

**Notice:** This meeting will be recorded



OREGON  
DEPARTMENT OF  
ENERGY

***Small-Scale Renewable  
Energy Projects Study***  
**Meeting #1: Access and Ownership**

**April 28, 2022**



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Welcome

*Harney County, Oregon*



# OREGON DEPARTMENT OF ENERGY

Leading Oregon to a safe, equitable, clean, and sustainable energy future.

## Our Mission

The Oregon Department of Energy helps Oregonians make informed decisions and maintain a resilient and affordable energy system. We advance solutions to shape an equitable clean energy transition, protect the environment and public health, and responsibly balance energy needs and impacts for current and future generations.

## What We Do

On behalf of Oregonians across the state, the Oregon Department of Energy achieves its mission by providing:

- A Central Repository of Energy Data, Information, and Analysis
- A Venue for Problem-Solving Oregon's Energy Challenges
- Energy Education and Technical Assistance
- Regulation and Oversight
- Energy Programs and Activities

# Meeting Logistics

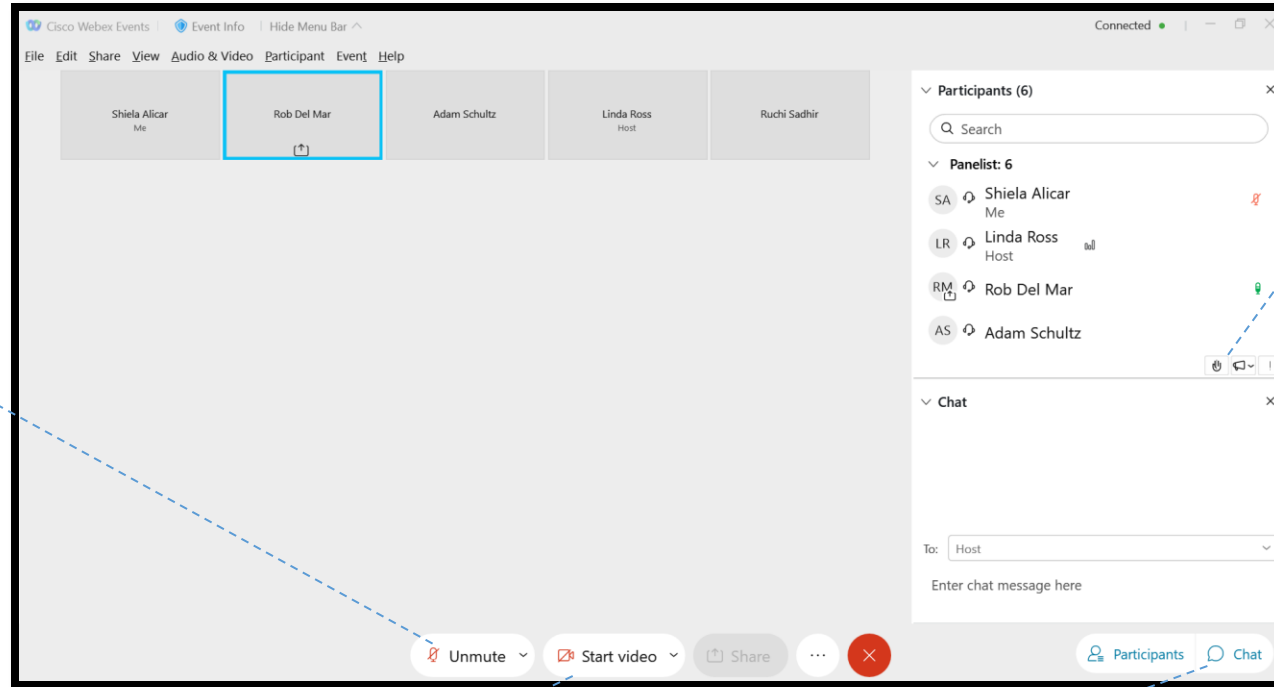
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- **Logistics**

- Note that we'll be recording this meeting and will post it online for reference
- Please feel free to use the Chat to ask questions, ODOE staff will be monitoring the Chat
- Please use the “raise hand” function to indicate interest in asking a question or making a comment
- ODOE Staff will work with you on determining the date of the next Advisory Committee meeting
- We have set aside time for Public Comment towards end of meeting

