

Notice: This meeting will be recorded



Small-Scale Renewable Energy Projects Study Meeting #4: Project Review and Legislative Recommendations

July 28, 2022

Hornshuh Fire Station Solar - Banks, OR



OREGON
DEPARTMENT OF
ENERGY

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

- **Logistics**

- Note that we'll be recording this meeting and will post it online for reference; all materials from past workshops are available on the ODOE website, as well materials for today
- Please feel free to use the Chat to ask questions, ODOE staff will be monitoring Please use the “raise hand” function to indicate interest in asking a question or making a comment
- We have set aside time for Public Comment towards end of meeting

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

- Be respectful to others
- Respect time limitations
- Learning happens outside of our comfort zones
- Listen to learn and not to respond
- Avoid speculations and accusations
- Technical issues or questions: Contact **Linda Ross** in the chat

AGENDA

- 9:00 Welcome and Logistics
- 9:10 Stakeholder Perspectives, Three Speakers, Q&A as we go
- 10:15 C-REP Initial Application Round Preliminary Results
- 10:20 Discussion of Guiding Principles for Recommendations to Legislature
- 11:00 Lunch Break
- 11:30 Recommendations Breakout
- 12:15 Roundup from Breakout Discussion
- 12:45 Discussion of Outline and Gaps
- 1:45 Public Comment and Next Steps

ODOE's Objectives

- 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.



OREGON
DEPARTMENT OF
ENERGY

Stakeholder Project Perspectives

Vista House, Columbia River Gorge

Stakeholder Project Perspectives

- Marc Thalacker – Three Sisters Irrigation Projects
- Raphaela Hsu-Flanders – Bonneville Energy Foundation
- Megan Levy – Public Service Commission of Wisconsin: Office of Energy Innovation



OREGON
DEPARTMENT OF
ENERGY

Three Sisters Irrigation District

Marc Thalacker

Vista House, Columbia River Gorge



OREGON
DEPARTMENT OF
ENERGY

Bonneville Environmental Foundation
Raphaella Hsu-Flanders
Renewable Program Manager

Vista House, Columbia River Gorge



BONNEVILLE
ENVIRONMENTAL
FOUNDATION

ODOE - Small Scale Renewable Energy Projects July 29th, 2022

Raphaela Hsu-Flanders, Renewables Program Manager

BEF Focus Areas



WATER
STRATEGIES &
RESTORATION



EDUCATION
PROGRAMS & ACTIVATIONS



RENEWABLES
SOLUTIONS &
SERVICES



**ENVIRONMENTAL
PRODUCTS**
RECs, OFFSETS &
WRCs

Renewables Program

We are dedicated to providing the **economic and environmental benefits of solar and renewable energy** to low-income and tribal communities throughout the Pacific Northwest.

We **build partnerships** that develop renewable energy projects and deliver positive impacts and cost savings to communities.

Who we work with	What we provide
<ul style="list-style-type: none"> • Tribes • Affordable housing providers • Community groups • Nonprofits • Consumer-owned utilities • Community Development Corporations • School districts • Businesses 	<ul style="list-style-type: none"> • Capacity building • Site Analysis • Feasibility studies • Grant writing support • RFP development • Financial modeling • Workforce development facilitation • Project funding • Contractor selection • System monitoring • Community education



Quinault Indian Nation Solar Project

- **First solar project for the Quinault**
 - Partnership with Twende Solar
 - 24 kW + battery backup for resilience during power outages
- **Workforce training**
 - Hands-on install experience and professional training for Quinault community members
- **An estimated \$2,000+ in annual electricity bill savings**
 - Lights, refrigeration, charging during an outage
- **Teacher training**
 - BEF's CE Program to work with Taholah School District to integrate renewable energy curriculum into classrooms



<https://www.youtube.com/watch?v=LK7Rj6nfmko>

Blackfeet Nation Community Solar Project

- **Partnership**
 - Blackfeet Community College, Heart Butte High School, GRID Alternatives, Glacier Electric Cooperative, BEF
- **Workforce training**
 - Hands-on install experience and professional training for Blackfeet community members, led by GRID Alternatives
- **An estimated \$17,983 in energy savings**
 - 20 households subscribed each year, saving \$120-330/year
- **Teacher training**
 - BEF's CE Program worked with Shelby Jones, Heart Butte STEM educator to develop renewable energy curriculum





Thank you!

Raphaela Hsu-Flanders
Program Manager, Renewables
617-301-0630
rhsuflanders@b-e-f.org



OREGON
DEPARTMENT OF
ENERGY

Public Service Commission of Wisconsin – Office of Energy Innovation

Megan Levy

*Resilience Strategist & Energy Assurance
Coordinator*

Vista House, Columbia River Gorge



Wisconsin Office of Energy Innovation

Critical Infrastructure Microgrids For Resilience

Megan Levy

Resilience Strategist

WI Office of Energy Innovation

July 28, 2022

A Brief History of the Office of Energy Innovation: Home of Wisconsin's State Energy Office

- 56 Energy Office (50 states 6 territories)
- Energy Policy & Conservation Act of 1975
- Each state is required, under 42 U.S.C. § 6323(e)(1), to submit an energy emergency plan that it will utilize in the case of an energy supply disruption.
- Moved in 2015 to PSCW, (ch. 16.955 Department of Administration, State Planning and Energy has been updated to Ch. 196.025(7) as of January 2018.

Chapter 196.025(7) Information.

“(7) State energy office.

(a) The commission shall do all of the following:

1. In cooperation with the other state agencies, collect, analyze, interpret, and maintain the comprehensive data needed for effective state agency energy planning and effective review of those plans by the governor and the legislature.
2. Administer federal energy grants, when so designated by the governor pursuant to s. [16.54](#).
3. Prepare and maintain contingency plans for responding to critical energy shortages so that when the shortages occur they can be dealt with quickly and effectively.

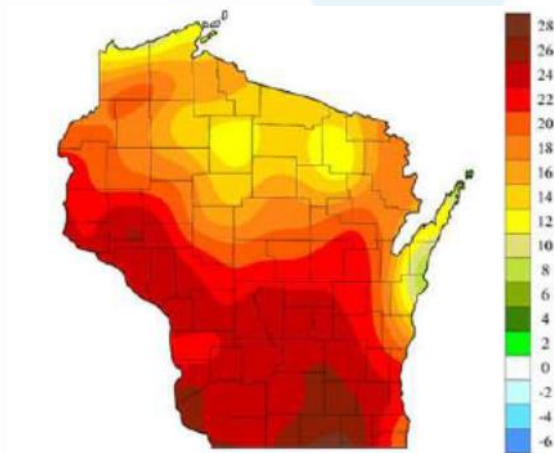
(b) The commission may provide technical assistance to units of government other than the state to assist in the planning and implementation of energy efficiency and renewable resources and may charge for those services. The commission may request technical and staff assistance from other state agencies in providing technical assistance to those units of government.



