

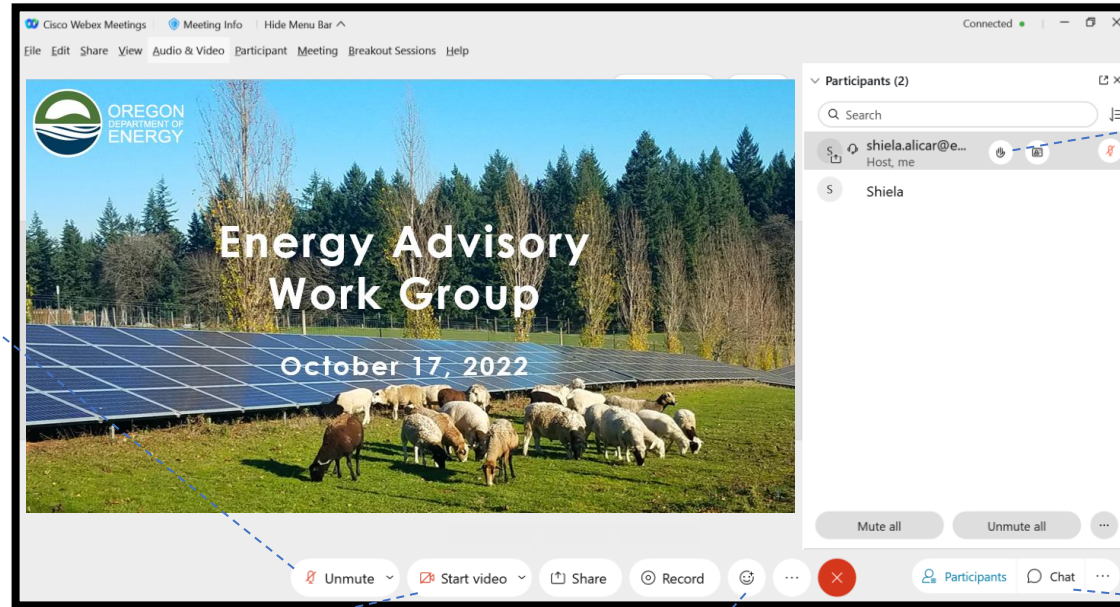


Energy Advisory Work Group

October 17, 2022



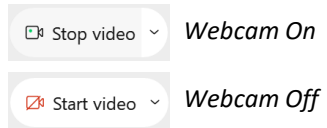
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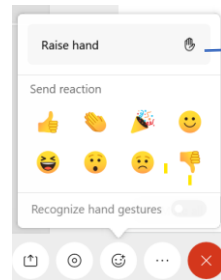
Audio Options



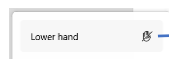
Video Options



Reactions



Click to Raise your hand.



Click on Lower hand when you are done.

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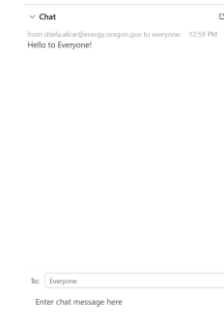
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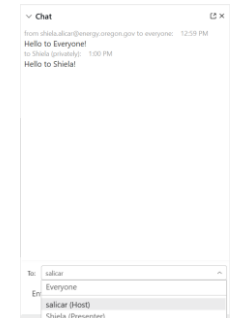


Chat

You can chat to Everyone in the meeting.



You can send a private message to the Host or Presenter (or all Panelists when there is a Panel).



AGENDA

1:00 p.m.	Welcome & Updates Since 10/5 Meeting	ODOE Director Janine Benner EAWG Members
1:10 p.m.	2022 Biennial Energy Report Update <ul style="list-style-type: none">- Brief Overview/Update- Feedback from EAWG Members on Recommendations	ODOE Director Janine Benner Technology & Policy Manager Jessica Reichers EAWG Members
1:40 p.m.	ODOE Strategic Plan Updates <ul style="list-style-type: none">- Strategic Evaluation Initiative Discussion- Progress Dashboard Highlights (as there is time)	ODOE Director Janine Benner Central Services Assistant Director Michael Williams EAWG Members
2:20 p.m.	Closing Comments	All



OREGON
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ENERGY

2022 Biennial Energy Report

Jessica Reichers

BER UPDATE

Executive Summary & Intro
Energy by the Numbers
Energy History Timeline

Energy Resource & Technology
Reviews

- Electricity-Generating Technologies
- Electricity Storage Technologies
- Energy Efficient Building Technologies
- Clean & Efficient Vehicles
- Transportation Fuels
- Hydrogen

Energy 101s

- Oregon Fuel Action Plan
- Backup Power
- Oregon State Climate Programs and Actions
- Infrastructure Investments and Jobs Act of 2021
- Electrification Options in the Agricultural Sector
- Highlights of Consumer Energy Cost Drivers
- Radioactive Waste in Oregon
- Public Utility Regulatory Policies Act of 1978 (PURPA)
- Electric Sector Resource Planning and Acquisition
- Long-Duration Energy Storage

