



# 2023 Integrated Resource Plan

## Public-Input Meeting

### January 13, 2023

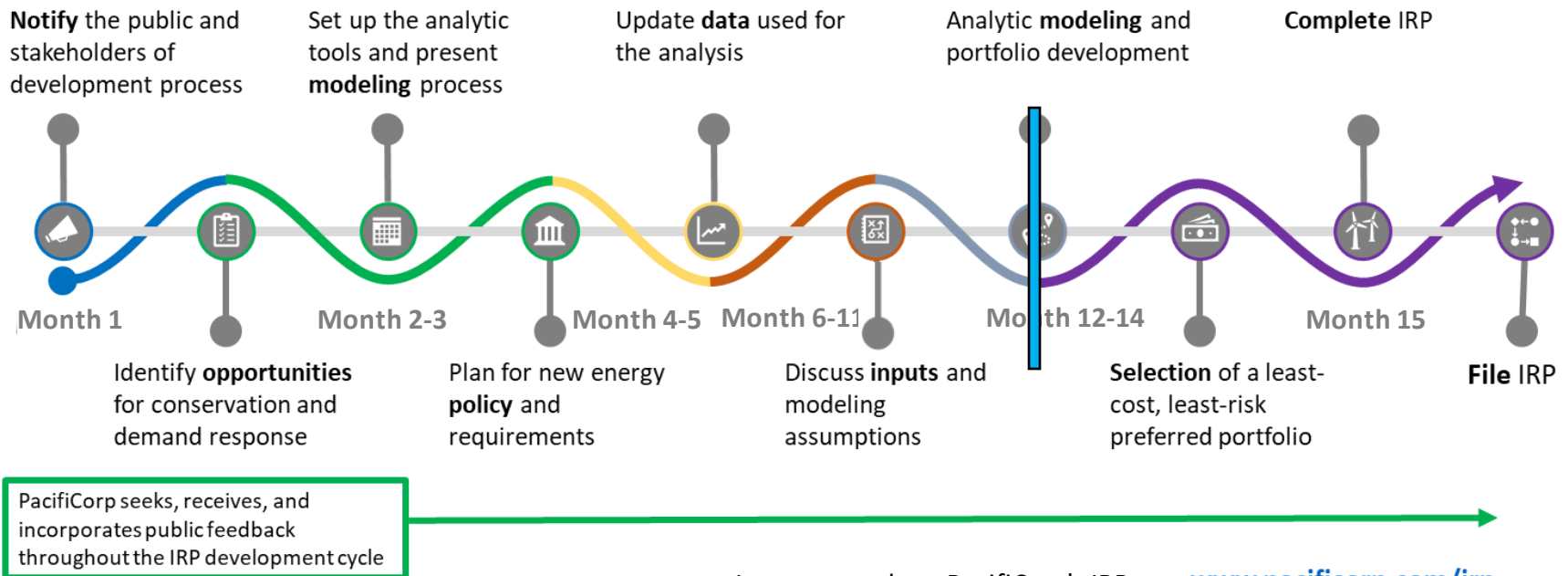


# Agenda



- This is a **RECORDED MEETING**
- Approximate times shown in Pacific time zone
  
- Introduction
- Extended Day-Ahead Market Update
- Oregon Clean Energy Plan Update
- Washington Clean Energy Transformation Act Update
- 2022 All-Source RFP Request for Proposal Update
- Lunch- (45 minutes)
- Distribution System Planning Update
- Transmission & Portfolio Selection Options Update
- Stakeholder Feedback Update
- Next Steps

# Overview of PacifiCorp's IRP Development Process



Learn more about PacifiCorp's IRPs at: [www.pacifiCorp.com/irp](http://www.pacifiCorp.com/irp)