- **Next up – a few instructions on how to use WebEx to participate in this meeting**

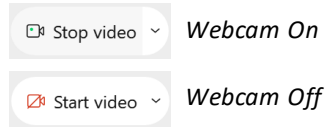
# WebEx Functionality



## Audio Options

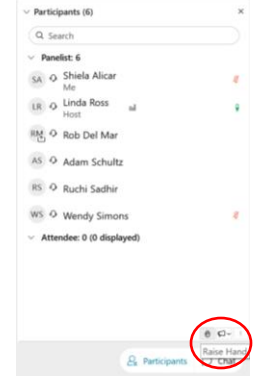


## Video Options



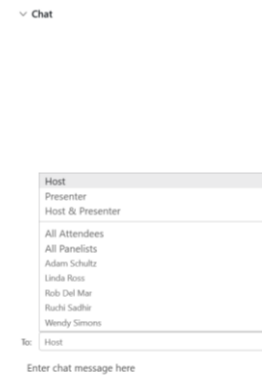
## Raise Hand

Click on the little hand icon to raise your hand.

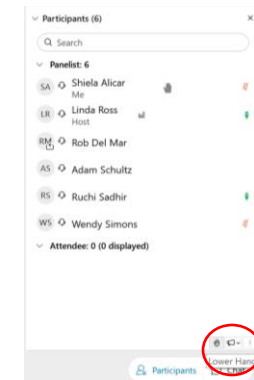


## Chat

Click in the box next to "To:" for options to send a message to the Host, Presenter, All Attendees, All Panelists or named individuals.



Click on the little hand icon to lower your hand.



# WebEx Audio and Webcam Settings

The 'Settings' dialog box has two tabs: 'Speaker and microphone' (selected) and 'Camera'. Under 'Speaker', there is a dropdown menu for 'Speakers (Realtek(R) Audio)' and a 'Test' button. Below this is an 'Output level' bar and an 'Output volume' slider. Under 'Microphone', there is a dropdown menu for 'Microphone Array (Realtek(R) A...)' and a 'Test' button. Below this is an 'Input level' bar and an 'Input volume' slider. At the bottom, there are two checked checkboxes: 'Automatically adjust volume' and 'Sync mute button status on microphone device'. Under 'Webex smart audio', there are three radio button options: 'Noise removal' (selected), 'Optimize for my voice', and 'Music mode'. Each option has a brief description of its function.

Select Speaker and Microphone Settings... to access the audio settings.

Select and test your speaker and microphone settings.

The screenshot shows the top of the Cisco Webex Meetings application. The menu bar includes 'File', 'Edit', 'Share', 'View', 'Audio & Video', 'Participant', 'Meeting', 'Breakout Sessions', and 'Help'. The 'Audio & Video' menu is open, showing options: 'Switch Audio...', 'Speaker and Microphone Settings...' (highlighted), 'Webex Smart Audio Settings...', 'Unmute Temporarily by Holding Spacebar' (checked), 'Camera...', 'Change Virtual Background...', and 'Connect to a Video System...'.

The 'Settings' dialog box has two tabs: 'Speaker and microphone' and 'Camera' (selected). Under 'Camera', there is a dropdown menu for 'Integrated Camera' and a 'Test' button. Below this is a video preview window showing a woman in a grey hoodie with the text 'My preview' at the bottom. At the bottom of the 'Camera' section, there are two expandable options: 'Change virtual background' and 'Advanced Settings'.

Select and Preview your Camera.

Click on Change virtual background to blur your background.

# How this meeting will be facilitated:

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- **Panelists and Participants**

- Panelists: Advisory Committee Members and ODOE Staff
- Participants: There is time reserved at the end of the agenda for public comment, and you can send questions through chat throughout the meeting.