Policy Briefs

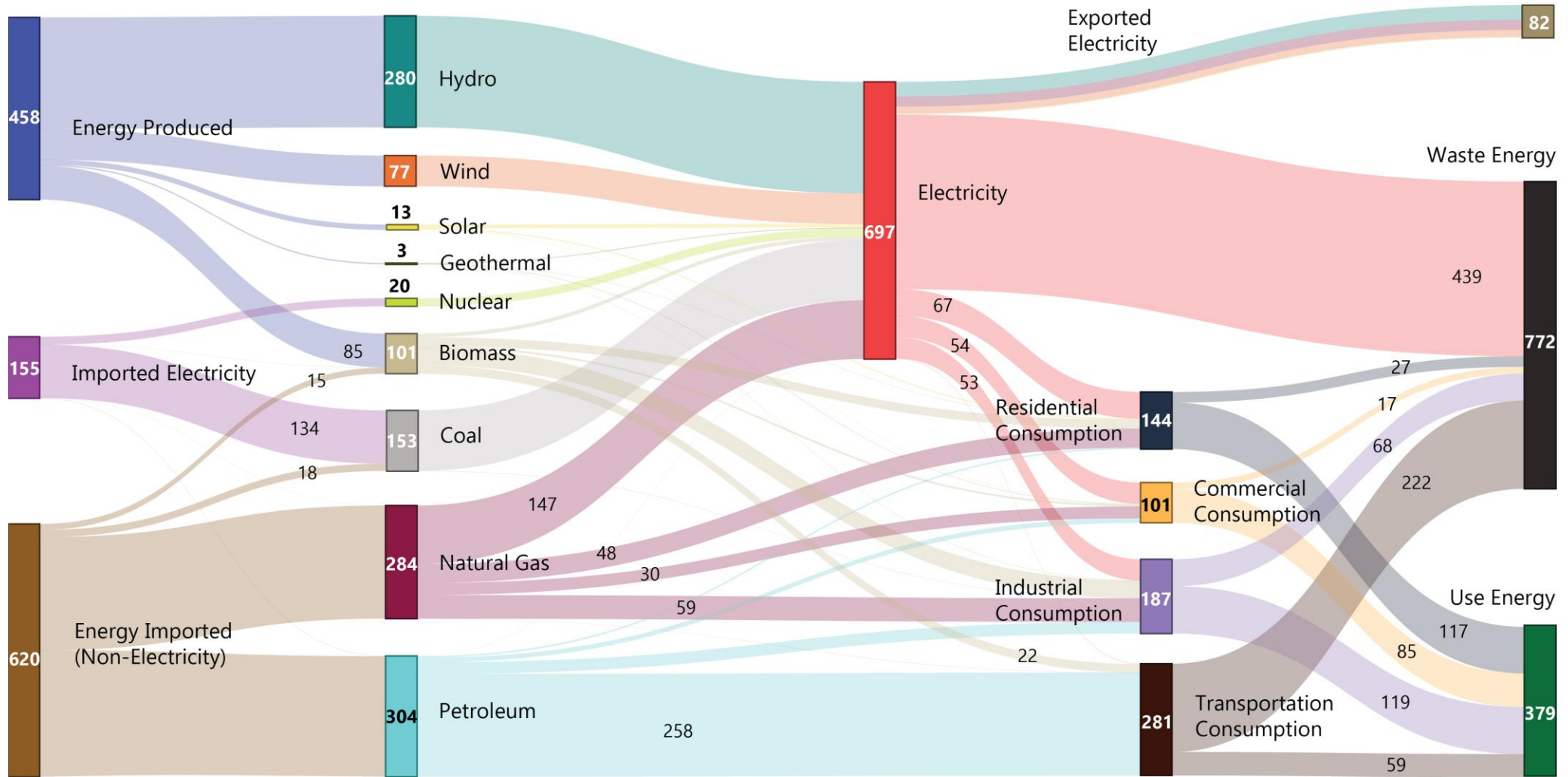
- Pathways to a Clean Energy Future
- Oregon Clean Energy Opportunity Campaign Case Study
- Oregon Energy Businesses: Workforce and Supply Chain Perspectives
- Expanding Energy Efficiency in Existing Buildings
- Beyond Energy Savings: Non-Energy Benefits of Energy Efficiency

Conclusion

Recommendations

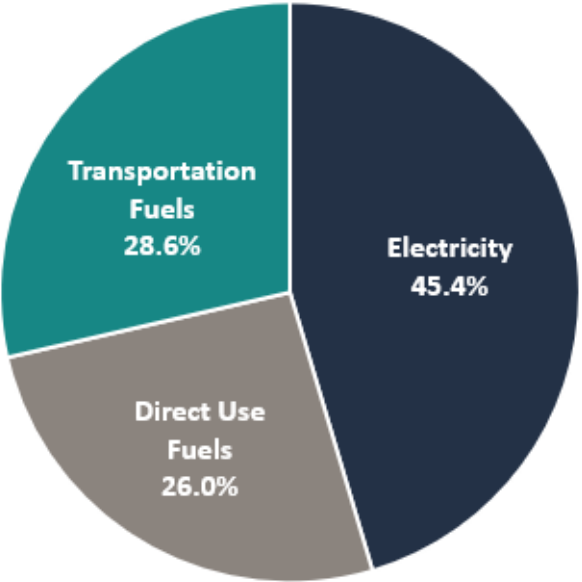
Closing Materials

BER PREVIEW

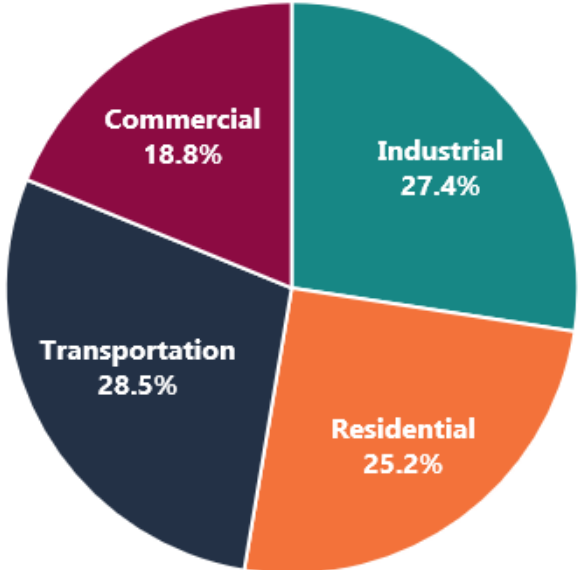


Numbers are in trillions of British thermal units (Btu)

Oregon's Energy Story | Energy by the Numbers
 Energy Flow – from production and imports to use