# Status Update



## 2023 IRP Upcoming Public Input Meeting Date(s)

February 25, 2022 - Public Input Meeting 1

April 7, 2022 - Public Input Meeting 2

May 12, 2022 - Public Input Meeting 3

June 10, 2022 - Public Input Meeting 4

July 14, 2022 - Public Input Meeting 5

September 1-2, 2022 - Public Input Meeting 6

October 13-14, 2022 - Public Input Meeting 7

December 1, 2022 - Public Input Meeting 8

January 12-13, 2023 - Public Input Meeting 9

February 23-24, 2023 - Public Input Meeting 10



# Extended Day Ahead Market Update



# EDAM Builds on Tremendous Success of WEIM

## Diverse Footprint

- EIM started in 2014 with just CAISO and PacifiCorp
- Approximately 80% of WECC Load will be in WEIM by 2023
- WEIM automated dispatch has facilitated the energy transformation in the West through the integration of renewable generation

## Economic Benefits

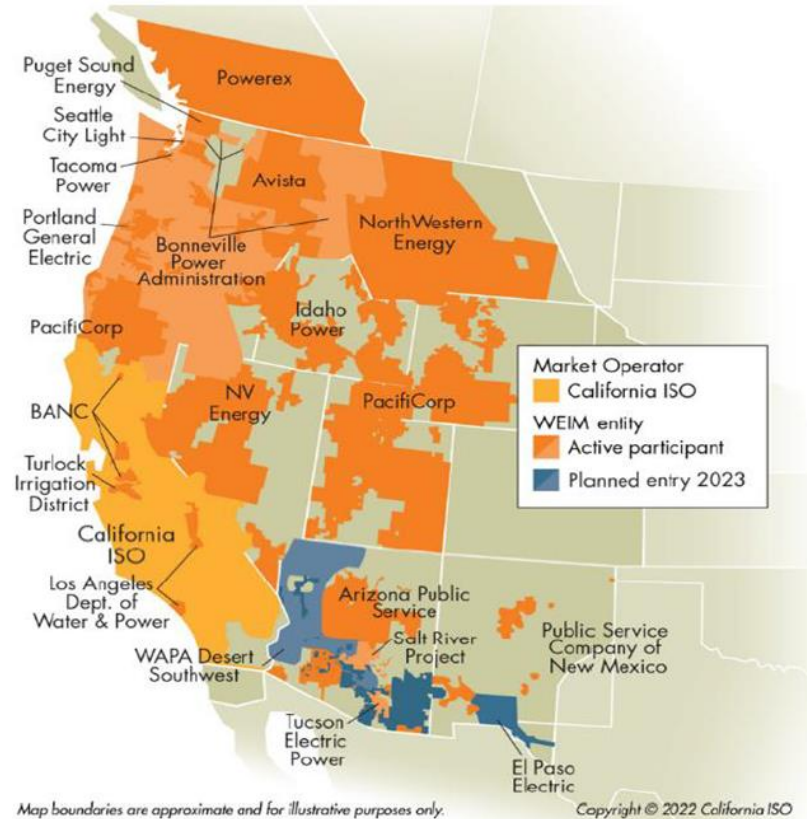
- \$2.9 billion total benefits since inception
- \$538 million PacifiCorp benefits since inception

## Operational Benefits

- Automated Dispatch has Improved Situational Awareness and Reliability

## EDAM Benefits

- The optimization of all load, resources, and available transmission has potential to further unlock regional diversity, resulting in greater benefits for customers
- Best opportunity to maintain inclusive west-wide footprint
- Diversity benefit of the footprint shared among participants, reduced uncertainty requirement
- Ability to participate in both EDAM and WRAP





# EDAM Schedule



February 2023	Joint ISO Board of Governors and WEIM Governing Body meeting ( <b>decision</b> )
<b>Q1 2023</b>	Draft tariff publication and stakeholder process
<b>Q2 2023</b>	FERC filing
<b>Q4 2023</b>	Implementation
<b>2024</b>	EDAM go-live coordinated with interested entities

For More Information:

[California ISO - Extended day-ahead market \(caiso.com\)](https://www.caiso.com)