- **Community Agreements:** Designed to foster inclusive and respectful meeting today

- Be present and ready to learn
- Be respectful to others
- Learning happens outside of our comfort zones
- Listen to learn and not to respond
- Thank you for being flexible and patient around any technology needs or changes
- If you need something at this meeting, ask for it!
  - Technical issues or questions: Contact **Linda Ross** in the chat

# AGENDA

- 9:00 Welcome and Logistics
- 9:10 Background, Definitions and Key Questions
- 9:30 Ownership Perspectives
- 10:45 Break
- 11:00 Poll of Discussion Questions
- 11:10 Breakout Discussions
- 11:30 Roundup from Breakout Discussions
- 12:20 Discussion of Main Takeaways
- 12:45 Next Steps and Public Comments
- 1:00 Close of meeting



# ODOE's Objectives

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- First, thank you for serving!
- **Quick recap of HB 2021 Study on Small-Scale Renewable Energy Projects:** what does it ask ODOE to do?

## **ODOE Objective:**

The State Department of Energy shall convene a work group to examine opportunities to encourage development of small scale and community-based renewable energy projects in this state that contribute to economic development and local energy resiliency.



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# Background



# Value of Energy

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**Net Metering:** Oregon law requires electric utilities to offer net metering for renewable energy systems. Size cap is 25 kilowatts (kW) in COU territories and two megawatts (MW) in IOU territories. Energy is valued at retail rate.

**Public Utility Regulatory Policies Act (PURPA) of 1978 (PURPA):** PURPA gives Qualifying Facilities (QF) the right to interconnect with the and requires these utilities to purchase energy at an avoided cost rate.

**Power Purchase Agreements:** Projects that exceed the thresholds for standard PURPA contracts may still deliver energy to a utility through a power purchase agreement (PPA).

# Schedule 38 Avoided Cost Rates



## OREGON STANDARD AVOIDED COST RATE

AVOIDED COST PURCHASES FROM  
ELIGIBLE QUALIFYING FACILITIES

Page 7

### Avoided Cost Prices (Continued)

#### Standard Fixed Avoided Cost Prices for Fixed and Tracking Solar QF (¢/kWh)

Deliveries During Calendar Year	Fixed Solar QF (1,2)		Tracking Solar QF (1,2)		Solar Integration
	On-Peak Energy Price	Off-Peak Energy Price	On-Peak Energy Price	Off-Peak Energy Price	All hours Energy Charge
	(f)	(g)	(h)	(i)	(j)
2021	5.02	4.07	5.02	4.07	0.15
2022	5.08	3.34	5.08	3.34	0.22
2023	4.52	3.23	4.52	3.23	0.24
2024	4.12	3.02	4.12	3.02	0.29
2025	3.43	2.70	3.43	2.70	0.50
2026	4.17	3.57	4.27	3.57	0.37

# Access And Ownership Challenges

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***Local Capacity and Technical Assistance:*** Many communities lack local capacity to plan, develop and operate renewable energy projects

***Financing:*** Existing financing instruments and institutions may not have experience with projects that involve multiple ownership parties or other atypical ownership structures.

***Outreach Gaps:*** Traditionally underserved communities may lack knowledge of financial incentive programs and/or project benefits.

***Others?***

# Programs Supporting Diverse Access

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**Community Renewable Energy Grant Program:** Grants for planning and constructing renewable energy and energy resilience projects.

1. Grants are only available to public entities such as a federally recognized Oregon Indian Tribe; a city, county, or special district; or a consumer owned electric utility. This provision supports community partnerships and public ownership of projects.
2. Incentives may cover up to 100% of project cost. This provision enables projects to be financed without the need for private tax equity partners to leverage the federal tax credit.

**Oregon Community Solar Program:** Community solar projects enable individuals to share in the costs and benefits of centrally located solar energy projects up to 3MW in size. Projects must be in the service territory of Portland General Electric, Pacific Power or Idaho Power.

1. solar projects may be cooperatively owned and operated
2. Virtual net metering enables benefits to be distributed as electric utility bill credits to multiple individual owners or subscribers.
3. The current reimbursement rate for projects is the full retail rate for residential electricity. This rate is considerably higher than avoided cost rates and should support diverse ownership options.



# Ownership Models

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***On-Site, Behind-the-Meter:*** Net metered systems

***Community Shared Renewables:*** Community shared programs typically enable participants to buy a subscription for output from a centrally located system.

***Cooperative Local Ownership:*** Local landowners and investors, ideally with tax liability that can be offset by the federal tax credit, pool their resources into an LLC to own and operate the project while selling output to the local utility.