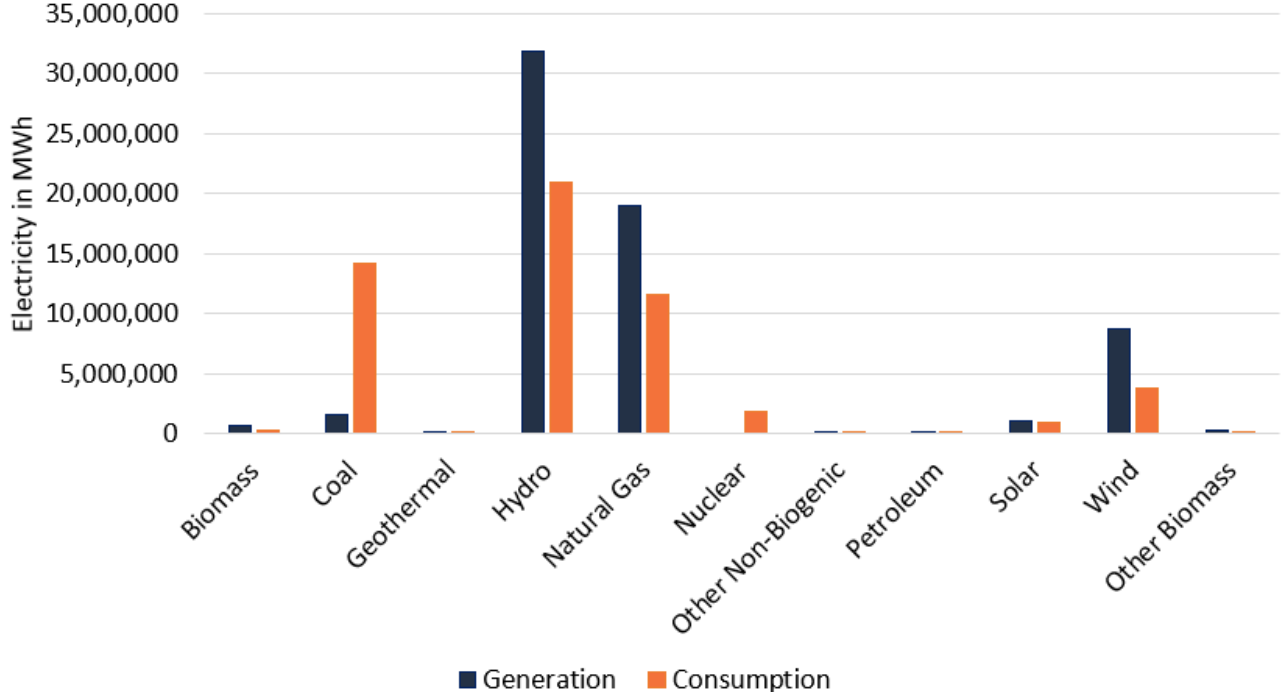


Consumption by Source (2020)

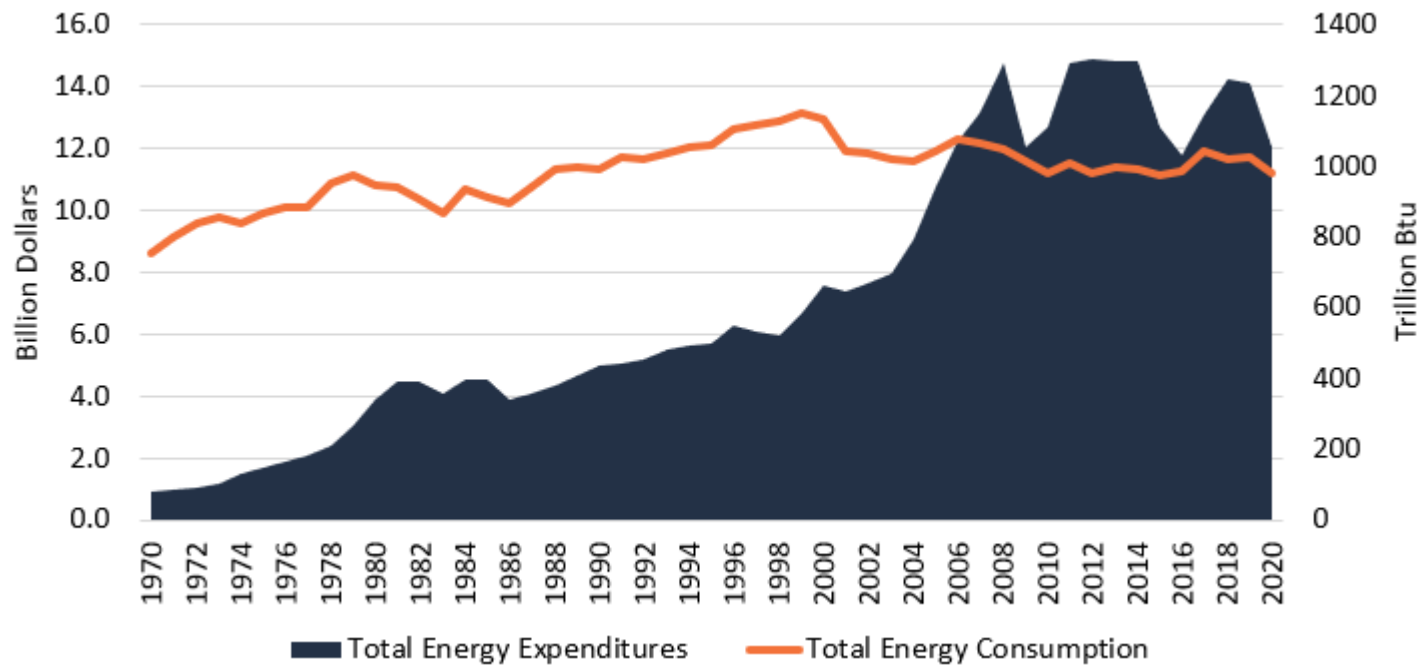


Consumption by Sector (2020)

Oregon's Electricity Generation and Consumption (2020)



Oregon's Total Energy Expenditures vs. Total Energy Consumption



\$12.1 billion

Oregonians spent on energy in 2020

4.95%

Percentage of Oregon's GDP spent on energy in 2020.

Oregonians sent about **\$5.7 B**

in transportation dollars to other states and countries where extraction, processing, and refining of transportation fuels occurs

OREGON STATE COLLEGE
May 1941

... as part of OAC Electric...
Electrification Exhibit, 1953-1959. Image courtesy of OSU...

EVENT

First Aluminum Smelter in the Northwest
1940



Left image- Alcoa Aluminum Co. poster during World War II, courtesy National Archives.

More →

3d

EVENT

Woody Guthrie & the "Columbia River Songbook"
1941



Check out the Audio link to listen Guthrie's songs from the "Columbia River Songbook"!

More →

EVENT

BPA's Motion Picture Information division starts the motion picture "The..."
1941



Watch

EVENT

Grand Coulee Dam begins Operation and Flooding of Kettle Falls
1941



Images (1) Audio (3)

1941

✕



"Roll On Columbia"

WOODY GUTHRIE & THE "COLUMBIA RIVER SONGBOOK"

Check out the Audio link to listen Guthrie's songs from the "Columbia River Songbook"!

Woody Guthrie starts work at BPA. He was hired to write songs and produced 26 songs in the 30 days of his employment which later were collected into the "Columbia River Songbook." The most famous of these songs is "Roll On, Columbia," the state folk song of Washington.



First Aluminum Smelter in the... ◀ 26 of 125 stories ▶ BPA's Motion Picture Information...

Heat Pumps

Timeline

- **1834** — Refrigeration was a precursor to heat pumps, as Jacob Perkins filed the first patent in England for mechanical refrigeration to make ice.⁷
- **1855** — Peter Von Rittinger developed the first heat pump (heating only) at an Austrian Salt mine. A Swiss fuel shortage drove development for commercialization in the late 1930s and early 1940s.⁷
- **1968** — Mitsubishi releases a wall-mounted split-system room air conditioner, also called a ductless heat pump.⁸
- **1970s** — U.S. adoption of the technology starts to increase.⁹
- **2000s** — Widespread incentives became available for heat pumps, including the first tax credits in 2006-2007.¹⁰ Local utility incentive programs and market transformation efforts focusing on promoting heat pumps picked up in the late 2010s and early 2020s.¹¹
- **2022** – SB 1536 passed in Oregon establishing two statewide heat pump programs, one for incentives for homeowners and one rebate program for rental homes.
- **2022** – Federal Inflation Reduction Act created large scale investment in energy efficiency and clean energy including a tax credit and rebate program for residential heat pumps.

