1. Small-Scale Renewable Energy Projects Study
Background for Benefits and Costs Workshop on June 28, 2022

Background

Small-scale and community-based renewable energy projects present an opportunity to diversify energy resources in Oregon and provide benefits to Oregon communities. To date, widespread development of these projects has faced a variety of financial, interconnection and policy-related barriers. This workshop will seek to identify and determine methods to quantify small-scale renewable energy development benefits as well as identify the potential rate impacts of the projects. Correctly identifying and quantifying the value of projects is important to their success. It allows informed decisions about the equitable distribution of the benefits and costs of achieving clean energy and climate targets. Related topics, such as ownership models and project opportunities and barriers are the subject of additional workshops.

Policy Landscape

The impacts of small-scale renewable energy projects have proven difficult to quantify and are heavily project dependent. The following policies are presented as topics for discussion in the benefits and costs workshop:

Public Utility Regulatory Policies Act of 1978 (PURPA): The Public Utility Regulatory Policies Act (PURPA) of 1978 was established after the US energy crises of the 1970s to encourage development of small, non-utility power facilities, defined as facilities under 80MW in size that use renewable resources. PURPA gives Qualifying Facilities (QF) the right to interconnect with the utility-controlled grid and requires these utilities to purchase QF-generated energy at an avoided cost rate.[3] In Oregon, utilities establish different avoided costs rates based on the technology installed on their system. Certain facilities can qualify for standard contracts, specifically solar facilities smaller than 3MW and other renewable facilities smaller than 10MW. Nonstandard rates are available for projects up to 80MW. PURPA provides an avenue for renewable energy development – particularly small projects – allowing developers to sell, and requiring utilities to purchase, output from QFs to utilities at an avoided cost rate under standard contracts.

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). For example, solar facilities larger than 3MW but smaller than 20MW would still be considered small-scale facilities but would be ineligible for the community solar program or a standard PURPA contract. Like PURPA QFs, these facilities deliver renewable energy and the benefits of decarbonization to the bulk power system.

Direct Access: Chapter 865, Oregon Laws 1999 describes direct access options in Oregon. Direct access enables certain nonresidential electricity consumers to purchase electricity from an electricity service supplier (ESS) other than their electric utility. Electricity service providers

must gain certification by the Oregon Public Utility Commission or the governing body of a consumer owned utility. Within direct access contracts, the electricity service supplier is responsible for generation and transmission of electricity, but the electric utility retains responsibility for distribution of services.

Net Metering: ORS 757.300 describes Oregon's net metering laws.[4] Since 1999, Oregon law has required electric utilities to offer net metering to Oregon customers for renewable energy systems up to 25 kilowatts (kW) in size. This law was amended in 2005, enabling the Oregon Public Utility Commission to adopt rules allowing customers of investor-owned utilities to install larger systems. In 2007, the Oregon PUC adopted net metering rules for Oregon investor-owned utilities, including an allowance for non-residential net metered projects up to 2 megawatts (MW) in size. For consumer-owned utilities, net metering policies are developed by each COU's governing body or board.

Community Solar Program: Oregon Laws 2016, Chapter 28 (SB 1547)[5] directs the OPUC to establish Oregon's Community Solar program to enable owners and subscribers of a community solar project to share in the costs and benefits of the project. The program is available to customers of PGE, PacifiCorp, and Idaho Power, and enables subscribers to realize electric bill savings associated with a share of a community solar facility. The bill requires that at least 10 percent of allocated capacity be made available to low-income customers.

County Permitting Practices: Moratoriums on ground mounted systems. Opportunities in some counties.

Oregon Statewide Land Use Planning Goals: OAR 660-015-0000(13) describes Goal 13, Energy Conservation. This is the only land use planning goal directly related to energy and is limited in scope to energy efficiency guidelines and provisions for recycling facilities. Goal 13 was adopted in 1974 and has never been updated. Goal 3 does not include any language related to renewable energy, statewide clean energy targets, climate change or energy facilities development. Goal 3 is related to the preservation of agricultural lands and is often cited in relation to renewable energy developments.

<u>Other Policy Considerations</u>
Fee in Lieu of Taxes
Transmission / Interconnection Constraints
RED Zones
RPS / HB 2021
Community Renewable Energy Grant Program
OSSRP
Energy Trust of Oregon Programs
Federal ITC
FEMA BRIC funding
Other Federal Funds?

Additional Benefit Considerations

- Tapping underdeveloped resources like micro hydro, geothermal, or biomass
- Using renewable energy and storage or other technologies to provide backup power to critical infrastructure
- Making use of previously disturbed land and combining renewable power with other land uses
- Deploying small-scale projects within communities where certain additional benefits may be realized such as resilience
- Small projects have smaller footprints and potentially fewer resource impacts

Additional Rate Impact Considerations

- Retail credit offsets for net metering
- Wheeling charges
- Allocation of the fixed costs of the grid and potential cost-shifting

Discussion Questions

Project Attributes

1. What are the attributes that differentiate small-scale renewable energy projects from utility-scale, or large-scale, projects?

Economic Benefits

2. What are the common economic benefits of small-scale and utility-scale renewable energy projects and what are those unique to small-scale?
3. How can these economic benefits be valued?

Resilience Benefits

4. What are the potential resilience benefits unique to small-scale and community-based renewable energy projects?
5. Can we differentiate between resilience benefits that accrue to individual customers vs. communities vs. the grid?
6. How can these resilience benefits be valued?

Other Benefits

7. What are the other key energy and non-energy benefits unique to small-scale and community-based renewable energy projects?
8. How can these other benefits be valued?

Rate Impacts

9. What is the potential impact of small-scale and community-based renewable energy projects on electricity rates:
    a. For participants / owners of the project?

b. On overall utility rates – including for utility customers who are non-participants to the project?

10. How do the avoided cost rates paid to Qualifying Facilities affect utility rates for their ratepayers now?

Costs

11. What are the differences in costs between different scales of development?
12. What are the major drivers of those differences in cost?
13. How do different types of renewable energy projects (e.g., PURPA QF, utility-owned large-scale projects, community-owned small-scale projects, etc.) affect the utility's overall revenue requirement?
14. Is there sufficient data publicly available about the costs of different types and scales of renewable energy projects?

Other Questions

15. What gaps in information are there regarding these costs?
16. What data are needed?
17. What are the specific benefits associated with different ownership models for small-scale renewable projects?
18. How can the benefits of small-scale project be extended to environmental justice communities?