***Flip Structure:*** Local investors without tax liability bring in a tax-motivated corporate equity partner to own most of the project for the first ten years (i.e., the period of tax credits), and then “flip” project ownership to the local investor thereafter.

***Municipal-Owned:*** A municipality develops and owns an in-front-of-the-meter project, potentially financed with tax-exempt municipal bonds, and sells the power to the utility.

**Others?**



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# Key Questions



*Yaquina Head Lighthouse, Newport, Oregon*



# Primary Research Questions

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1. What *barriers* exist to access and ownership of small-scale renewable energy projects by low-income communities; Black, Indigenous and People of Color communities; tribal communities; and rural and coastal communities with limited infrastructure?
2. What *barriers* exist to access and ownership of small-scale renewable energy projects by local governments, nonprofit organizations, community cooperatives and other community groups?
3. What *opportunities* exist for access and ownership of small-scale renewable energy projects by low-income communities; Black, Indigenous and People of Color communities; tribal communities; and rural and coastal communities with limited infrastructure?
4. What *opportunities* exist for access and ownership of small-scale renewable energy projects by local governments, nonprofit organizations, community cooperatives and other community groups?
5. What actions could Oregon take to support more equitable access and ownership opportunities in Oregon?

# Additional Discussion Questions

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1. What do the terms community ownership and community access mean to you?
2. What are the benefits of small-scale renewable energy project ownership? How are the benefits of ownership different from the benefits that would be realized from third party ownership models or large-scale renewable projects?
3. What are the obligations of renewable energy project ownership?
4. What specific goals or objectives would be furthered by expanding more equitable access and diversity of ownership of renewable energy projects?
5. Does Oregon's Community Solar program support and/or promote diverse ownership models?
6. What do you see as the primary regulatory barriers to access and ownership of projects?
7. What do you see as the most important enabling policies for access and ownership of projects?

# Parking Lot for Crossover Questions

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1. How are utility rates (both for participating owners of projects, but also for non-participants) affected by different ownership models?



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# Ownership Perspectives

*Vista House, Columbia River Gorge*

# Oregon Department of Energy Small Scale Renewable Energy Projects Study Investor Owned Utility Ownership

April 28, 2022



# Traditional Investor Owned Utility Investment

- Basics
  - Utility builds a new asset used to benefit rate payers, leveraging shareholder funding.
  - Commission reviews investment and approves recovery of funds from ratepayers
  - Utility recovers the initial funds (Return of Investment) and profit (Return on Investment)
  - High Level Review Criteria
    - Investment must be “Used and Useful”
    - Decision to build must be “Prudent”
      - frequently shown by using cost effectiveness metrics
    - “Least cost, least risk” portfolio
  - Power Purchase Agreements are not utility ownership



# Non Wires Alternative Solutions

Replace or defer large scale system upgrades with strategic placement of generation and storage assets.

## Panguitch Solar / Storage

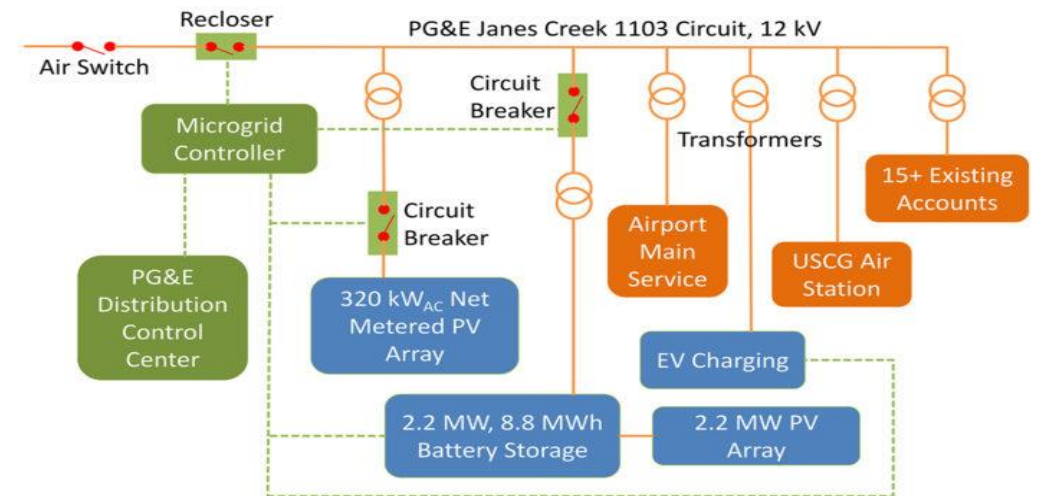
650-kilowatt solar photovoltaic is paired with a 1 MW peak capacity, 5 MWh energy storage system that anticipates and responds to peak electricity consumption and levels demand on the local grid

