



DLCD
Department of
Land Conservation
& Development



OCMP
Oregon Coastal
Management Program



**OREGON
CONSENSUS**

Oregon Offshore Wind Energy Roadmap

Review Draft #1

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Oregon Offshore Wind Energy Roadmap
FIRST FULL DRAFT

COVER ART & TITLE PAGE

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Dear Roundtable reviewers,

First, thank you all for the detailed comments on the Roadmap concept paper in May 2025. Those comments led to substantial changes as the document moved into this first draft of a Roadmap. We are now asking for further feedback. As a reminder, the review process will be:

- Feedback on First Draft in September to inform a Second Draft by November;
- Feedback on a Second Draft to inform a Third Draft that will go out to broader public comment in January (of course Roundtable feedback on the Third Draft is welcomed);
- Feedback on the public comments to inform a Final (fourth Draft) in Spring
- Final adjustments to the Final Manuscript before the Roadmap is "done for now"

Please provide comments ASAP, so DLCD has time to incorporate them for November. Comments by October 10 would be best, by October 20 would be OK.

Comments are easiest for us to incorporate if:

- You have a cover letter or comment that gives some of your overall impressions and reasons for bigger/more global changes to the Roadmap
- Use a Word document, using track changes with suggested language you can suggest, for specific edits to the document
- Some of the figures may be hard to do tracked changes to. Give us a comment there.

Some of the areas we could really use your attention right now:

- Generally, what's missing? What's unclear? What needs to change? What dilemmas do you see that need to be talked about further?
 - The document is long in page length, but may be short on detail in some important areas (to some Roundtable members)--The document can't be all things to all people. What's the right balance of A) an executive summary designed for the Legislature, B) enough technical detail so future people don't have to tread the same ground unnecessarily, and C) enough plain language and usability so all Oregonians understand the pathways the Roadmap defines to possible offshore wind (or not).
 - Look at the 4 alternative futures Section 2 defines. Are those the right alternatives? Are they described clearly?
 - Section 3 focuses on the two pathways that include OSW arrays off the Oregon coast--This is the description of the permitting pathway OSW developers would follow if those pathways are chosen.
 - Section 5 is designed to be the strategic actions/recommendations that would help fill gaps identified in Section 4 and ensure implementability of the pathway described in Section 3. What's missing? What needs more detail? What's unclear?
-

Executive Summary:

Oregon Offshore Wind Energy Roadmap

Roadmap Purpose

Under the direction of the 2024 Oregon Legislature through House Bill 4080, the purpose of the Oregon Offshore Wind Energy Roadmap is to, “define standards to be considered in the processes related to offshore wind development and approval”. Built on the broad engagement with interests along the coast and across the state, the Roadmap considers the potential benefits and costs of offshore wind energy, as well as the unwanted adverse effects that could result if offshore wind is not developed responsibly for the state. The Roadmap provides a framework for a future that could include offshore wind, including policy recommendations, investments or actions the state can take, and clear expectations for permitting and process steps along the path to responsible offshore wind development for Oregon. Section 1 of the Roadmap describes more of the background, purpose, and current context for offshore wind energy in Oregon.

HB 4080 identified the key objective areas that Oregon standards for offshore wind must support, including:

- Supporting local and regional coastal communities;
- The creation of economic opportunities and sustainment of existing local and regional economies;
- The creation of an offshore wind energy workforce that is local, trained, housed and equitable;
- Protection of Tribal cultural and archaeological resources, culturally significant viewsheds and other interests of Tribes;
- Protection of the environment and marine species; and
- Achievement of state energy and climate policy objectives, including energy resource diversity, reliability and resilience of state and regional energy systems.