Wisconsin Office of Energy Innovation

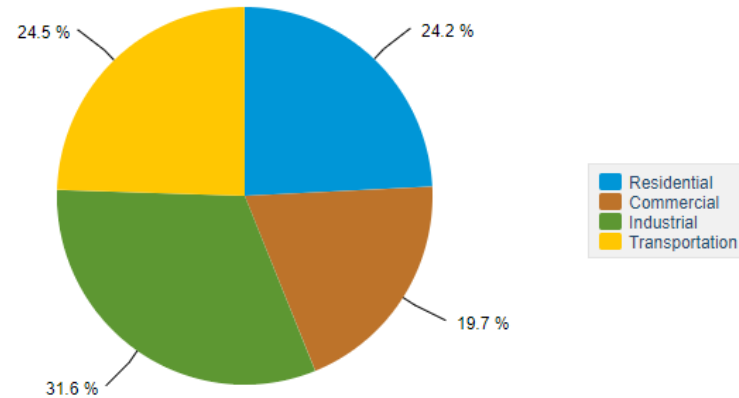
The \$14 Billion Problem


- ❑ *Wisconsin consumes 6 times more energy than it produces.*
- ❑ *Despite a warming climate on the whole, Wisconsin will have thermal needs that are difficult to satisfy as well as more cooling load in the summer.*



Projected Change in the Frequency of 90°F Days Per Year from 1980 to 2055

Wisconsin Energy Consumption by End-Use Sector, 2019 [DOWNLOAD](#)



 Source: Energy Information Administration, State Energy Data System

A Brief History of OEI Programs Leading to Microgrids for Resilience

ENERGY INDEPENDENT COMMUNITIES PROGRAM

“Generate **25%** of Wisconsin power and transportation fuels from **renewable resources locally** by **2025**”

- **150 Energy Independent Communities**
- **50 Communities** received grant funding for creating sustainable energy plans for government operations in **2009 and 2010**. More have since.
- **Encompasses 3.41 million people**
- **58.7% of Wisconsin’s population**

Municipal Energy Efficiency Technical Assistance Program- MEETAP

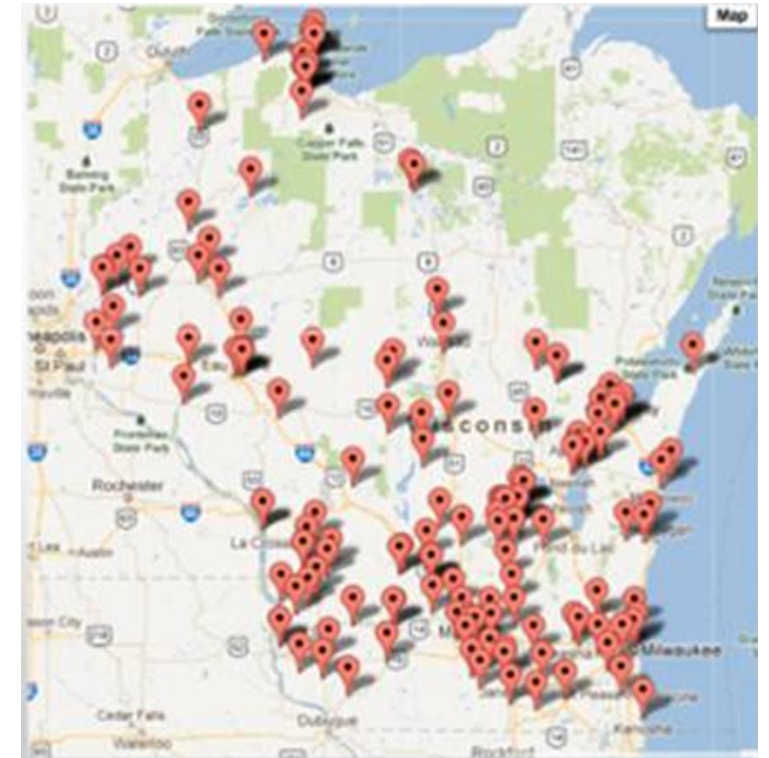
Petroleum Shortage Contingency Planning

Energy Security Planning and Response

Statewide Assistance For Energy Resilience and Reliability

SAFER2

- **Recruit Tribes and Communities** to update emergency plans and participate in “**deep-dive analysis**”
- **Deep-dive components** (customized to participants’ needs and goals):
- **Wisconsin Clean Cities Alternative Fuel fleet assessment**
- ***Micro-grid feasibility study of critical infrastructure***