- Deferred large transmission upgrade by providing voltage support
- **Opportunity:** *strategic utility investment provides system benefit (cost effective for all customers)*
- **Challenge:** *limited locations for deployment, the deferred upgrade needs to be significant to justify investment.*
- *Other Examples: PSE: Bainbridge Island, PG&E:*



- Opportunity:
  - HB 2021 encourages utilities to evaluate resiliency in planning
- Challenges
  - Reliability vs Resiliency: significant utility investment to help one or a few customers
    - Need to develop metrics to evaluate these opportunities
  - Tariff design and engineering standards not mature
  - Limited utility investment : need partnerships

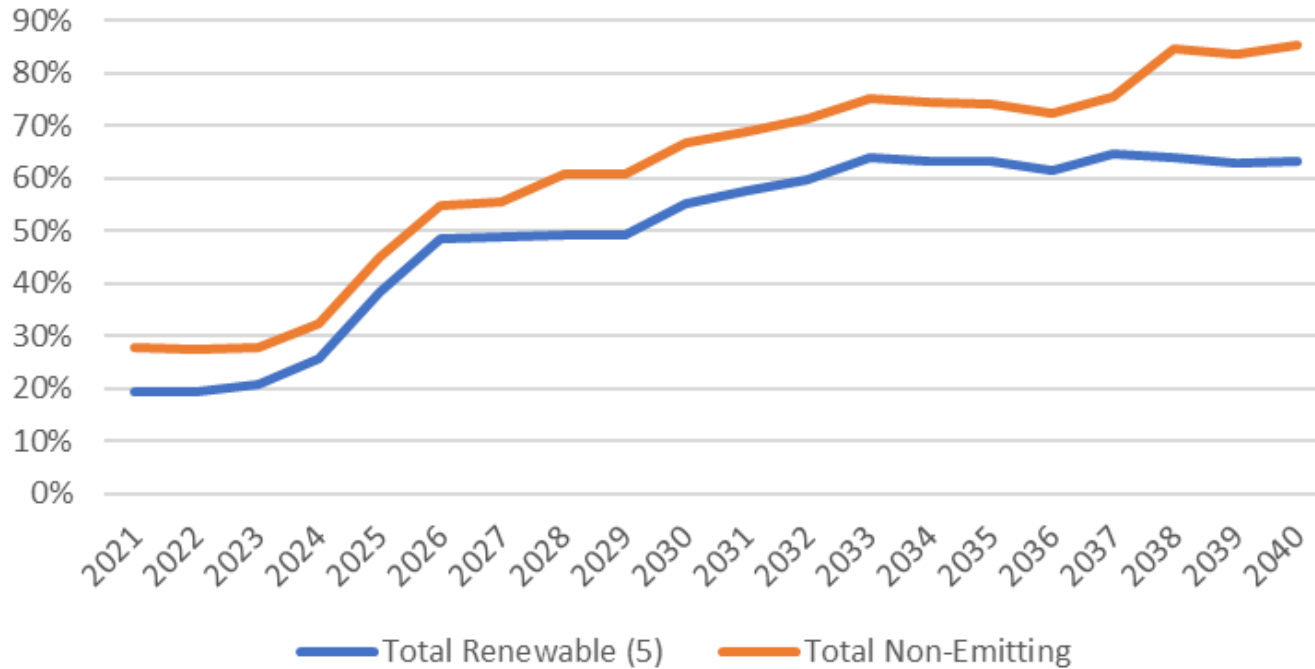
### Redwood Coast Airport : Multi Customer Microgrid





# Pacific Power's Transition to Clean Energy

PacifiCorp Oregon Fuel Mix Forecast\*



- Opportunities:
  - Help satisfy targets with smaller community driven resources, helping fill the gap between existing plans and new guidelines, and to satisfy the 10% small scale renewable mandate
- Challenges
  - Smaller resources are more expensive to site and build
  - “Prudence” how does a utility evaluate what projects that aren’t least cost are prudent utility investments.
  - Tax normalization: Spread investment based tax credits over the life of an asset.

