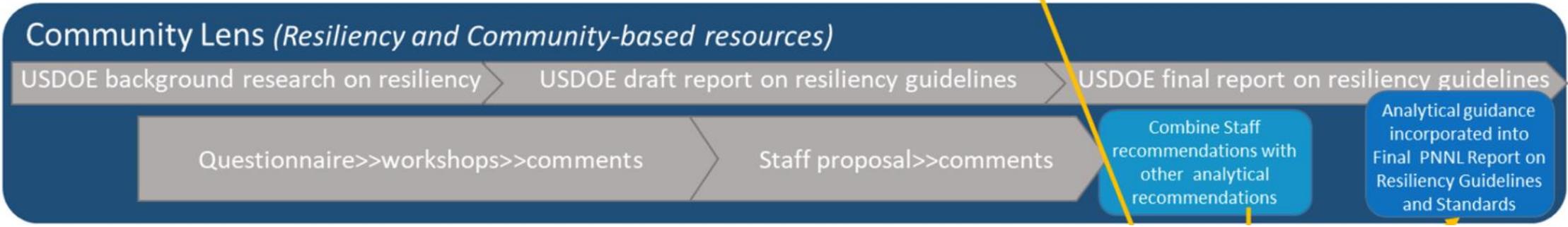
7/11:  
Engagement &  
Procedural  
Requirements  
Workshop

**Next Steps:**

|   |  |  |  |
|---|--|--|--|
|   |  |  |  |
| 9/13:<br>Staff draft<br>administrative<br>rules for CEP<br>filing and<br>review process | 10/3:<br>Comments<br>on Staff<br>draft rules | 10/21:<br>Staff<br>Public<br>Meeting<br>Memo<br>Target | 11/1: <b>Public<br/>Meeting for<br/>Commission<br/>to open<br/>formal<br/>rulemaking</b> |

- Opportunity for stakeholder input
- Interim staff product
- Final workstream outcome

CEP analytical requirements



●  
4/26: Community Lens Questionnaire

●  
6/15: Introduction to Resiliency Planning Workshop

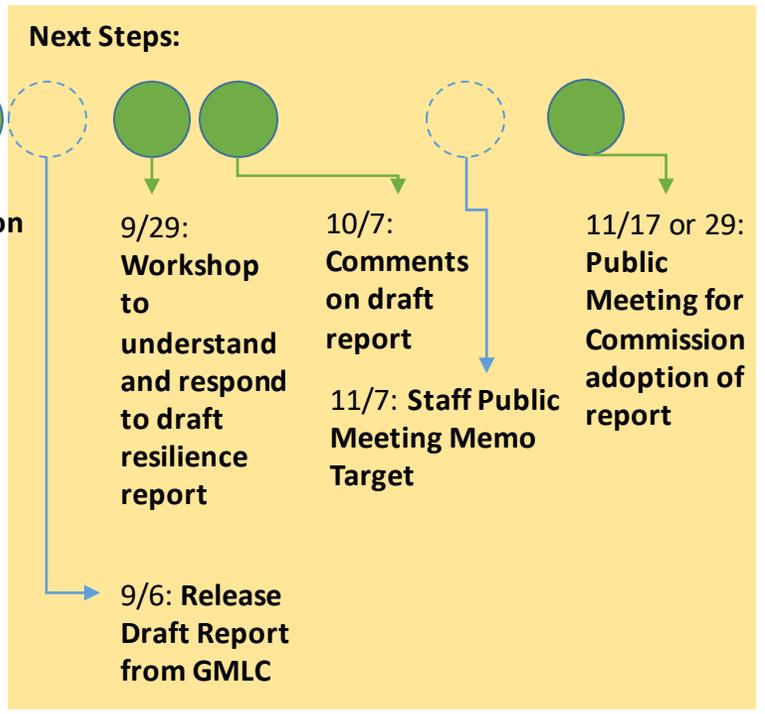
●  
6/25: Introduction to Community Benefits Methods Webinar

● ●  
6/29: Roadmap & Community Lens Questionnaire Workshop

○  
8/9: Community Lens Guidance Straw Proposal

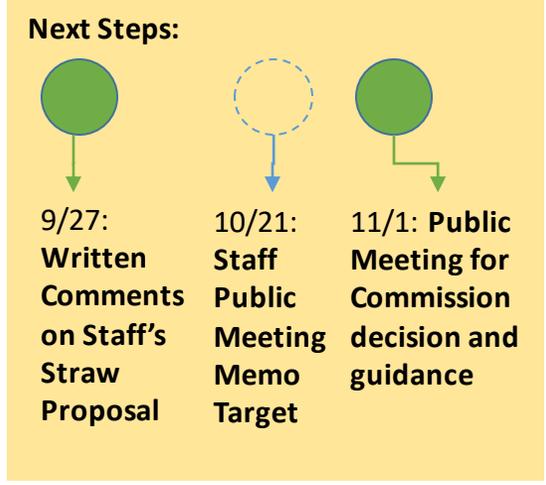
- Topic #1: Community Lens Acquisition Targets
- Topic #2: Opportunities Considered within Community Lens Potential Studies
- Topic #3: Community Benefits Indicators
- Topic #4: Off-setting Fossil Fuels with CBREs
- Topic #5: Resiliency-specific guidance

●  
9/1: Comments on Staff's Straw Proposal



- Opportunity for stakeholder input
- Interim staff product
- Final workstream outcome

CEP analytical requirements



9/6: Staff's Straw Proposals on Planning for Decarbonization Targets, Treatment of Fossil Fuel Resources, and Additional Data Transparency Topics

|  |   |  |
|--|---|--|
| <p><b>Chapter 1: Planning for Decarb Targets</b></p> <p>Topic #1: Clean Energy tech scenarios</p> <p>Topic #2: Demand scenarios</p> <p>Topic #3: Regional Development scenarios</p> <p>Topic #4: GHG emissions constrains in IRP modeling</p> <p>Topic #5: Key long term decarb planning questions</p> | <p><b>Chapter 2: Treatment of Fossil Fuel Resources</b></p> <p>Topic #1: Fossil fuel retirements and conversions</p> <p>Topic #2: Fossil fuel operational changes</p> | <p><b>Chapter 3: Additional Data Transparency Straw Proposal</b></p> <p>Topic #1: GHG emissions</p> <p>Topic #2: Renewable Energy Credits</p> <p>Topic #3: Fossil fuel resource operations</p> <p>Topic #4: Data standardization and accessibility</p> |
|--|---|--|

9/7: Presentation and discussion of Staff's Straw Proposal