Wisconsin Office of Energy Innovation

Statewide Assistance For Energy Resilience and Reliability SAFER2

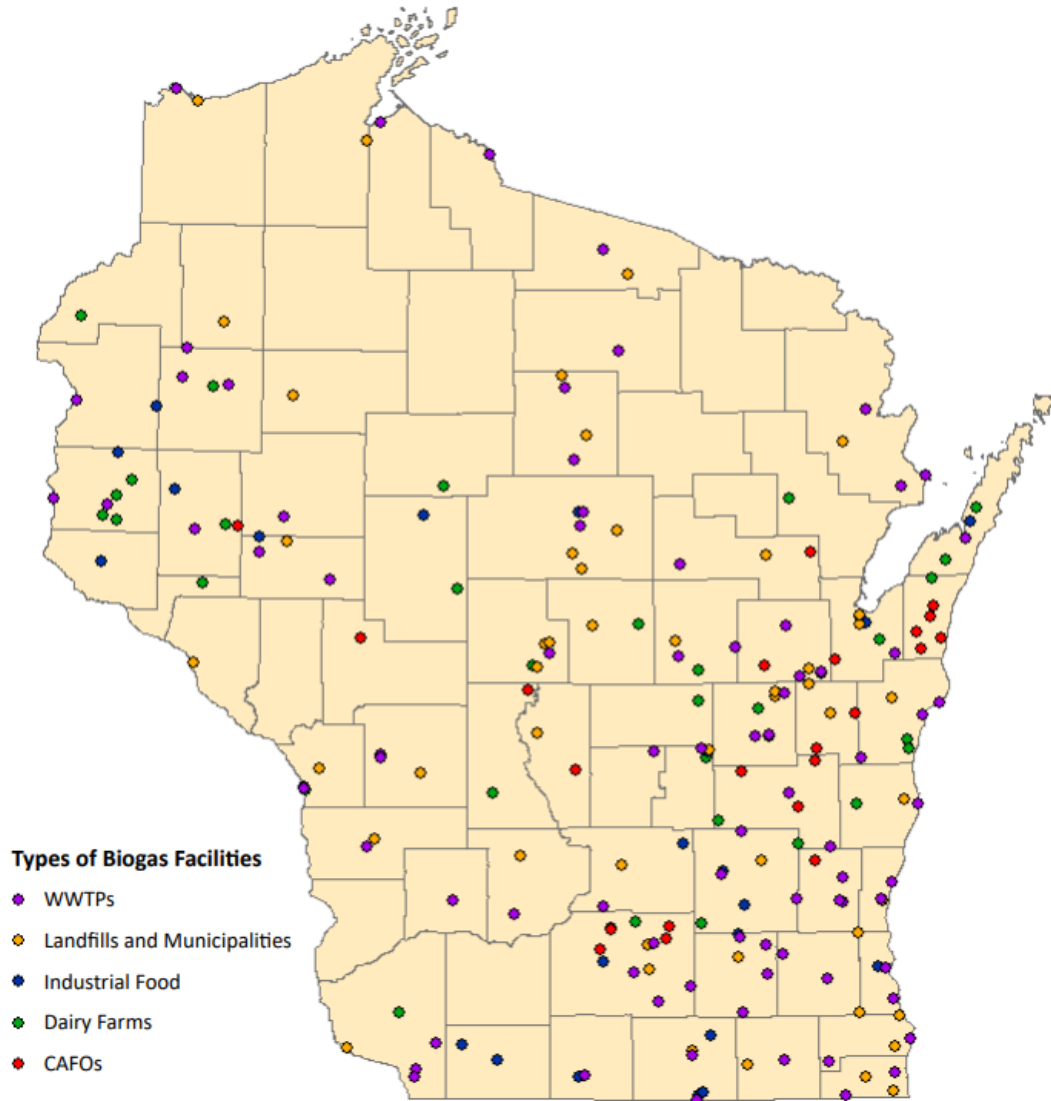


- Recruit Tribes and Communities to participate in “deep-dive analysis”
 - Deep-dive components (customized to participants’ needs and goals):
 - Wisconsin Clean Cities fleet assessment
 - Grant review- provided by OEI & WEM- listing of all available funding sources
 - Micro-grid feasibility study of critical infrastructure

Oneida Nation has already deployed a significant amount of solar PV, this analysis will consider linking loads to storage, associated costs, and practicality of alternative back-up power to diesel or propane generators.

Activities wrap up in 2022- holding Executive Tabletop Exercise in April to transmit findings to Executive branch decision makers

The Biogas Opportunity – 2020 WI Biogas



Map 1: Wisconsin biogas facilities on-site

- **Policy Drivers** Recommended by 2020 Survey Respondents:
- Specific federal incentives or grant opportunities for biodigesters (21% of facilities),
- More state energy incentives or funding (RPS)(18%),
- Higher prices or assistance in renewable energy credits (11%),
- Less stringent permitting requirements (10%)
- Consistent Incentives

Other Policy Recommendations

- Mandate food waste diversion from landfills
- U.S. renewable fuel standard policy for assisting in biogas
- More Environmental Quality Incentives Program (EQIP) funding
- Policies encouraging more outside investors (PACE?)
- Mandating higher electricity rate for biodigester facilities (Cow Power)
- Upfront costs present one of the biggest barriers
- Lack of access to pipeline injection prevents many RNG producers from profitability in current incentive environment.



Photo 1: Dairy Biogas Anaerobic Digester Facility, Clean Fuel Partners, LLC, Dane, WI



Photo 9: Biogas system, Appleton Wastewater Treatment Plant, Appleton, WI

Resources



Photo 5: Pipeline injection of biogas from a Dane County Landfill, Dane County Public Works, Madison, WI

WI Biogas Survey 2015:
[WisconsinBiogasSurveyReport.pdf](#)



WI Biogas Survey 2020:
[WI Biogas Feedstock Survey](#)



Photo 2: Manure Anaerobic Digester Facility, EnTech Solutions in partnership with Northern Biogas, Middleton, WI



Photo 4: Food waste-to-energy biodigester facility, Forest County Potawatomi Community Renewable Generation, LLC

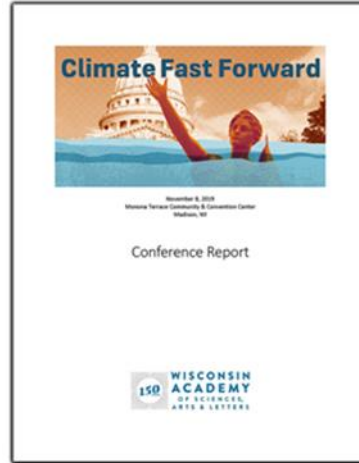


Photo 3: High strength equalization tank with truck, Waste Water Treatment Facility, Stevens Point, WI

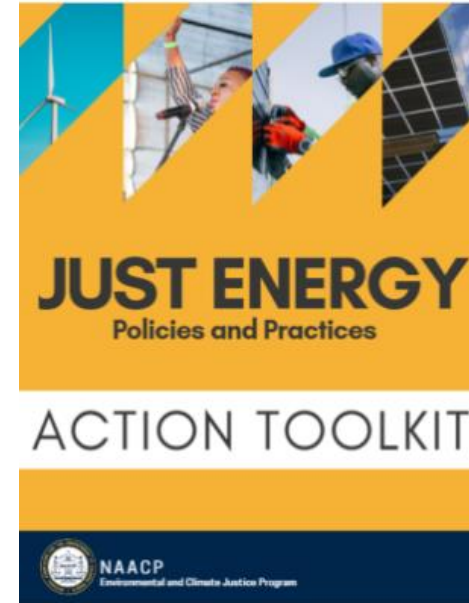
Energy Justice is a Critical Component of Energy Security



Figure 1 Wind events July 2019 https://www.weather.gov/grb/071919_severe_event



Energy Storage for Social Equity Initiative --
<https://www.pnnl.gov/projects/energy-storage-social-equity-initiative>



<https://www.naacp.org/climate-justice-resources/just-energy/>



2010 San Bruno Pipeline Explosion



Critical Infrastructure Microgrid & Community Resilience Center Pilot Grant Program

▶ **The Pilot Grant Program (CIMCRC)**

design details were established by the Public Service Commission in an open meeting on April 15, 2021

▶ **Federally Funded** through U.S. Department of Energy by the State Energy Program

- [Program Design Memorandum](#) staff researched programs in:
- New York (NY Prize)
- Connecticut
- New Jersey
- Rhode Island
- Maryland
- Massachusetts

Strategic Objectives

- ▶ **Energy Security:** Foster critical infrastructure security and resilience, improving the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions. Resilience includes the ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats or incidents.
- ▶ Prioritize reliability and resilience benefits (during outages not caused by events beyond a utility's control) and benefits of avoiding major power outages (i.e. outages caused by major storms or other events beyond a utility's control).
- ▶ **Clean Energy Equity:** Help provide equitable access to the benefits of clean energy, efficiency, and preparedness by reaching broad applicant types. This includes applicants who may traditionally face barriers to adopting clean energy solutions and the benefits they provide, or whose communities may be disproportionately impacted by the negative effects of traditional fossil fuel and inefficient energy systems.