## The 2021 IRP continues significant shift from emitting to renewable resources

- By 2024: 1,700 MW Wind , 1,300 MW Solar
- By 2026: 745 MW Wind, 600 MW Solar + Storage
- By 2040: 5,600 MW Solar, 3,600 Wind, 6,100 MW Storage, 2,400 MW Demand Response, 4,290 MW Energy Efficiency



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**CLEAN POWER**  
**COOPERATIVE**

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COMMUNITY-OWNED RENEWABLE ENERGY



Help Oregon communities  
shift to clean energy...  
by enabling people to invest  
in their communities.



**AP** Associated Press



**First**  **Tech**  
federal credit union



**ACE**  
**Hardware**





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**TABLE 44**  
**RED HERRING PROSPECTUS**

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Proposed Prospectus

A registration statement has been filed with the Securities and Exchange Commission but is subject to change. The securities described herein may not be sold until approval becomes effective.

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# Schools



**SCHOOL  
DISTRICT**

**Manzanita / Garibaldi (2021)**

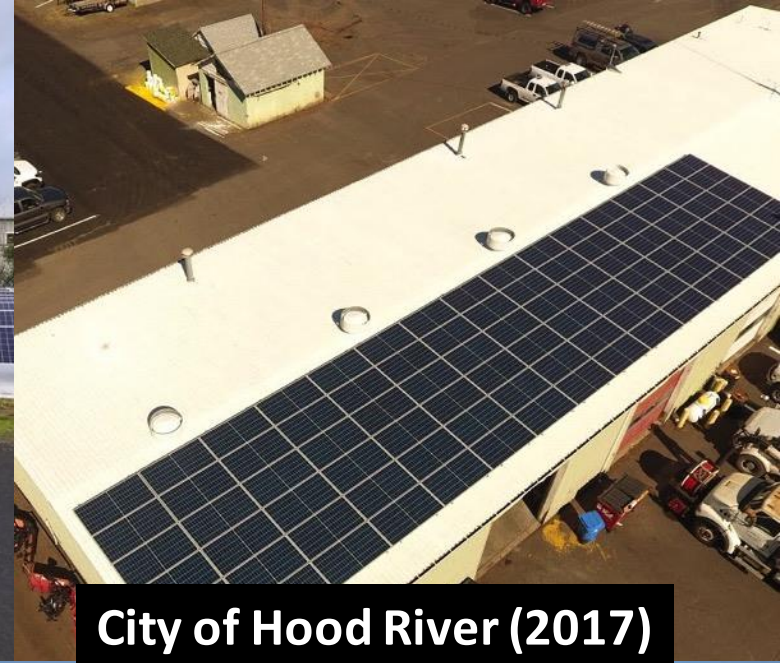


**Corvallis High School (2019 & 2021)**



**Corvallis School District Offices (2019)**

# Local Governments





# Nonprofits



**OnTrack Rogue Valley (2021)**



**Old Mill Center, Corvallis, (2020)**



**Rogue Valley Council of Governments (2019)**



**Mazama Mountaineering Center  
Portland (2017)**



# Faith Communities

St. Andrew Lutheran, Beaverton (2018)



Salem United Methodist Churches (2020)



First Unitarian Church of Portland (2019)



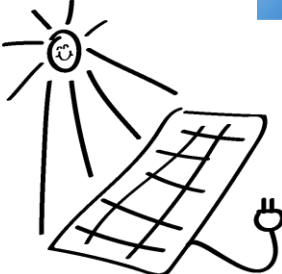
# How it Works



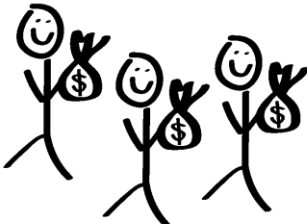
Oregon resident joins the Co-op



Members invest in project



Co-op develops & finances project



Co-op pays back members



After ten years system is paid for and savings for church, school, library, etc. goes way up.