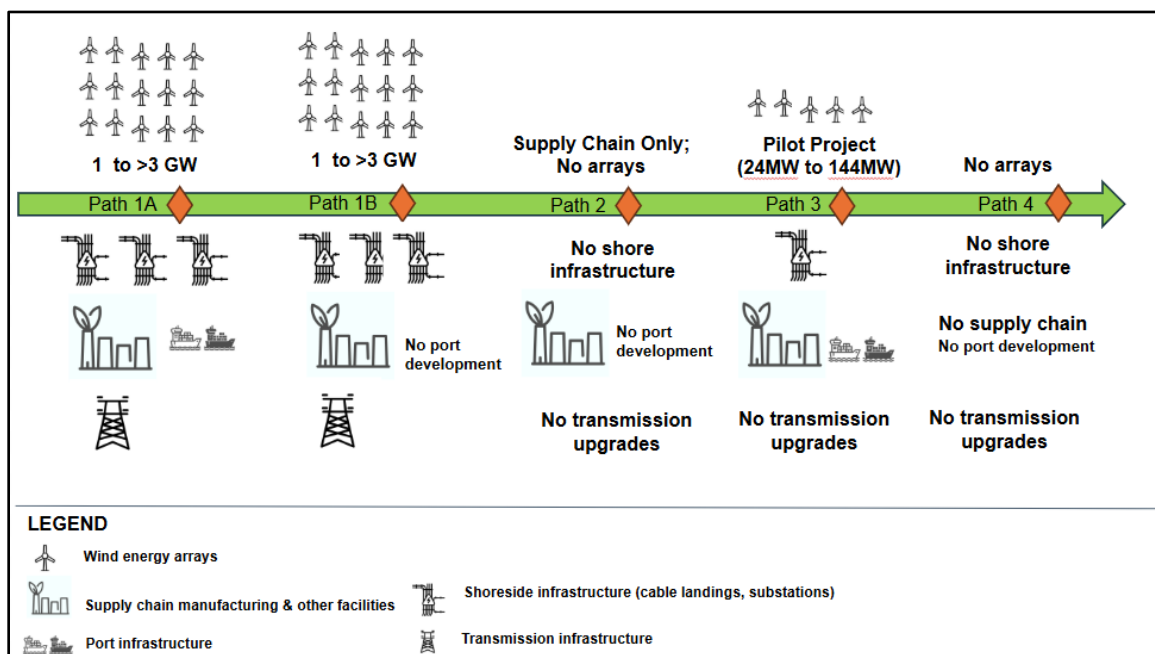
Within each of these objectives, the Roadmap identifies policies, processes, strategic opportunities, and actions necessary to achieve those objectives consistent with values and interests of the state, Tribes, and affected communities.

The Roadmap is not the vehicle to decide *whether* offshore wind will be built in Oregon. Instead, it defines the conditions, processes, and standards under which offshore wind *could* proceed responsibly—protecting coastal communities, Tribes, fisheries, and ecosystems while advancing Oregon’s clean energy and climate goals. There is uncertainty in federal policy and the offshore wind industry. The Roadmap uses alternative futures to account for actions the state could take under scenarios ranging from large-scale development or opting out entirely, or in between

scenarios of smaller-scale pilot projects or supply chain participation without hosting wind farms (See Figure ES-1). Section 2 of the Roadmap describes four alternative futures in more detail, but they are summarized here:

- Paths 1A and 1B: These paths envision medium to large-scale development of offshore wind energy, imagining 1 to 3 gigawatts of power generation off the Oregon coast. This future would require energy transmission upgrades, shoreside infrastructure such as cable landings and substations, and local supply chain businesses. Path 1A imagines significant Oregon port upgrades, and Path 1B imagines using the port capacity envisioned in places like Seattle, Humboldt, or other California ports.
- Path 2: Oregon may decide to develop supply chain businesses to support offshore wind development in California or other states but not host wind energy arrays off the Oregon coast.
- Path 3: Oregon may choose to partner with energy developers for a smaller scale pilot (in state or federal waters), which would not require significant transmission upgrades, but may also not be economically feasible without state and federal financial support.
- Path 4: Oregon may opt out of any participation in the offshore wind industry.

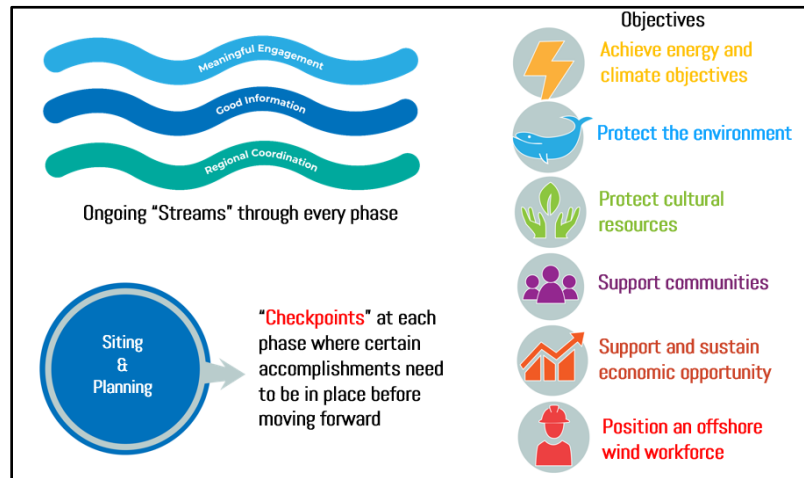
Figure ES - 1. Alternative Futures Considered in the Roadmap