Definitions

- ❑ **Critical Infrastructure:** Those facilities, systems, and other assets deemed vital to the public confidence and to Wisconsin. Loss or incapacity of critical infrastructure would have a debilitating impact on the state's security, public health, economy, safety, or well-being.
- ❑ **Microgrid:** A group of interconnected loads and distributed energy resources within clearly defined electrical boundaries that acts as a single controllable entity with respect to the grid. A microgrid can connect and disconnect from the grid to enable it to operate in both grid-connected or island- mode.
- ❑ **Lifelines:** A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security. Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function.

Definitions Continued

- ❑ **Level 1 or single customer:** a single Distributed Energy Resource (DER) or multiple DERs serving one customer through one meter. Example: a single facility (such as a hospital) using an on-site microgrid to provide backup power.
- ❑ **Level 2 or single customer or campus setting (partial feeder microgrid):** a single DER or multiple DERs serving multiple facilities, controlled by one meter at the interconnection point (also known as Point of Common Coupling or PCC). Example: a microgrid sited on a University campus connected to multiple buildings.
- ❑ **Level 3 or multiple customers (advanced or full feeder microgrid):** a single DER or multiple DERs serving multiple facilities or customers on multiple meters. The DER(s) may be located on a different site from the facilities or customers. While the advanced microgrid has one PCC, the individual facilities or customers within the advanced microgrid may have their own individual connections to the distribution grid.
- ❑ **Community Resilience Centers (CRC):** Facilities designed to provide emergency heating and cooling capability; refrigeration of temperature-sensitive medications, vaccines and milk from nursing mothers; plug power for durable medical equipment (to include dialysis equipment and continuous positive airway pressure machines); plug power for charging of cell phone and computer batteries; and/or emergency lighting. A CRC may also be a designated location (by the city, county, or State of Wisconsin) for the distribution of emergency services during extended grid outages. This center would not necessarily be a replacement for an emergency shelter, and should not be required to have food service capabilities, showers, or locker rooms; however, an emergency shelter that does provide these services would still be eligible to apply. A CRC can be a Level 1, 2, or 3 Microgrid (see definition of Microgrid above).

Eligible Applicants

- ▶ Municipalities, Universities, Schools, Hospitals, and Like Entities (MUSH Market): cities, villages, towns, counties, K-12 school districts, tribes, municipal water and wastewater utilities, municipal electric utilities, municipal natural gas utilities, University of Wisconsin System campuses and facilities, Wisconsin Technical College System, public or nonprofit hospitals. 501(c)(3) nonprofits
- ▶ The Commission approves the staff identified option to establish a partnership approach for eligible applicants, wherein a Lead Applicant engages Target Partners. The Commission establishes the MUSH Market as “Lead Applicant” eligible entities; responsible for partnering with “Target Partners” described as appropriate public, private, and non-profit entities, or their subunits, with unique oversight or expertise in sectors appropriate to the project such as housing authorities, municipal utilities, and engineering firms.

Critical Infrastructure Microgrid & Community Resilience Center Grant Program

15 projects funded to study the feasibility of Microgrids for resilience across Wisconsin:

Projects include:

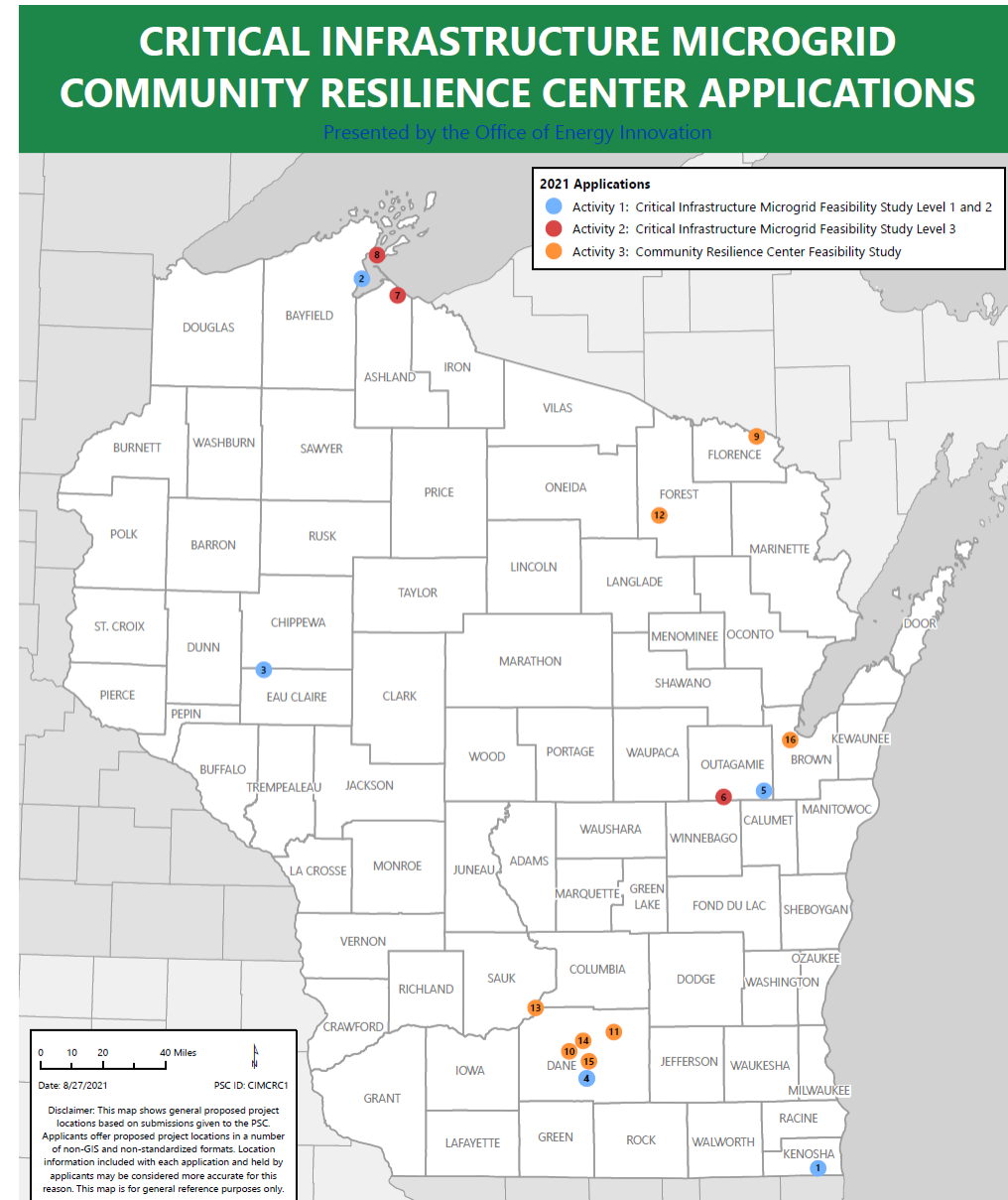
Hospital, Airport, Police Operations Center, Business Park, Mobile Microgrid, Mini-grid (combination of 3 microgrids), Water Treatment Facility, Wastewater Treatment Facility, and more!