Heat Pumps in Oregon and the Northwest

In 2017, about **15 percent of single-family households in the Northwest used a heat pump** as the primary heating system (11.3 percent air source heat pump; 3.4 percent mini-split heat pump; and 0.7 percent geothermal (or ground source) heat pump).⁴



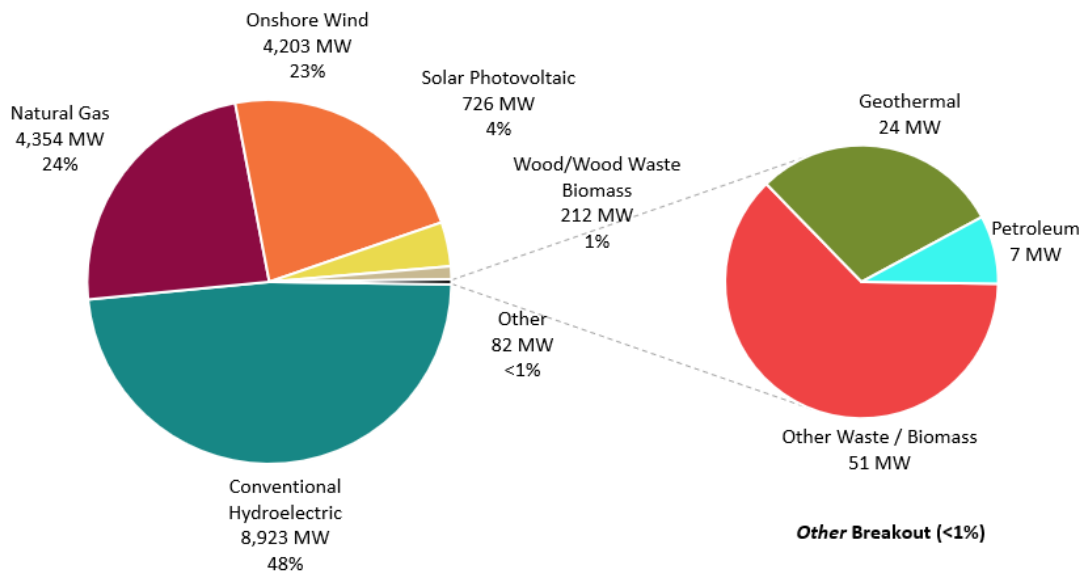
Research from Washington state showed an **increase in the number of households using electricity for heating** — from approximately 20 to 90 percent of surveyed respondents — indicating an increase in homes using electric technologies like heat pumps.⁵

Oregonians could **save about 50 percent on home heating costs** with a heat pump compared to electric resistance heat, like cadet or baseboard heaters.

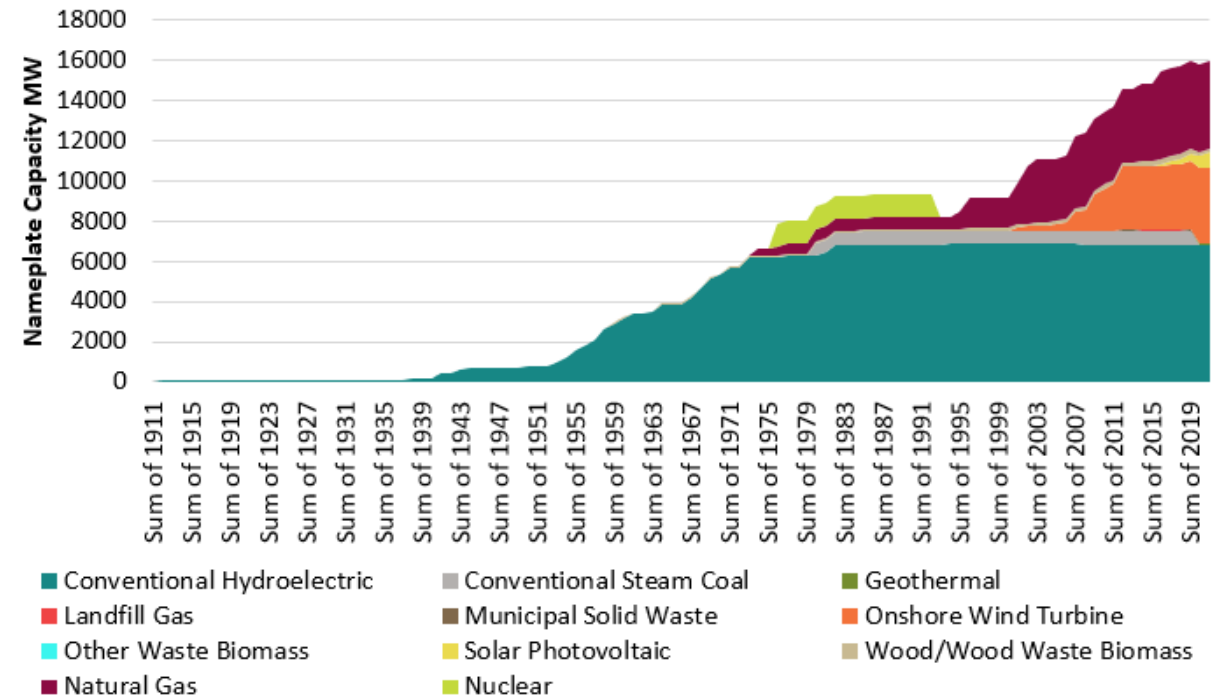
Energy Resource & Technology Reviews

- Mini timeline of resource/tech events
- Oregon-specific data
- How it works
- Trends & potential
- Beyond energy

