The Potential of Renewable Energy

Oregon has committed to reducing its carbon emissions to prevent the worst impacts of climate change. In 2021, Oregon passed legislation (HB2021) mandating that 100% of the electricity used by Oregonians be generated from non-emitting sources by 2040. Achieving this goal will require a significant expansion of utility-scale renewable energy facilities in the state. An analysis of Oregon’s renewable energy potential found that the state has sufficient land- and ocean-based areas to meet its clean energy goals with “a combined available capacity of over 1,500 gigawatts of solar photovoltaic, onshore wind, offshore wind, and geothermal resource spread throughout the state.” However, use of these resources is constrained by existing transmission infrastructure already utilized at full capacity and the challenges of expanding it.

Conserving Valued Land Uses

Renewable energy development often requires substantial areas of land, creating the possibility of conflict with other land use values. Oregon has rich natural areas and a proud history of livelihoods and communities centered around the use of natural resources. The state prioritizes conservation through its land use planning goals, which include protections for wildlife habitats and lands used for agriculture and timber. Renewable energy projects are subject to permitting by state and local regulators and must be found to be consistent with these goals. The constraints of siting to minimize impacts on valued resources are real but need not be insurmountable. Good planning and consultation with relevant agencies, tribes and stakeholders can reduce siting challenges and align energy generation with state land use goals.

A Collaborative Approach

The Oregon Smart Siting Collaboration (OSSC) was formed with the objective of developing voluntary guidelines for responsible renewable energy siting. The OSSC consists of four project partners, Defenders of Wildlife, the Natural Resources Defense Council, Oregon Natural Desert Association and Renewable Northwest and is funded by a grant from the Doris Duke Foundation. To develop the guidelines, the OSSC sought input from state and tribal government representatives as well as a diverse set of stakeholders including clean energy advocates, conservation organizations, environmental justice groups, renewable energy developers, federal agencies, local government officials, utilities, community organizations and representatives of agriculture and industry.

Site Characteristics for Low-Impact Siting

Based on the input received, OSSC created a list of the key site characteristics that should be prioritized when siting renewable energy facilities:

1. High wind or solar resource potential
2. Access to existing transmission and distribution networks with available capacity and interconnection
3. Areas with low biodiversity conflicts
4. Areas that do not conflict with agricultural production
5. Areas that minimize conflicts with communities, cultural resources and historic values
6. Areas with low recreational and scenic value

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Areas that do not overlap with military operations

Areas that do not impinge on tribal sovereignty

The sites most consistent with these characteristics are often those that are already developed or disturbed. In addition to rooftops and parking lots, these include areas where the soil has been altered and is not valuable for wildlife habitat or agriculture. Other options to minimize siting conflicts include the combination of agriculture and renewable energy development (agrivoltaics) and floating solar (floatovoltaics). However, meeting Oregon’s clean energy goals will require identifying additional low-impact sites throughout the state.

Community Engagement Is Key

Renewable energy development can provide benefits for, or result in impacts to, the communities where it occurs. In addition to broad stakeholder outreach, the OSSC partners decided they needed to hear more from host communities. Listening sessions were conducted with small focus groups in eastern Oregon to learn how some local communities perceive the renewable energy siting process. While Oregon counties differ markedly from each other, common themes arose from the listening sessions:

- There is a perception that land use regulations do not reflect the values of rural Oregon; communities want their voices to be heard.
- Communities want developers to collaborate with them early in the siting process.
- There is interest in providing energy for Oregonians, but communities want to receive more benefits when renewable energy facilities are placed on valued local lands.
- Conserving farmland is a high priority; farmers should receive the greatest possible value for land taken out of agricultural production.
- There is general agreement about the need to move away from fossil fuels, but a resilient local energy supply is a higher priority for some communities.

Guidelines Summary

Through careful consideration of the perspectives of Oregon stakeholders, OSSC developed a set of voluntary guidelines that address renewable energy site selection, community engagement and community benefits. The guidelines mainly apply to renewable energy developers, but some are intended for regulatory agencies and communities. It is important to note that the guidelines are not meant to be treated as rules or a model for regulation.

The guidelines for site selection are based on the eight low-impact site characteristics. They encourage developers to obtain the best available data to consider all the characteristics when evaluating potential project locations. To minimize impacts, the guidelines urge developers to site facilities on previously developed and disturbed lands to the extent practicable. Agencies are encouraged to respond promptly to developers’ requests for the data and, within existing regulations, to allow permitting flexibility for developers who have demonstrated a good faith effort to site in locations consistent with the characteristics.

The guidelines related to community engagement and benefits emphasize the importance of collaborating with local communities early and often. They urge developers to consider each community’s unique needs and interests, to solicit their input and to provide them with timely information. Developers are also encouraged to integrate community benefits into project planning, which would include recruiting locally for jobs on renewable energy projects and providing training to develop a skilled local workforce. The guidelines suggest that communities should participate in updating local comprehensive plans to ensure their values are represented in the permitting process, and fully utilize existing programs to get the most benefit from property taxes and other sources of revenue.

Conclusions

The expansion of renewable energy needed to meet Oregon’s climate goals will require tradeoffs, as it will not be possible to optimize all of Oregon’s land use values in all areas. The best solutions will thoughtfully balance the priorities of the state and its residents. Careful planning now will pay dividends over the long term. The OSSC guidelines are one contribution to that ongoing planning effort.

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