\$915,000 awarded

Docket# [9705-FG-2020](#)

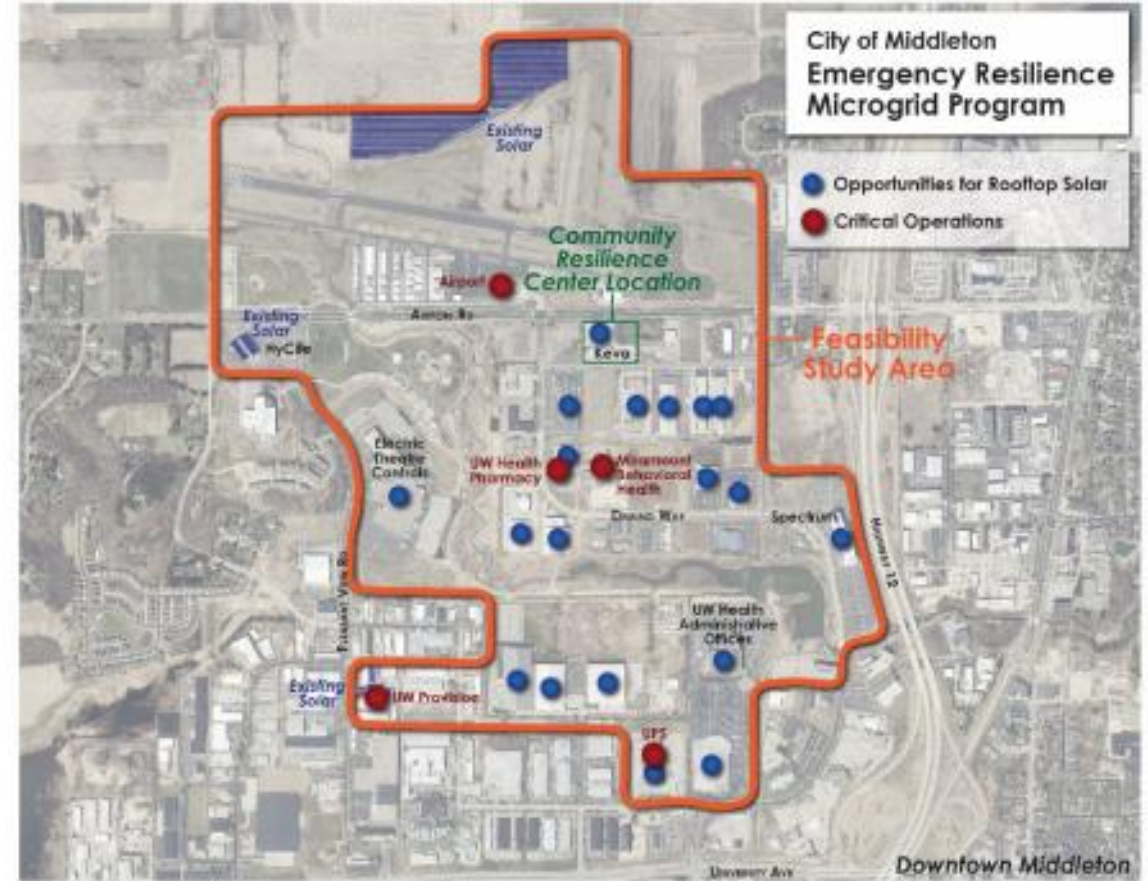
7/28/2022

OEI@Wisconsin.gov



City of Middleton Emergency Resilience Microgrid Study

- Energy Independent Communities (EICs) are advancing!
- 2018- OEI funded a clean energy plan study for 7 communities- Middleton was the lead.
- This installation will build on existing solar at the Police department (which also received another grant for a battery and expanded solar array in 2020).
- Concept includes installation of 5 MW of solar and utilization of 35 acres of rooftop space distributed throughout the project area.
- Extreme rainfall event in August of 2018 (12 inches in 24 hours) flooded the project area and crippled emergency services.
- Feasibility study will consider service to more than 60 businesses.