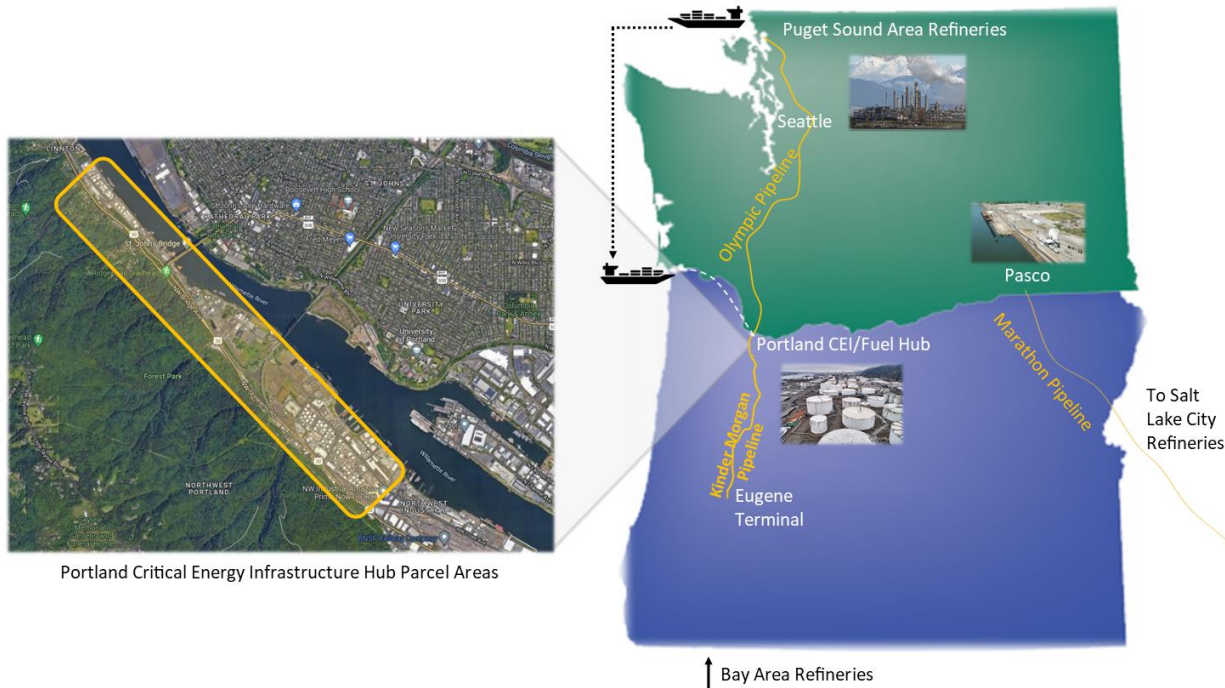
Total Technology Nameplate Capacity (MW) of Electricity Generation Facilities in Oregon



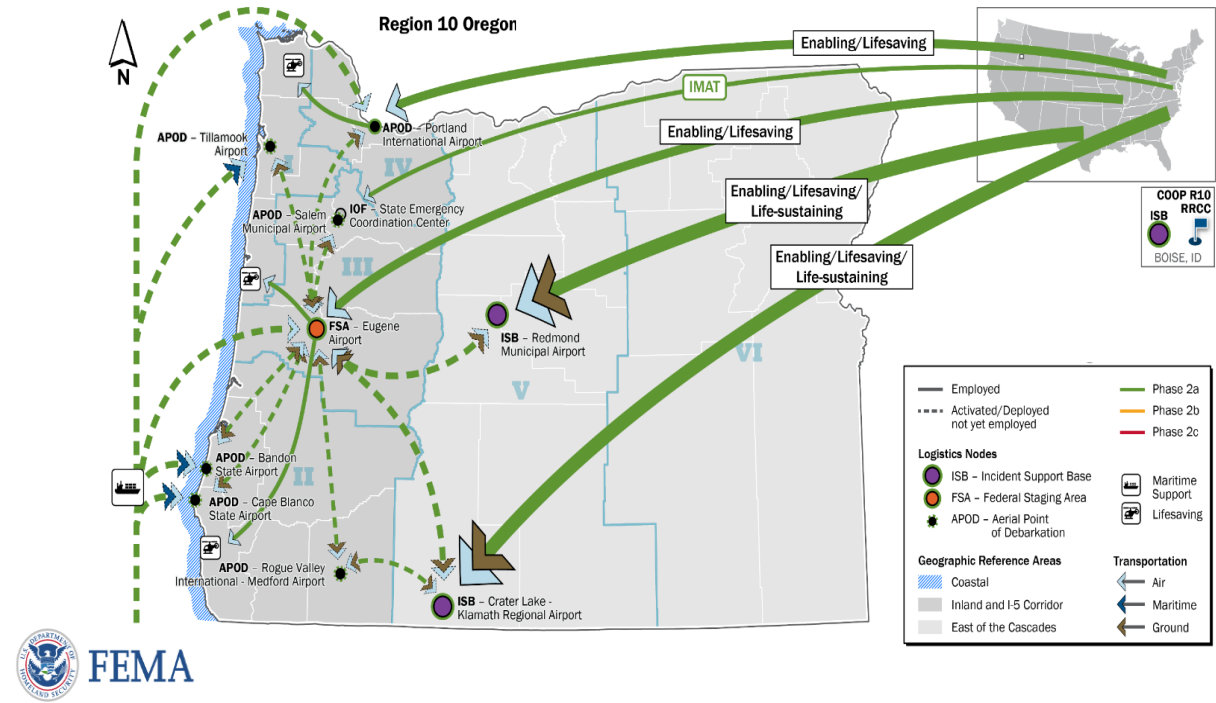
Total Nameplate Capacity of Electricity Generators in Oregon – 1911-2019