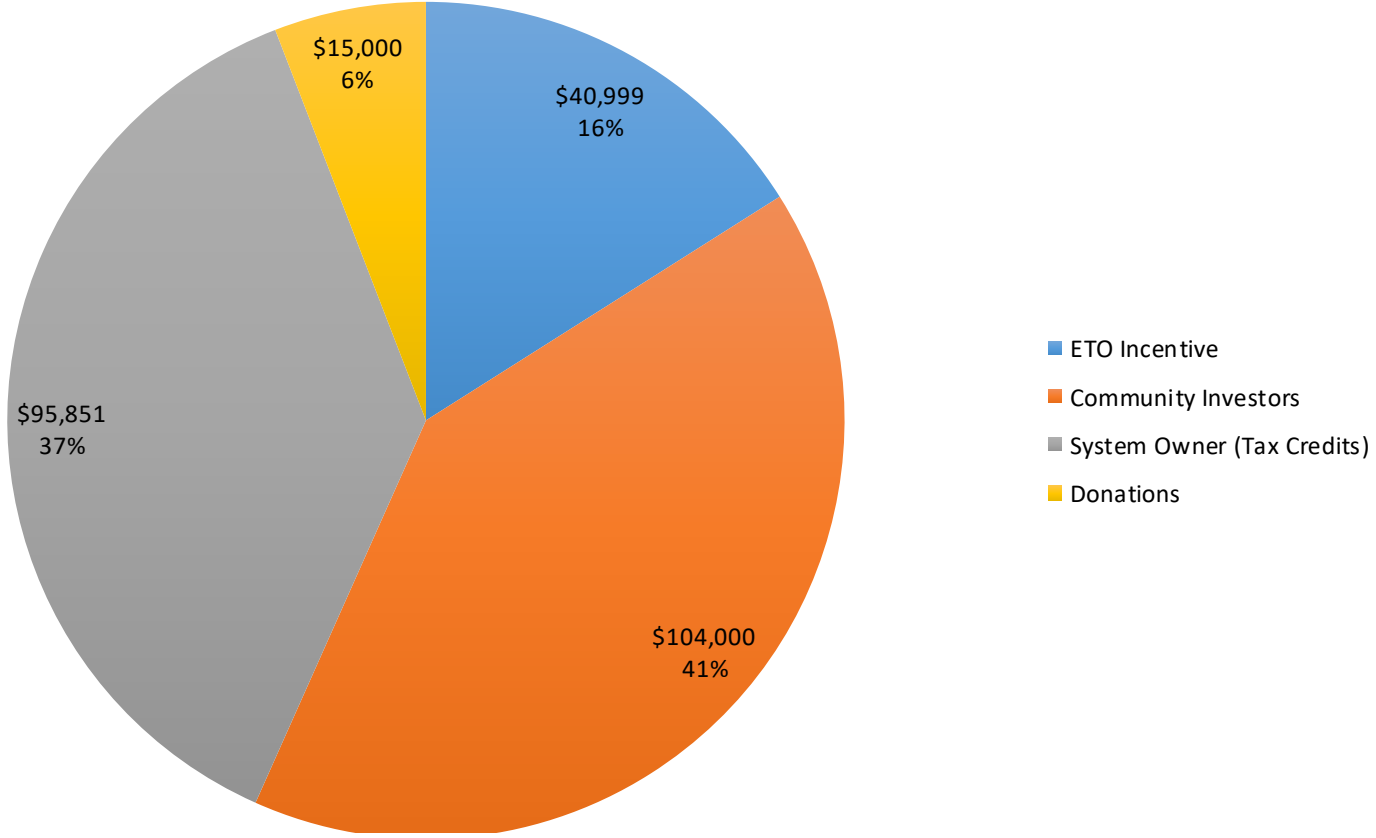
- 
- Minimum investment: \$1,000
  - 1 - 4% APR
  - 10 or 12-year terms
  - Repayment begins after one year