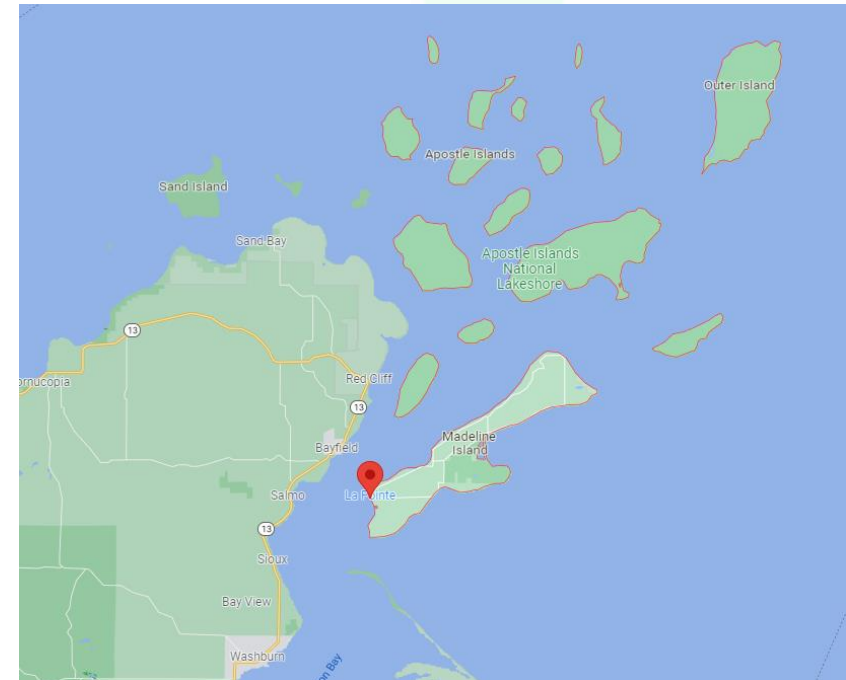
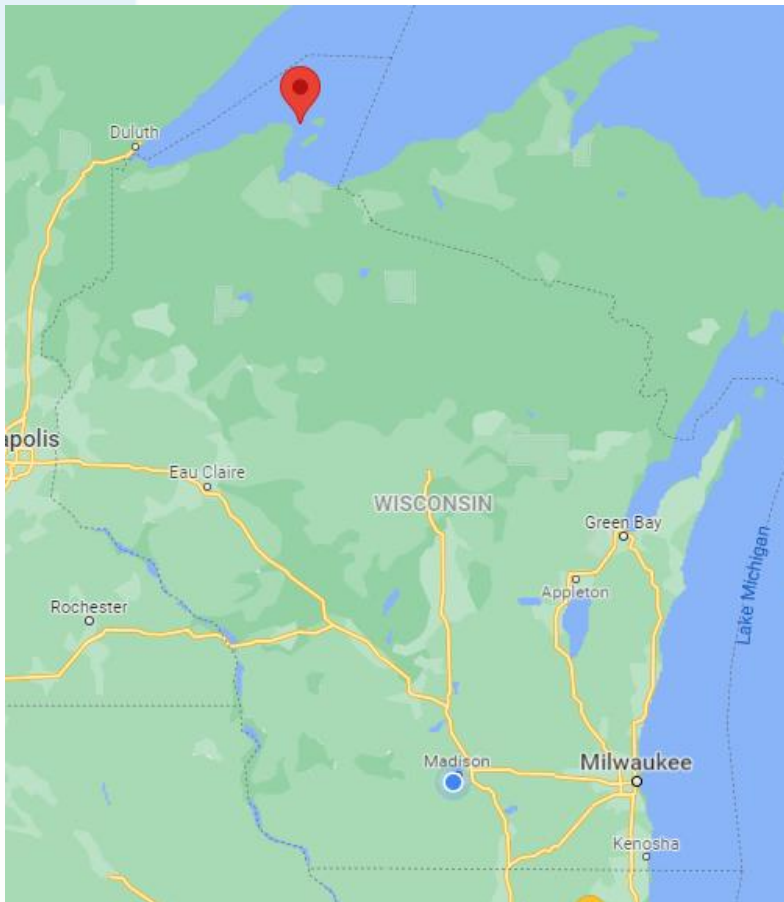


Town of La Pointe Microgrid Feasibility Study



Level 3 Critical Infrastructure Study:

Remote community located on Madeline Island, part of Apostle Islands National Lakeshore



Town of La Pointe Microgrid Feasibility Study



Level 3 Critical Infrastructure Study:

Key to the project- existing DERs and propane generators- considering lithium-ion battery storage, controls, solar.



SEPA Feasibility Study Example

- ❑ Holy Wisdom Monastery
- ❑ Designated Dane County Regional Airport Shelter Location, several agreements to provide emergency shelter
- ❑ Renewable Energy is important to the Monastery
- ❑ Currently served by oversized diesel generator




Source: MGE, 2021

Holy Wisdom Monastery Scenario Development




Fuel Preferences


Aggressive renewable




Moderate renewable





Low renewable



Islanding Duration

 **Short-term Islanding** capabilities can help a facility ride through a short-term outage due to short-term distribution disruptions (2-3 hours)

 **Medium-term Islanding** capabilities can help a facility withstand a widespread distribution outage or limited-scope transmission outage (2-3 days)

 **Long-term Islanding** capabilities can help a facility to eliminate reliance on the grid during long-term, catastrophic outages (2-3 weeks or indefinite)

Holy Wisdom Monastery Scenario Development



What % of the site's load should be served by a microgrid?
Does the site have any short-term plans to reduce load?



Where should additional solar generation be located?
How much solar generation should be installed at the site?














How long will the site be able to operate as an island?
Will the site consider any backup generation options?



What size battery should be installed as part of the microgrid?
Where will the battery be located?
Who will own the battery energy storage system (BESS)?
How will the BESS be used (resilience, economic gain)?

Holy Wisdom Monastery Microgrid Scenarios



Microgrid Scenario	Total Solar (kWDC)	BTM Battery Duration	BTM Battery Capacity	Main Battery Function	Resiliency Benefit	MGE Resilience Service	Cost
A*	415 kW (270kW new)	 ~3h	 175 kW	Short-Term Resilience Peak Shaving Energy Arbitrage	Customer-owned battery provides short-term; utility provides long-term islanding capability		\$\$\$
B	415 kW (270kW new)	 4h	 150kW	Peak Shaving	Utility-owned battery provides extended islanding capability		\$\$
C	415 kW (270kW new)	 4h	 150kW	Energy Arbitrage	Utility-owned battery provides extended islanding capability		\$\$
D	415 kW (270kW new)	 4h	 1 Mw	Long-Term Resilience Economic Dispatch	Customer-owned battery provides extended islanding capability	Third-Party Provider to Optimize Battery	\$\$\$\$

Questions?

Megan Levy
Resilience Strategist & Energy Assurance Coordinator
Office Of Energy Innovation
Public Service Commission of Wisconsin
Megan.levy@Wisconsin.gov
608-800-2277 phone



Wisconsin Office of Energy Innovation





OREGON
DEPARTMENT OF
ENERGY

Community Renewable Energy Grant Program – C-REP



Yaquina Head Lighthouse, Newport, Oregon

C-REP Initial Application Round Results

Applications for the first set of opportunity announcements totaling \$12 million were due on Friday, July 8, 2022.

We are thrilled to report excellent participation in this first round, and want to share some statistics:

- 68 applications submitted
- 34 planning applications (23 resilience, 11 non-resilience)
- 34 construction applications (21 resilience, 13 non-resilience)
- Requested grants total around \$27 million, advance requests around \$7 million
- Renewable energy generation planned from all projects totals around 30 MW
- Applications received from all over the state and from counties, public libraries, community colleges, fire departments, irrigation districts, Tribes, cities, water and sanitation districts, consumer-owned utilities, public universities, and state agencies.

ODOE is now working on the Eligibility and Completeness Review for all submitted applications. After this is complete, we will move into the Competitive Review Process.



OREGON
DEPARTMENT OF
ENERGY

Guiding Principles Discussion

Harney County, Oregon

Guiding Principles for Recommendations

Can the workgroup agree to guiding principles to inform the development of recommendations? ODOE staff would propose beginning with the following:

Recommendations to the Legislature should:

- Assist Oregon in meeting state goals as defined in HB 2021
- Promote equitable outcomes among Oregonians
- Contribute to maintaining affordable energy for all Oregonians
- Support project transparency
- Consider the perspectives of other stakeholders
- Consider contributions to economic development or local energy resilience

What else? Are there principles here that you don't agree with?