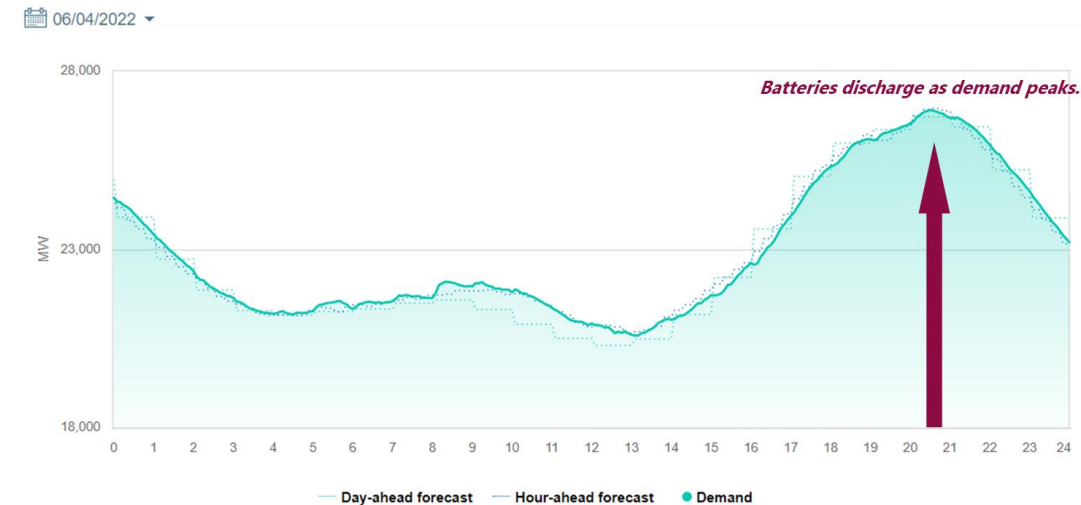
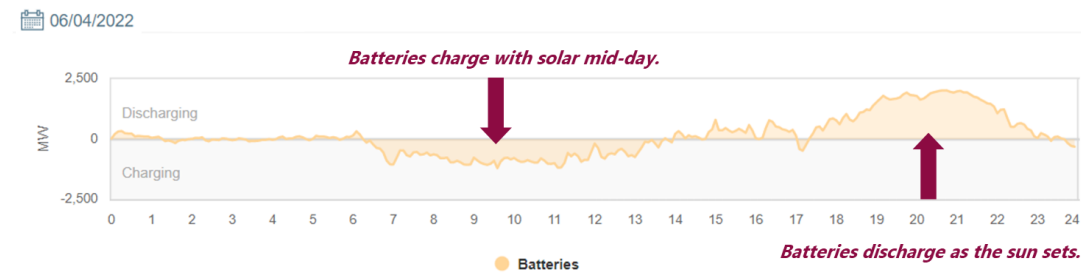
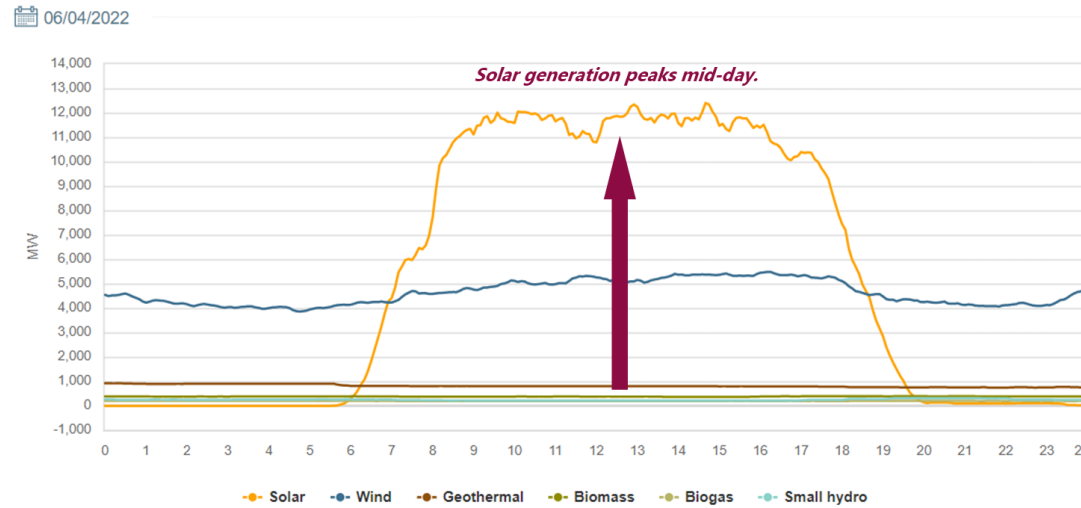


Map of Oregon and Washington Fuel Supply and Distribution System



FEMA-Proposed Concept of Operations for Oregon – Cascadia Event





Solar Generation and Battery Charging and Discharging Data from California ISO on June 4, 2022

Oregon Clean Energy Opportunity Campaign Steering Committee	Oregon Clean Energy Opportunity Campaign Advocates
<ul style="list-style-type: none"> • Adelante Mujeres • Asian Pacific American Network of Oregon(APANO) • Beyond Toxics • Causa • Coalition of Communities of Color • Euvalcree • Lake County Resources Initiative • NAACP Eugene Springfield • Native American Youth And (NAYA) Family Center • Oregon Just Transition Alliance • OPAL Environmental Justice Oregon • Pinos y Campesinos Unidos del Noroeste (PCUN) • Rogue Climate • Verde 	<ul style="list-style-type: none"> • 350 PDX • Bonneville Environmental Foundation • City of Milwaukie • City of Portland • Climate Solutions • Columbia Riverkeeper • Community Energy Project • Ecumenical Ministries of Oregon • The Environmental Center • Multnomah County • Oregon Coast Energy Alliance Network (OCEAN) • Oregon Environmental Council • Oregon League of Conservation Voters (OLCV) • Oregon Physicians for Social Responsibility • Sierra Club



Governor Brown signed HB 2021 in July 2021. Passage of this bill was led by the Oregon Clean Energy Opportunity Campaign.

BER Recommendations

2018 – Four Themes

- **Data Gaps** (collaboration, build capacity, new relationships)
- **Equity & Energy Burden** (data, policies, engagement)
- **Planning** (evaluate, participate, prepare, encourage, collaboration)
- **Engagement & Investment** (support, assess, explore)

“It is our hope that the information in this report, including recommendations regarding data gaps, equity, planning, and state support, will provide Oregon policymakers and the public with the tools they need to work with the Oregon Department of Energy to lead our state to a safe, clean, and sustainable energy future.”

2020 – Focus on equity and engagement

- **2018 BER themes persist**
- 2020 did not include a specific list of recommendations, **ideas embedded in topic-specific policy briefs**
- Move from internally-developed lists and recommendation to invitation for **community conversations**

“We need to work with not only energy industry experts, but also with Tribes, community-based organizations, and especially the Oregonians who disproportionately feel the impacts of our energy choices every day. We want all Oregonians to be able to engage in a conversation about Oregon’s energy future, whether they are experts or not. And we hope this report will help”

BER Recommendations

2022 – Responding to What We’ve Heard

- Based on **2020 BER commitment**, we conducted stakeholder and public outreach, original research, discussions with other agencies, and review of technical studies
- **Findings:** Oregonians have many ideas and opinions. There are multiple pathways to meet statewide energy and climate goals. Federal funding is on the way, creating need and urgency.
- Leading to a **common theme:**

The state would benefit from a strong energy strategy to align policy development, regulation, financial investment, and technical assistance in support of an intentional transition to a low carbon future. This strategy, if done right, would optimize pathways to meet our clean energy goals, prioritize equity, balance tradeoffs, maximize benefits and minimize harms, and ultimately be used to make informed decisions and take action.

BER Recommendations

The state would benefit from a strong energy strategy to align policy development, regulation, financial investment, and technical assistance in support of an intentional transition to a low carbon future. This strategy, if done right, would optimize pathways to meet our clean energy goals, prioritize equity, balance tradeoffs, maximize benefits and minimize harms, and ultimately be used to make informed decisions and take action.

Areas of Requested Feedback

- What about this idea **do you like**? What makes you nervous/what **red flags** do you have?
- What types of **issues** need to be considered in developing a strategy? E.g., energy efficiency, cost, resilience, equity, workforce
- What categories of **policy tools** would need to be examined in a strategy? E.g., incentives, technical assistance, data and analysis?
- How could you see the state **use an energy strategy**?
- What **additional data or analysis** would be necessary to support such a strategy?