Pathways to Offshore Wind for Oregon

Along the pathway to any of the alternative futures that include wind turbines off the Oregon coast (Paths 1 and 3), there will be phases of development, and at each phase the Roadmap defines ongoing “streams” where there will be meaningful engagement with communities, information needed, and coordination with other states.

Figure ES- 2. Legend for the Pathway Diagrams



Those phases begin with siting and planning where offshore wind could be located, followed by leasing ocean areas for exploration, permitting, construction, operations, and then finally a decision to renew the lease or decommission and remove the wind energy facilities.

Within each phase of development, there are also “checkpoints” where a wind energy project is evaluated (informally or formally) to ensure the project meets the six “objectives” (see Figure ES-2) and decisions to move forward or not are made. The Roadmap describes each of those phases of development and the likely accomplishments needed at each phase to inform a decision to A) move forward to the next phase, or B) iterate, pause, or exit movement forward until additional information is available. Below are “Pathway Diagrams” for each phase of offshore wind development (see Figures ES 3-8). The Roadmap document Section 3 describes in more detail the standards and steps expected at each stage identified in the diagrams.

Figure ES - 2. Offshore Wind Siting and Planning Phase

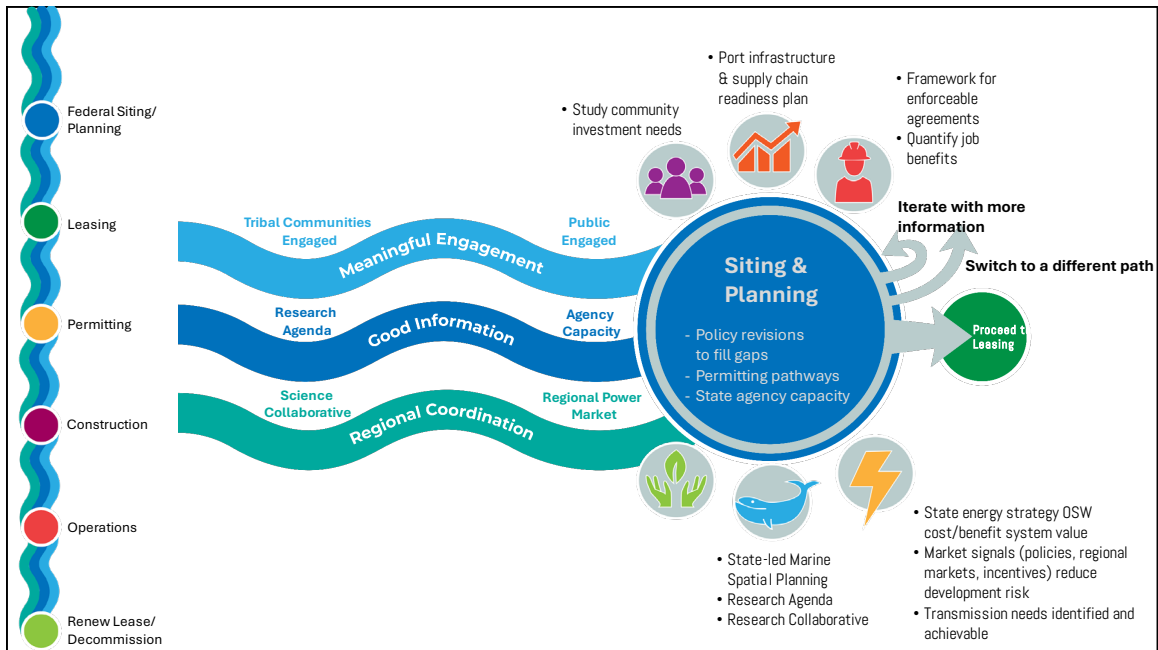


Figure ES - 3. Offshore Wind Leasing Phase

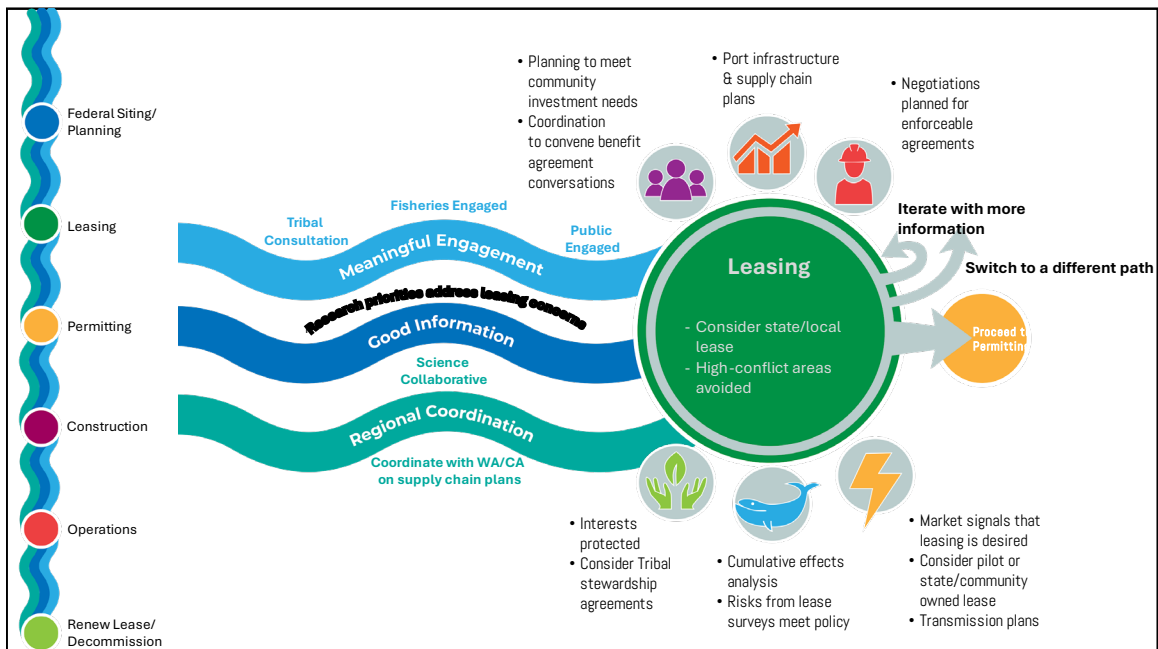


Figure ES - 4. Offshore Wind Project Permitting Phase

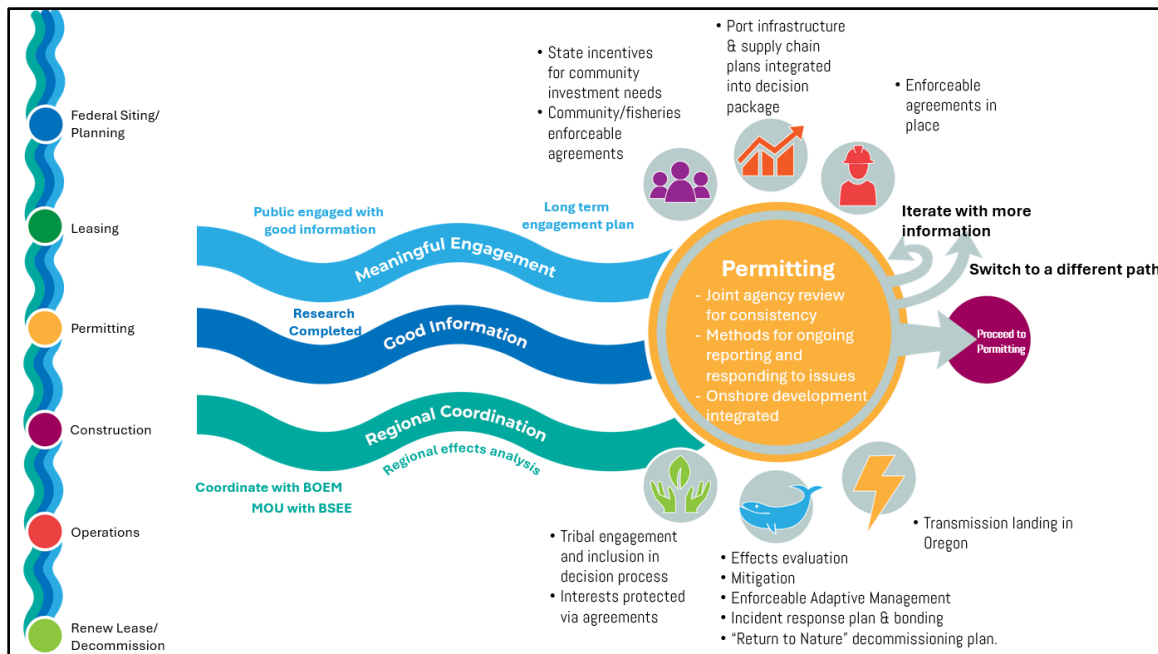


Figure ES - 5. Permitted Offshore Wind Project Construction Phase