# Oregon Clean Energy Plan Update





# Oregon Clean Energy Plan (HB 2021)



## **Overview:**

- Requires retail electricity providers to reduce GHG emission associated with electricity sold to Oregon consumers by:
- 80% below baseline emissions levels by 2030;
- 90% below baseline emissions levels by 2035; and
- 100% below baseline emissions levels by 2040

## **Timeline:**

- July 2021 – CEP signed into law, effective September 25, 2021
- January 2022 and on-going UM 2225 Staff's Investigation into CEP of a near-term focus on OPUC guidance for implementation
- March 2023 – PacifiCorp will file their first Clean Energy Plan with the IRP filing

# Oregon Clean Energy Plan (HB 2021)



## **Status Update:**

- ODEQ's role in implementing HB 2021 is to verify emission projections and forecasted reductions in CEPs based on methodology specified in OAR 340 division 215, Oregon's Greenhouse Gas Reporting Program.
- PacifiCorp, Portland General Electric, Oregon Department of Environment Quality (ODEQ) and Oregon Public Utility Commission (OPUC) have been engaged on establishing protocols for ODEQ emissions target compliance verification, including:
  1. Emissions Analysis Assumptions
  2. Verification Requirements (e.g data granularity and format)
  3. Communication and file transmittal process
- DEQ is developing supplemental guidance to be shared publicly in January 2023. Guidance will include emission factor assumptions for:
  - Existing specified resources
  - Unspecified resources and market purchases (0.428 MT CO<sub>2</sub>e/MWh)
  - Future/proxy resources selected in IRP modeling's
  - Future technology conversions (e.g. coal to gas)

# Oregon Clean Energy Plan (HB 2021)



## **Status Update:**

- PacifiCorp provided ODEQ a sample file:
  - How the calculation will be performed from the IRP portfolio data
  - Data format and granularity DEQ can expect to receive for verification
- OPUC and ODEQ met the first week of January 2023 to address how files will be transmitted, data confidentiality and what formal verification from DEQ looks like. Final protocols will be established prior to CEP filing.
- Formal data transmittal and verification by ODEQ will occur after the CEP is filed.



# Washington Clean Energy Transformation Act Update



# Washington Clean Energy Transformation Act (2019 WA. Laws SB 5116)



## Overview:

- Created several state decarbonization policies, including:
- Eliminating coal-fired resources from Washington rates by the end of 2025;
- Requiring greenhouse gas-neutral retail electricity in Washington by 2030;
- Requiring carbon free retail electricity in Washington by 2045.

## Timeline:

- May 2019 – CETA signed into law
- June 2019 through December 2021 – CETA Stakeholder discussions
- December 2021 – PacifiCorp files 2021 Clean Energy Implementation Plan
- June 2022 – WUTC Staff initiates Complaint on PacifiCorp's CEIP
- November 2022 – Settlement Reached in Complaint on PacifiCorp's CEIP
- December 2022 – Staff withdrawal of CEIP Complaint. CEIP docket currently in process. Expected resolution by March 2023.
- March 31, 2023 - file CETA progress report
  - Winter---Summer: Continued Resolution of PacifiCorp's 2021 Re-Filed CEIP



# 2022 All-Source Request for Proposals (2022 AS RFP) Update





# 2022 RFP Update



- 14 benchmark bids received on December 9, 2022
- Notice of intent to bids (NOIs) received from around 35 developers representing over 120 resources across six states representing approximately 500 bid variations between ~25-~1500 MW. Majority of resources bid will include a storage offering.
- Market bids due February 14, 2023. PacifiCorp will accept:
  - All technology types (all resource RFP)
  - Power purchase agreements (PPA) from generating resources
  - Tolling agreements from energy storage resources
  - Build transfer agreements (BTA) for utility ownership
  - Professional services contracts for demand response resources
- Three independent evaluators retained representing Oregon, Utah and Washington.
- More information at: <https://www.pacifiCorp.com/suppliers/rfps/2022-all-source-rfp.html>