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Strategic Plan



Strategic Evaluation Initiative

IMPERATIVE: ASSESS AND MODERNIZE AGENCY PROGRAMS AND ACTIVITIES

With many agencies and organizations active in the energy field, the state could benefit from clarifying ODOE's role and value. Oregon's energy landscape has changed substantially since ODOE was created in the 1970s, and it's time to develop a clear understanding of whether older programs continue to meet their intended purposes and whether there are different or updated policies or programs that could better meet Oregon's goals and needs. There is an opportunity for ODOE to analyze its programs and activities as compared to other energy programs and activities in the state, along with identifying gaps and options to fill unmet energy policy needs in Oregon.

OBJECTIVES

100% of ODOE programs and activities align with ODOE mission and position statements.

Conduct a strategic evaluation of each program and activity.

Share the outcomes of the strategic evaluation and describe the alignment of programs and activities with ODOE's mission and position statements. Where necessary, identify actions to achieve better alignment.

Complete assessment of ODOE work in the context of the state's energy ecosystem to identify redundancies and gaps.

Collaborate with energy stakeholders to identify Key Energy Indicators and state priorities and objectives (including statutory targets and goals, executive orders, non-energy goals like job creation, other executive guidance like the Equity Framework).

Create dashboard(s) to monitor and report on status of Key Energy Indicators.

Build on collaborative effort to assess how other agencies and organizations in the state are working toward Key Energy Indicators and state priorities, and identify areas where ODOE's work may overlap with other entities or where there might be gaps in state efforts.

INITIATIVES



OREGON
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Strategic Evaluation Initiative

ODOE Programs

- What programs and activities on the list are you **involved** with or **familiar** with? Do you see something missing?
- Is there other background information that might be **helpful to include** in these short descriptions?
- Are there particular **criteria**, in addition to alignment with ODOE's mission, that would be helpful for ODOE to evaluate about these programs?

DRAFT Evaluation Criteria

Alignment	Resources	Process	Effectiveness	Equity / Accessibility
<ul style="list-style-type: none"> • How does the program align with ODOE’s mission, position statements, and imperatives? • How does the program contribute to state goals? What are the energy and GHG effects? • What is the statutory, legislative, or executive basis or background? 	<ul style="list-style-type: none"> • How is the program funded? • How many FTE support this program? • What are benefits or value derived from the program? • Who are the key audience/users of the program? 	<ul style="list-style-type: none"> • What requirements/ deadlines are associated with the program? • Are processes timely? • What could make the program more efficient? 	<ul style="list-style-type: none"> • What are the objectives and expected/desired outcomes? • Are there other agencies or organizations doing this work? What is the specific added value of ODOE’s program? • What are the measurements for success? • Do roles, responsibilities, and skillsets align with program needs? • If there are customers/users of the program, what are their views? 	<ul style="list-style-type: none"> • Who benefits and who is burdened? Is equity advanced? • Is information (requirements, data, status) accessible? • Are there avenues for public engagement and transparency? (What are they?)

Imperative		Objectives	Status/Reporting
Expand and Improve Stakeholder Engagement		Increase diversity of agency stakeholder groups, rulemaking, oversight, and advisory boards	Exploring and developing baseline
Timing	Status	Year-over-year increase in agency engagement with organizations representing historically and currently underserved populations and communities	Proxy data shows overall increase; working to delineate populations and communities
Q2/Q3 2022	Significant progress and initiatives underway	Year-over-year increase in the external use of agency produced reports, studies, and presentations	All categories increasing (media mentions, legislative presentations, website visits)



Highlights and Look Forward

Work Underway

Continued prioritization and increasing stakeholder engagement for new programs and studies, e.g., webinars, collect feedback, and engage in Q&A

Use engagement plans and best practices from pilot projects across other agency work and activities

Operationalizing liaison and ambassador roles with staff leadership and working group structure

Continued prioritization and increasing stakeholder engagement for federal funding (e.g., IJJA, SEP)

Submitted Policy Option Packages (POPs) in Agency Recommended Budget for Navigator and Public Advocate

What's Next

Continue to explore ways to better facilitate engagement with historically and currently underserved communities

Conduct outreach and engagement on federal funds (e.g., grid resilience grant, energy security plan, and IRA).

Conduct stakeholder debrief and listening session before legislative session

Gather feedback from past and current liaisons through surveys and interviews

Recruitment for outreach-focused staff for ODOE incentive programs, including Spanish language proficiency

Accomplishments and Challenges

Accomplishments/Lessons Learned

Worked with community organization to make program materials more accessible for applicants

Increased engagement in development of ODOE studies and new programs, supported by effective identification of interest during stakeholder outreach

Hosted an intern for the Strategic Engagement Team, who provided an analysis of state government structure/energy landscape (programs, regulation, policies), as well as stakeholder list with highlights of their needs/interests

Transitioned to staff champion and team for initiative focused on strengthening staff capacity to serve as liaisons and ambassadors

Completed stakeholder engagement vision and objective for the 2022 Biennial Energy Report, which included collecting and analyzing input from surveys, comment portal, and listening sessions - all of which was used to guide and inform BER 2022 content.

Hosted internal technical writing workshop to increase effectiveness of communication with the public and stakeholders

Completed planning and preparation for engagement in workshops to inform the Small Scale Community Renewables Study

Implementing best practices for government-to-government communication, including sending formal letters to Tribes to seek input and offer coordination on agency activities and new work


Increased offerings for technical assistance webinars, including Electric School Bus Funding Mechanisms and School Bus Cost Analysis Tool webinars, and an Energy Tracking 101 webinar for school districts

Challenges and Needs

Evaluating approaches for support/funding to better engage with communities and community-based organizations

Need to continue to refine engagement tactics on specific programs, including training and development of liaisons

Requires extensive staff planning and time, and existing limits for staff capacity


Imperative		Objectives	Status/Reporting
Build Practices and Processes to Achieve More Inclusive and Equitable Outcomes		Year-over-year increase in the percent of agency job applicants identifying as Black, Indigenous, and People of Color	Increasing every year
Timing	Status	Year-over-year increase in the percent of historically and currently underserved populations and communities participating in ODOE programs & services	Proxy data established by tracking new ODOE programs; working to delineate populations and communities
Q2/Q3 2022	Continued progress and initiatives underway 	Increase agency Diversity, Equity, and Inclusion awareness and fluency	Underway