Are there principles that you think are missing?

Guiding Principles for Recommendations

Recommendations to the Legislature should:

- Assist Oregon in meeting state goals as defined in HB 2021
- Promote equitable outcomes among Oregonians
 - Promote EJ goals
- Maintain affordable energy / rates for all Oregonians
- Promote equitable distribution of costs and benefits for all Oregonians
 - Acknowledge the varied perspectives on the appropriateness of using regulated utility rates to pay for benefits that do not contribute to maintaining the uniform delivery of safe and reliable service at just and reasonable rates for all electricity customers (including local benefits vs. global benefits)
- Support project transparency
- Consider the perspectives of other stakeholders
- Support economic development
- Support local energy resilience
- Support unique contributions of small-scale projects
 - Nimbleness
 - Community/local ownership



OREGON
DEPARTMENT OF
ENERGY

30-Minute Break (return at 11:35)

Sunset on the Columbia River in Boardman

Policy Recommendations / Thoughts Received Via Forms from the Workgroup

- “I think it's important for the legislature to understand that Oregon COUs already provide their customers very low carbon and low-cost electricity. This lowers the value proposition of adding renewables in COU territory.”
- “It is critical to ensure the value of the Federal hydropower system is represented and thus low rates in the NW are taken into account. Additionally, it is imperative to note the importance of voluntary participation and the desire to maintain a path of non-participating individuals not subsidizing participating individuals.”

Policy Recommendations / Thoughts Received Via Forms from the Workgroup

- “I would ask that project funding take into account retail rate impacts to those that benefit, as well as those that do not. Some kind of transparent decision-making framework here would be helpful. I'd also suggest including a comparison to existing energy sources that may better meet the needs of our communities.”
- “Re-capitalize the Small-Scale Energy Loan program and target public entities.”

Policy Recommendations / Thoughts Received Via Forms from the Workgroup

- “Not sure exactly what the solution is but many of the smaller COOPs in Oregon have a strict limit on the quantity of renewables you can put on their grid. For many organizations, we would be willing to invest more in solar arrays (for example) if our utility would purchase the generated electricity. The state could help these utilities by subsidizing the cost of this generation. While the local utility is long on power the NW power grid could definitely use more.”

Policy Recommendations / Thoughts Received Via Forms from the Workgroup

- “Amend ORS 469.210: Insert generation for capacity:
 - (2) For purposes related to the findings in subsection (1) of this section, by the year 2030, at least 10 percent of the aggregate electrical GENERATION [capacity] of all electric companies that make sales of electricity to 25,000 or more retail electricity consumers in this state must be composed of electricity generated by one or both of the following sources...”
- “Dual-use, or agrivoltaic, solar projects should be allowed on all soil classes, with no size cap, but give counties the ability to make some modifications. The definition of dual-use should be broad enough to include pollinator habitat, livestock grazing (sheep and bees), and farming.”
- “Pilot project for utilities to work with communities to have small-scale projects contribute to community resilience by having utility scale storage attached to solar and/or to have a small-scale project connect to the local grid during outages.”

Policy Recommendations / Thoughts Received Via Forms from the Workgroup

- “Pass HB 2520 from the 2021 session”
- “Fund DLCD to create rules for Goal 13, in order to implement A. 5 (5. Plans directed toward energy conservation within the planning area should consider as a major determinant the existing and potential capacity of the renewable energy sources to yield useful energy output. Renewable energy sources include water, sunshine, wind, geothermal heat and municipal, forest and farm waste. Whenever possible, land conservation and development actions provided for under such plans should utilize renewable energy sources.)”

Policy Recommendations / Thoughts Received Via Forms from the Workgroup

- “Full property tax exemptions for tribal energy projects (even if power is sold off reservation/trust land) or guide to PILOT/revenue share agreements with local jurisdictions.”
- “Clear guidance to local jurisdictions and states prohibiting double taxation on tribal energy infrastructure including on sales, property, or services.”
- “Guidance/Incentives for expedited T&D interconnection for tribal energy projects”

Policy Recommendations / Thoughts Received Via Forms from the Workgroup

- “Additional State Funding: Additional state general funds are critical to incorporating more small-scale renewables projects, instead of requiring utility customers to support small-scale projects through utility rates. Given the long-term economic and statewide benefits of these projects, additional state funding specifically directed to offset the incremental project costs would make small-scale projects more economical for customers and is the most appropriate avenue to achieve state goals for smaller-scale and community-based energy project expansion. PacifiCorp and PGE support additional state dollars for the Community Renewable Energy Grant Program established by House Bill 2021 (2021) that provides grants for the planning and development of community”

Policy Recommendations / Thoughts Received Via Forms from the Workgroup

- “Performance Metrics: Increased small-scale projects on the energy system could become a greater issue if the projects do not meet certain performance metrics. Smaller projects should adhere to performance and reliability standards consistent to other generators to ensure the system continues to operate efficiently. If energy is not available when needed (e.g., during high usage periods or resilient during extreme storms or other emergency events) or is available when it is actually problematic for the system to accept it (e.g., high generation during low load hours without storage), even a small project could lead to substantial cost impacts to transfer the energy out of the immediate area. Small-scale projects that can provide reliability or resiliency benefits can be very useful but must be determined on a case-by-case basis. Metrics around resiliency measures and standards as the program begins to expand will help inform coordinated benefits for the state.”

Policy Recommendations / Thoughts Received Via Forms from the Workgroup

- “Long-Term State Goals: It will also be important to understand the state’s long-term goals for small-scale projects. PacifiCorp is a multi-state utility, serving retail customers in six different states across the West. As a single system operating across different geographic areas, PacifiCorp can provide distinct value through both load and resource diversity. This allows PacifiCorp to find lower cost alternatives for its customers when the resources can be used to serve loads in all of PacifiCorp’s states. But each state we serve is different, with their own political and regulatory challenges that can sometimes conflict with what is most beneficial to our whole system. House Bill 2021 is comprehensive and keeps the focus on ensuring reliability, affordability, and delivering the best solutions for Oregon customers while achieving the ultimate goal of decarbonization. This approach builds on Oregon’s previous clean energy policies and provides regional alignment with our neighbors. Understanding how the state views small-scale renewables within the broader decarbonization framework will help us better provide specific feedback as we continue to plan for our multi-state system, while incorporating state-specific policies to serve customers in only one state.”