# Distribution System Planning Update



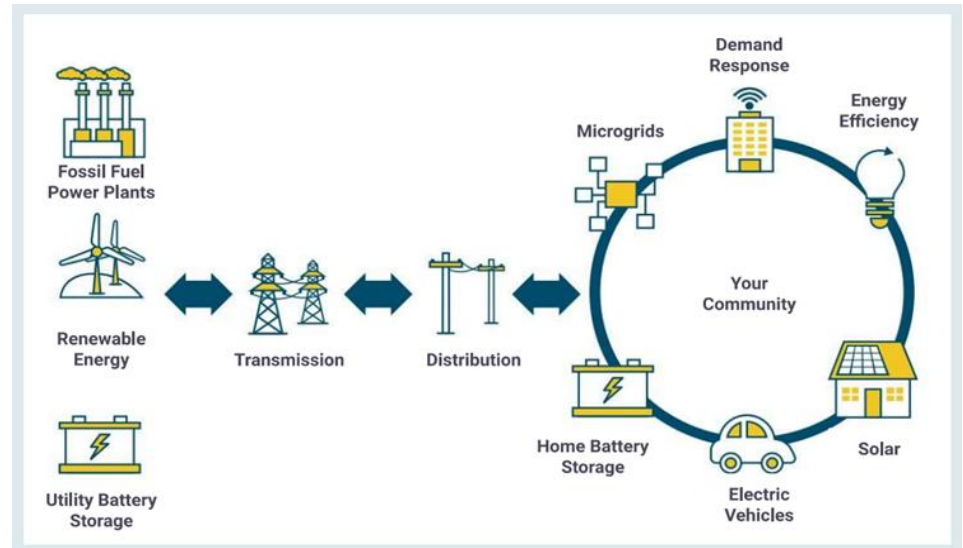
# Introduction & Background

## What is Oregon DSP?

- Based on guidelines proposed by Oregon PUC staff
- Increased transparency and modernization of traditional DSP to meet the needs and leverage the capabilities of the modern grid

## Key Changes to Traditional DSP

- Increased community engagement
- Consideration of non-traditional solutions to meet grid needs
- Enhanced forecasting
  - 24-hour load profiles
  - Inclusion of incremental electric vehicle and solar adoption rates



# Activities since we last met (July 14<sup>th</sup>, 2022)



- Filed Oregon DSP Part 2 on August 15<sup>th</sup>, 2022
- Defined Near-Term Action Plan ('23-'26) in the DSP Part 2 filing:

- 1.) DSP analytical projects and pilot evaluations
- 2.) DSP data evaluation and improvement
- 3.) DSP toolset evaluation and implementation
- 4.) DSP process improvements
- 5.) DSP specific outreach and engagement (local and statewide)
- 6.) Utility staffing and development

- Presented summary of DSP Part 2 filing to the OPUC on September 15<sup>th</sup>, 2022





# Progress on Near-Term Action Plan Since Filing DSP Part 2

## Analytical projects and pilot evaluations

- Klamath Falls Non-Traditional Solution Pilot Analysis
- Statewide Irrigation Solar Sizing Analysis