Highlights and Look Forward

Work Underway	What's Next
Submitted Policy Option Packages (POPs) to request paid internships beginning in 2023-2025 biennium	Building research and outreach for those the agency has not worked with much in the past, particularly to increase access to ODOE programs and inform the Biennial Energy Report
Measuring and tracking intern experiences	Scoping to develop an approach for a Diversity, Equity, and Inclusion (DEI) Action Plan
Submitted Policy Option Packages (POPs) in Agency Recommended Budget for Navigator and Public Advocate	Biennial Energy Report: Share information and data in the BER related to energy opportunities for communities and organizations
Implementation of new initiative to create inclusive, multi-lingual communications	Continues to develop engagement plans for identified programs using template developed through the Racial Justice Council's REIS statement for the budget process
Developing a better understanding of who we serve by collecting demographic data	

Accomplishments and Challenges

Accomplishments/Lessons Learned	Challenges and Needs
Ensuring materials and website content available in more languages, e.g., Energy Efficient Wildfire Rebuilding program applications translated into Spanish; Comment input portal offers translation	Continue to add translation and communication options, e.g., live translation during public meetings, follow-up and conversations with program application that primarily speaks a language other than English
Offering translation (subtitles) for online public meetings	Requires extensive staff planning and time, and existing limits for staff capacity
New flyer developed to showcase ODOE's incentive programs in one place	Capturing demographic information (other than voluntarily) for participation in programs and activities
Identified and sponsored employee attendance at DEI training courses.	
Provided specific low-income incentives for Energy Efficient Wildfire Rebuilding program, with a focus on manufactured homes	
Shared information about the Solar+Storage Rebate Program with Governor's Racial Justice Council, with an interest in improving the Low-Moderate Income (LMI) parts of the program	
Convened CREP engagement committee, with payment to support participation when necessary	
Awarded opportunity to host a RARE AmeriCorps member to support rural energy engagement	
Refinement of Solar+Storage Rebate Program to improve access for low-income service providers, such as affordable housing organizations	

Imperative		Objectives	Status/Reporting
Assess and Enhance Organizational Data Capabilities		100% of specified agency products (e.g., produced reports, studies, and analyses) use standardized agency data methodologies or tools	In development with pilot projects underway
Timing	Status	Year-over-year increase of collection, review, and analysis of data	Increased number of programs collecting data, other efforts in development
Q2/Q3 2022	Initiatives Underway 	Year-over-year increase in data sharing relationships	Exploring metrics

Highlights and Look Forward

Work Underway	What's Next
Biennial Energy Report: Piloting a data validation process (and template for future data work) to verify data to the source and use consistency	Developing a catalogue of agency data-dependent work products, including a survey across divisions to understand data sources and needs
Developing agency-wide process for external data collection and storage to provide a single internal data resource to support traceable and consistent reporting	Establishing data oversight team, standards for selection and use of data and analytical tools, and staff training for tools and data management
Maintaining EV mapping program to inform COU planning activities; Assessing capacity and timing for updating EV maps for participating COUs	Delivery of Open Data Plan to the Oregon Chief Data Office
Continue monitoring demographics capture, analyze results, and adjust collection methods as needed.	Discussing how to use data to inform Key Energy Indicators

Accomplishments and Challenges

Accomplishments/Lessons Learned	Challenges and Needs
Data Governance Charter approved by the Leadership Team	Transitions in key leadership roles related to data management and responsibilities
Completed catalog of internally-owned datasets	Requires extensive staff planning and time, and existing limits for staff capacity
Continued to build efficiencies across multiple data-dependent efforts, primarily the Biennial Energy Report, ODOE studies and programs	Build trust and protocols for confidentiality of data (as needed) with data holders
Switched to direct emailing for demographic survey and in one case have almost doubled participation	
Refined utility service area map to improve EV counts, and shared this information with ODOT to inform their work to support the National EV Incentive program (IIJA funding for EV chargers)	

Imperative

Assess and Modernize Agency Programs and Activities

Timing

Status

Q2/Q3 2022

Scoping Complete and Planning Underway



Objectives

100% of ODOE programs and activities align with ODOE mission and position statements

Complete assessment of ODOE work in the context of the state's energy ecosystem to identify redundancies and gaps

Status/Reporting

Underway

Underway

Highlights and Look Forward

Work Underway

Sharing list of "ODOE programs and activities" for feedback from the EAWG

Developing strategic evaluation elements, including methods to receive feedback from program participants

Siting Division program review underway

What's Next

Share final draft of list of "ODOE programs and activities" and draft evaluation elements for additional feedback

Explore Key Energy Indicator development process, and responses to interest areas/recommendations from Biennial Energy Report stakeholder survey

Accomplishments and Challenges

Accomplishments/Lessons Learned

Internally finalized list of "ODOE programs and activities" that will be considered as part of the scope of this imperative

Provided electronic incentive program interfaces to modernize interaction with applicants

Hosted an intern for the Strategic Engagement Team, who provided an analysis of state government structure/energy landscape (programs, regulation, policies)

Challenges and Needs

Defining the approach and scale of assessment related to "ODOE programs and activities"

Requires extensive staff planning and time, and existing limits for staff capacity

Imperative		Objectives	Status/Reporting
Optimize Organizational Efficiency and Impact		Increase average Gallup Q12 engagement score to at least 4.0 (out of 5.0)	Underway; new survey in planning
Timing	Status	Increase "Efficient and effective processes & procedures" survey score to at least 3.5	Underway; new survey in planning
Q2/Q3 2022	Continued progress and Initiatives Underway	Increase in Key Performance Measure customer satisfaction score to at least 95%	Planning underway for improved methodology



Highlights and Look Forward

<p>Work Underway</p> <ul style="list-style-type: none"> Improving procurement process to be more efficient and accessible Improving processes to request and approve internal travel and training requests and reimbursements Improving accounting processes for accounts receivable and payable, and identifying efficiencies in review and approval process Action plan and action team underway for initiative to evaluate and improve agency collaboration and communication culture 	<p>What's Next</p> <ul style="list-style-type: none"> Begin additional process improvements for agency procurement requests and approvals Conduct staff engagement surveys including Gallup Q12 and survey to assess the objective to "increase efficient and effective processes and procedures." Further improving KPM customer service survey methodology and timeliness.
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Accomplishments and Challenges

<p>Accomplishments/Lessons Learned</p> <ul style="list-style-type: none"> Effectively managing change and limited capacity by identifying efficiencies and adjusting scope of initiatives and action plans Launched ORBuys for wave 1 per DAS (ODOE was in wave 1, and is now being reconciled with ODOE internal process) 	<p>Challenges and Needs</p> <ul style="list-style-type: none"> Requires extensive staff planning and time, and existing limits for staff capacity Ongoing adjustments and project re-prioritization with other ODOE projects and business needs
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