Data and Information Gaps Identified By Workgroup Members Via Forms

- “It would be helpful to share with the workgroup, and perhaps in the report, an updated compendium of distributed renewable energy generation in Oregon, including technology, location, capacity, ownership, etc., and the degree of confidence whether the data are accurate. Related information, if available, that expounds on capacity trendlines (positive or negative) may also be valuable to the study and report readers.”
- “There is a lack of transparency around the capacity and location of distributed renewable energy resources (DERs) in Oregon and the energy and economic benefits they provide. It's a constantly shifting figure, but a broader understanding of their impact on the energy system may be beneficial.”

Data and Information Gaps Identified By Workgroup Members Via Forms

- “I'd like to see more levelized cost of energy figures included in the discussion. If we're going to prioritize these projects for policy reasons, we should know exactly how much more than are going to cost our utility rate payers as compared to alternatives.”
- “How have avoided cost schedules tracked with actual costs over time?”
- “Not sure if we are able to adequately describe additional benefits of small-scale renewables beyond power. The benefits may not be measured in cost but contribute other attributes.”

Data and Information Gaps Identified By Workgroup Members Via Forms

- “PacifiCorp and PGE recommend that ODOE prepare and provide economic analyses that compare costs and benefits from larger-scale and smaller-scale renewable projects. This type of independent evaluation would provide helpful context for the stakeholders in the workshop to discuss distinct benefits and risks of small-scale, community-based energy projects as compared to projects of larger size using the same renewable technology. It would provide helpful insight for utilities to determine customer impacts when conducting system planning. Without this analysis, utilities that traditionally rely on least cost, least risk planning to meet state energy policy, would not have a cost foundation analysis that can support proposals submitted to the Public Utility Commission of Oregon. This places the utility at risk that compliance with this portion of Oregon energy policy could lead to stakeholder challenges over the economic analysis of small-scale resource options and the utility’s interpretation of its legal obligations.”

Data and Information Gaps Identified By Workgroup Members Via Forms

- “I think the exploration of models of community-ownership/leadership in project development is really important. This has been missing a bit from the workshops so far, but I feel like an opportunity that small-scale renewables presents to us is the ability for community groups/orgs/neighborhoods to take leadership and define what they want projects to look like and what types of co-benefits are important to them.”
- “Examples of financially successful agrivoltaic projects in other states”

Data and Information Gaps Identified By Workgroup Members Via Forms

- “How does someone who wants to develop a larger solar array connect with A) developers and B) utilities willing to purchase the electricity.”
- “Tribal perspectives on distribution level challenges. I will continue to make introductions.”
- “Demand side management, small scale gen aggregation, and formation and management of VPPs, which seems particularly challenged in an unorganized market”



Breakout Groups:

- Create list of recommendations
- Discuss Pros and Cons
- Group by:
 - Contracting & Rates
 - Land Use
 - Interconnection & Transmission
 - Other

Workgroup Recommendations From Prior Workshops

- On the following slides, the recommendations workgroup have mentioned in prior workshops are already listed
- Based on your discussions in the breakout session, we will build out this list in four general categories:
 - Contracting and Rates
 - Land Use
 - Interconnection and Transmission
 - Other

Workgroup Member Recommendations: CONTRACTING AND RATES

- Expand standard PURPA contracts and rates to larger projects (consider that energy rates change and long-term contracts can be problematic)
- Consider grant-based, taxpayer-funded subsidy instead of rate-based (ratepayer-funded, not rate-based) if rate to be above avoided cost rate
- Create methodology to incorporate resilience benefits into project determination
- Greater transparency from BPA as to allowable projects
- Ensure performance metrics of projects are met – PUC already has performance based ratemaking authority / look to Hawaii model for DER support
- Community collaboration with utilities to develop metrics that value benefits, but don't add to ratepayer burden
- C-REP seems like a good model (though more data would be instructive) to divide payment of benefits between taxpayers and ratepayers --- persistent availability of funding critically important to project development
- Figure out way to compensate storage rate-wise

Workgroup Member Recommendations: LAND USE

- Simplify permitting / siting for small projects
 - Utilize NREL's free SolarAPP software (NREL Software Automates Residential Solar Permitting, Improving Process for Local Governments | News | NREL)
 - Use Oregon Renewable Energy Siting Assessment (ORESAs) Online Mapping & Reporting Tool.
- Expand dual-use and agrivoltaics (legislative direction for DLCD to update rules)
- Establish exemption process for “greater good” of renewable energy projects
- Update Goal 13 or at least streamline process for renewables (SB 762 – wildfire bill - lessons)
- Technical assistance or easier process for siting and land use issues, particularly for Tribes
- Develop model codes for smaller counties / would be great if state could support this

Workgroup Member Recommendations: INTERCONNECTION AND TRANSMISSION

- Create better transparency for interconnection feasibility with existing infrastructure
 - Suggest creating a map of excess capacity / existing resources
 - Standardized spreadsheet for IOUs/BPA to insert capacity at each existing / planned facility
- Standardize / formalize wheeling charges
- Support formation of an RTO – **scale of this topic enormous, not driven by small scale renewables (though those projects very well could benefit from an RTO)**
- **Speed up decision-making and implementation of interconnection**
- Meter aggregation: single interconnection point
- Better understanding of interconnection data / transparency of hosting capacity

Workgroup Member Recommendations: OTHER

- Fund the Small-Scale energy loan program
- Change language in law requiring small-scale renewables from capacity to generation
- Clear long-term state goals re: small-scale projects
- Refer to NREL and MTERA Report: Addressing Regulatory Challenges to Tribal Solar Deployment
- Ownership and Governance – promote relationship-building and assessment of genuine community needs from the start and local ownership of projects by giving them priority in applying for state and other (?) funding (prioritize public funding for projects supported by local community)
- Forum for sharing best practices among COUs / communities / community solar projects
- Cooperative ownership model (like existing rural electric coops) provide potential wealth building opportunity for communities
- Ownership discussion may suffer from language differences—opportunities and risks of ownership need to be considered. Models for community ownership to build wealth may not yet exist, but could explore creating it.
- Work on common language/definitions—resilience, for example
- Consider Feed-in Tariff for small-scale projects



OREGON
DEPARTMENT OF
ENERGY

Outline and Other Gaps in Knowledge / Data

Trillium Lake, Mt. Hood

Your Outline Comments

- Distinction between IOU/COU territory recommendations



OREGON
DEPARTMENT OF
ENERGY

Takeaways and Next Steps

North Fork John Day River, Grant County



OREGON
DEPARTMENT OF
ENERGY

Public Comment

Please state your name and any
affiliation/organization

Please limit your comments to 5 minutes

Thank you!



OREGON
DEPARTMENT OF
ENERGY

Thank You!

For questions or more information:
Stephanie Boles
stephanie.boles@energy.oregon.gov

St. John's Bridge, Portland