## Data Evaluation and Improvement

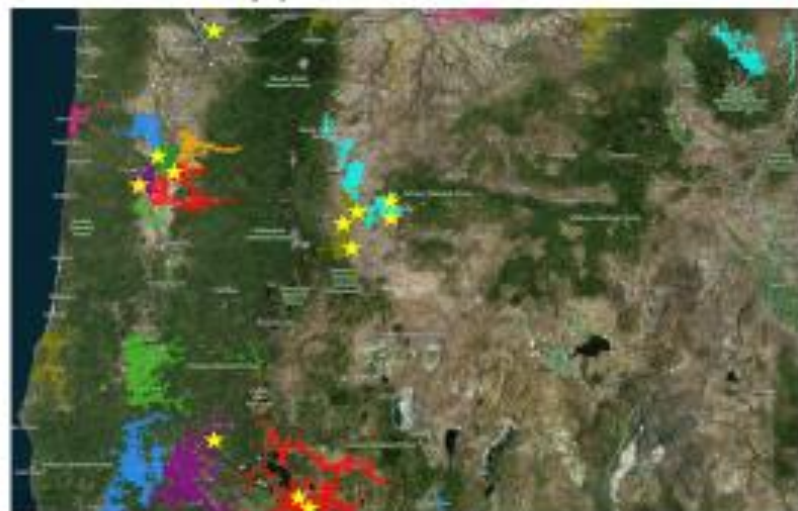
- Evaluate AMI data and use cases
  - Substitute for missing SCADA
  - Observed voltage violations during peak and minimum loading
  - Load profiles by customer class

## Utility Staffing and Development

- DSP Manager (started September 2022)
- DSP Data Governance Specialist (position posted)
- DSP Program Specialist (position posted)

## DSP Process Improvements

- Analyze Potential 2023 DSP Study Areas (In Progress)
  - High level analysis on 12 circuits with a diverse set of characteristics across Oregon service territory
  - Goal: Based on analysis findings identify 2-4 study areas to go through modernized DSP study process





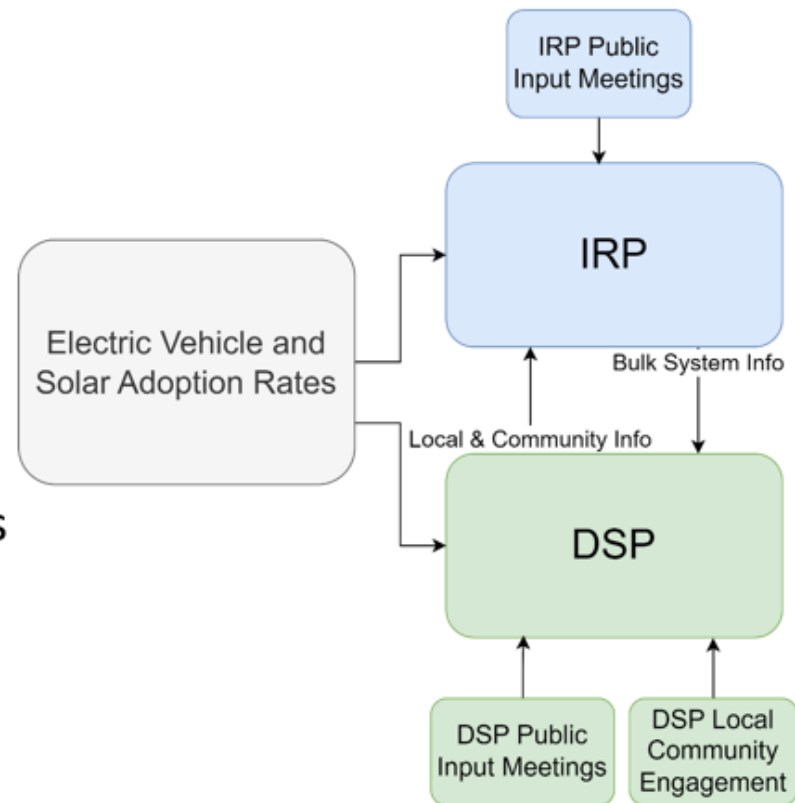
# Preliminary 2023 Near-Term Action Plan Roadmap Highlights