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# Corvallis High School Funding Sources



Project Cost: \$255,850







# Solar Harvest





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**COOPERATIVE**

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COMMUNITY-OWNED RENEWABLE ENERGY



# Oregon Community Solar Program Report

ODOE Meeting  
28 APR 2022



**Solarize Rogue**

*Promoting the adoption of solar energy in the Rogue Valley*

**Residential, Business, Community**

# Solarize Rogue



- Started in 2017
- 501(c)(3) non-profit based in Talent, OR
- Staffed by local volunteers
- Mission: To increase the use of solar energy in the Rogue Valley
- Providing options for residents, businesses, renters, low income families
- <https://solarizerogue.org>

# Why a Participant-Owned Community Solar Works

- It is much cheaper to build a large solar system than a lot of small residential installations (economy of scale)
- Upfront costs to participants can be up to 75% less compared to residential solar (7 year payback period after FITC)
- Our small survey indicated a heavy interest in ownership
- Works for home owners and renters
- You don't lose your ownership if you move within the same utility's territory
- Participant-owners were happy to provide clean energy at a discount to Low Income families

# Our First Community Solar Project

## Town Hall Meetings:

- January 2018 – Talent Community Center
- March 2019 – SOCAN Medford Library

PIM<sup>1</sup> Published 30 December 2019

Site: <b>Oregon Shakespeare Festival</b> Production Building 408 Talent Ave, Talent OR 97540	
Model:	Participant Owned
Minimum Size:	25 kW-DC
Stretch Goal:	60 kW-DC
<b>Achieved:</b>	<b>141 kW-DC !!!!</b>



1 Program Implementation Manual  
(Oregon Public Utility Commission)

# Our First Community Solar Project



Total Cost (prelim.)	\$302,265.00
PV System	\$ 254,268.00
Pre-Certification (PA)	\$ 648.00
Interconnection (PAC est.)	\$ 7,500.00
Interconnection Equipment	\$ 41,000.00
Installation Credits/Grants	\$ (105,705.00)
Payback Period With FITC	11 Years
Price Per Watt	\$1.06

Location	OSF Production – Talent, OR
Size	141.18 kW-DC, 129.6 kW-AC
No. of Panels	362 (390 W)
Utility	Pacific Power
Installer	True South Solar
Start Date	February 2020
<b>Go-Live Date</b>	<b>14 March 2022</b>
Production	172,238 kWh / yr (est.)

Owners	16 Residents*
	H o m e b w n e r s

(\* ) From Rogue River City to the Greensprings. (\*\* ) Families Recruited by Rogue Climate.



# Our First Community Solar Project

**First** small, community, non-profit project in Oregon

**First** participant-owned project

**First** operating project in Pacific Power territory



# Solarize Rogue and OCPC



<b>Joe Wismann, Secretary</b> Retired, Army Colonel, Battery Development
<b>Ted Gibbs, Treasurer</b> Retired MD, Diagnostics Research
<b>Ray Sanchez-Pescador, President</b> Retired PhD, Biotech & BioPharma
<b>Dan Orzech, General Manager</b> Oregon Clean Power Coop



# Thank you!



The Solarize Rogue Team  
**info@solarizerogue.org**  
<https://solarizerogue.org>

541-414-6566

541-535-6440 FAX



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# 10-Minute Break (return at 11:10)

*Sunset on the Columbia River in Boardman*



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# Poll

*Crater Lake National Park*



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# Breakout Groups

*Trillium Lake, Mt. Hood*



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# Takeaways and Next Steps

*North Fork John Day River, Grant County*



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# Public Comment

*Haystack Rock, Cannon Beach*



# Public Comment

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- (1) Please state your name and any affiliation/organization**
- (2) Please limit your comments to 5 minutes, thank you!**



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**Thank  
You!**

For questions or more information:

**Rob Del Mar**

[Robert.Delmar@energy.Oregon.gov](mailto:Robert.Delmar@energy.Oregon.gov)

**John Cornwell**

[John.cornwell@energy.Oregon.gov](mailto:John.cornwell@energy.Oregon.gov)

The next meeting of the Working Group  
will be \_\_\_\_\_.

*St. John's Bridge, Portland*