Q1	Q2	Q3	Q4
<b>DSP Process Improvements</b> <i>DSP Study Areas:</i> <ul style="list-style-type: none"> <li>Finalize study area selection</li> <li>Local meetings to review study areas and forecasts</li> </ul> <i>Collaboration:</i> <ul style="list-style-type: none"> <li>Provide DSP Input to Clean Energy Plan and IRP</li> <li>Participate in Community Benefits and Impacts Advisory Group</li> <li>Educate Internal Stakeholders on DSP</li> </ul> <b>Outreach and Engagement</b> <ul style="list-style-type: none"> <li>Statewide workshop #1</li> </ul> <b>Utility Staffing &amp; Development</b> <ul style="list-style-type: none"> <li>Hire Data Governance Specialist</li> <li>Hire Program Specialist</li> <li>Set 2023 Development Goals</li> </ul> <b>Data Evaluation and Improvement</b> <ul style="list-style-type: none"> <li>Document current data structures and flows</li> </ul>	<b>DSP Process Improvements</b> <i>DSP Study Areas:</i> <ul style="list-style-type: none"> <li>Grid need and solution Identification</li> <li>Develop new methods/approaches within studies including analysis of non-traditional solutions</li> </ul> <i>Collaboration:</i> <ul style="list-style-type: none"> <li>Continued collaboration with Clean Energy Plan and IRP</li> <li>Continued participation in Community Benefits and Impacts Advisory Group</li> </ul> <b>Toolset Evaluation and Implementation</b> <ul style="list-style-type: none"> <li>Document data requirements and use cases based on input from DSP study area analysis (As Needed)</li> </ul>	<b>DSP Process Improvements</b> <i>DSP Study Areas:</i> <ul style="list-style-type: none"> <li>Continued work from Q2</li> </ul> <i>Collaboration:</i> <ul style="list-style-type: none"> <li>Continued collaboration with Clean Energy Plan and IRP</li> <li>Continued participation in Community Benefits and Impacts Advisory Group</li> </ul> <b>Outreach and Engagement</b> <ul style="list-style-type: none"> <li>Local meetings to review DSP study area findings</li> <li>Statewide workshop #2</li> </ul> <b>Toolset Evaluation and Implementation</b> <ul style="list-style-type: none"> <li>Define toolset requirements (As Needed)</li> <li>Begin preliminary toolset evaluation (As Needed)</li> </ul>	<b>DSP Process Improvements</b> <i>DSP Study Areas:</i> <ul style="list-style-type: none"> <li>Finalize Studies</li> <li>Define Next Steps</li> </ul> <i>Collaboration:</i> <ul style="list-style-type: none"> <li>Continued collaboration with Clean Energy Plan and IRP</li> <li>Continued participation in Community Benefits and Impacts Advisory Group</li> </ul> <b>Outreach and Engagement</b> <ul style="list-style-type: none"> <li>Local meetings to communicate final findings and next steps</li> <li>Statewide workshop #3</li> </ul> <b>Toolset Evaluation and Implementation</b> <ul style="list-style-type: none"> <li>Implement data improvements and new toolsets (As Needed)</li> </ul>



# Continuing Collaboration With IRP

- Ensure consistency of inputs and assumptions for forecasting
  - Electric Vehicle and Solar Adoption Rate Studies
- Communicate relevant findings from DSP
  - Learnings from forecast meetings with local stakeholders
  - Plans to address grid needs with non-traditional solutions
- Collaboration on data and toolset improvements



# Additional DSP Information



## DSP Email / Distribution List Contact Information

- [DSP@pacificorp.com](mailto:DSP@pacificorp.com)

## DSP Webpages

- [Pacific Power Oregon DSP Website](#)
- [Planificación del Sistema de Distribución de Oregon \(pacificorp.com\)](#)

## Additional Resources

- [PacifiCorp's DSP Part 1 Report](#)
- [PacifiCorp's DSP Part 2 Report](#)
- [DSP Pilot Project Suggestion Form](#)



# Transmission & Portfolio Selection Options Update



# Enabled Resources



Transmission Option	Year	Wind	Solar	Battery	Other
CON Clover > TxCON	2029		X	X	
CON Clover > TxCON	2029		X	X	
CON Clover > TxCON	2029		X	X	
CON Clover > TxCON	2026		X	X	Geothermal
CON Central Oregon>TxCon	2026		X	X	
INC Southern Oregon > Central Oregon	2028		X	X	
CON Yakima > TxCON	2026		X	X	
INC D2 Wyoming East > Bridger	2029	X			
CON Goshen > TxCon	2027		X	X	Nuclear Plant
CON Borah > TxCON	2026		X		
CON BPA NITS > TxCON	2026			X	
CON Central OR > TxCON	2028		X	X	
CON Utah North 10 > TxCON	2026		X		
CON Utah North 11 > TxCON	2026		X		
CON Utah North TxCON	2028		X	X	Pumped Hydro
CON Walla Walla > TxCON	2027	X	X	X	
CON Willamette Valley> TxCON	2025		X	X	
CON Willamette Valley> TxCON	2026	X	X	X	

# Example Resource Selections



Transmission, Year and Limit	Solar	Wind	Storage	Nuclear	Non-Emitting Peaker	Total
Yakima Upgrade 2026 450 MW	450 MW	0 MW	450 MW	0 MW	0 MW	900 MW
Willamette Valley Upgrade 2026 719 MW	475 MW	100 MW	720 MW	0 MW	0 MW	1,295 MW
Clover Upgrade 2029 2373 MW	2373 MW	0 MW	2173 MW	0 MW	0 MW	4,546 MW
Bridger 2037 1415 MW	480 MW	330 MW	1125 MW	345 MW	205 MW	2,485 MW



# Stakeholder Feedback





# Stakeholder Feedback Form Update



- 30 stakeholder feedback forms submitted to date
- Stakeholder feedback forms and responses can be located at:  
[pacificorp.com/energy/integrated-resource-plan/comments](https://pacificorp.com/energy/integrated-resource-plan/comments)
- Depending on the type and complexity of the stakeholder feedback, responses may be provided in a variety of ways including, but not limited to, a written response, a follow-up conversation, or incorporation into subsequent public-input meeting material
  - Generally, written responses are provided with the form and posted online at the link mentioned above
- Stakeholder feedback following the previous public input meetings is summarized on the following slides for reference

# Summary – Recent Stakeholder Feedback Forms



Stakeholder	Date	Topic	Brief Summary*	Response*
Sierra Club	November 18, 2022	Inflation Reduction Act	Relationship between IRA and load forecast assumptions	<b><u>Posted</u></b>
Utah Clean Energy	November 23, 2022	Lila Canyon Coal Mine fire	Risk and Ratepayer Assumptions resulting from damage to Lila Canyon	<b><u>Posted</u></b>
Interwest Storage Alliance	December 1, 2022	Transmission	Advanced Conductor, Grid Enhancing Technology, Advanced Transmission Technology & Cluster Study Details	<b><u>Posted</u></b>
Renewable Energy Coalition	December 8, 2022	Qualifying Facilities	QF Renewal and Success Rates	<b><u>Posted</u></b>
Sierra Club	December 20, 2022	Multiple Topics	Inflation Reduction Act, Transmission Assumptions, Reliability Adjustments	<b><u>Meeting Held 1/6</u></b>

\*Full comments and PacifiCorp's responses can be found online at <https://www.pacificorp.com/energy/integrated-resource-plan/comments.html>



# Wrap-Up/Additional Information





# Additional Information

- 2023 IRP Upcoming Public Input Meetings:
  - February 23-24, 2023 (Thursday-Friday)
- Public Input Meeting and Workshop Presentation and Materials:
  - [pacificorp.com/energy/integrated-resource-plan/public-input-process](https://pacificorp.com/energy/integrated-resource-plan/public-input-process)
- 2023 IRP Stakeholder Feedback Forms:
  - [pacificorp.com/energy/integrated-resource-plan/comments](https://pacificorp.com/energy/integrated-resource-plan/comments)
- IRP Email / Distribution List Contact Information:
  - [IRP@PacifiCorp.com](mailto:IRP@PacifiCorp.com)
- IRP Support and Studies:
  - [pacificorp.com/energy/integrated-resource-plan/support](https://pacificorp.com/energy/integrated-resource-plan/support)