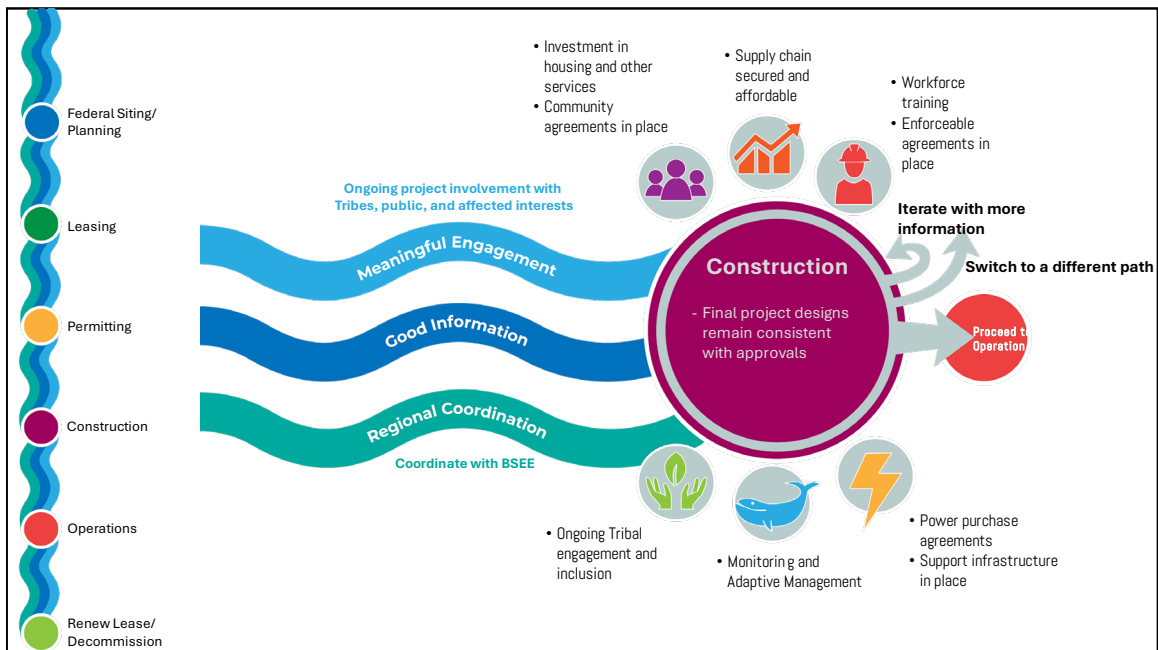


Figure ES - 6. Operation Phase of an Offshore Wind Project

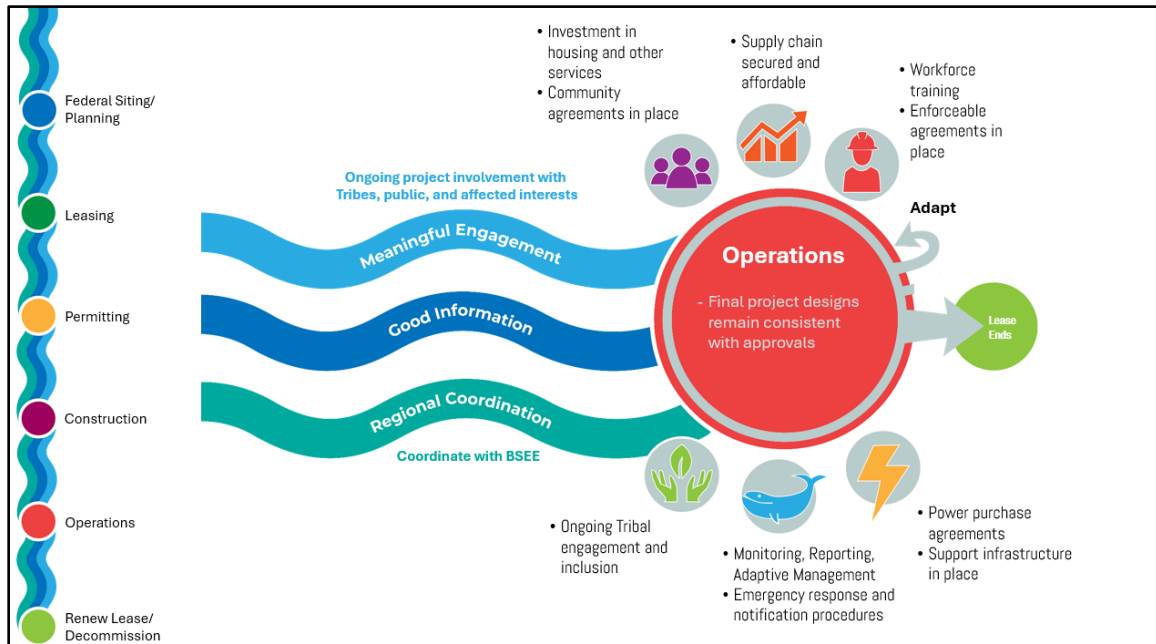
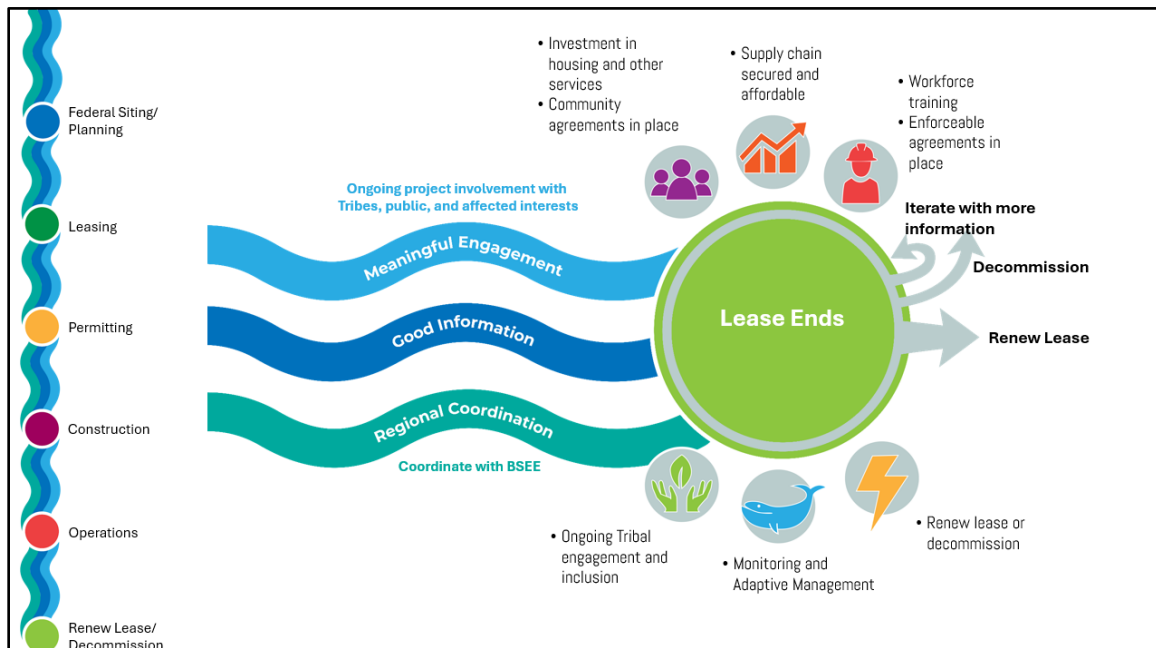


Figure ES - 7. Lease Renewal/Decommissioning Phase of an Offshore Wind Project



Recommended Policies and Actions to Address Gaps

Section 3 of the Roadmap contains an assessment of the enforceable policies and other standards the state might use in the future when reviewing federal permits and other proposals related to offshore wind development. That assessment includes:

- Discussion of the potential effects of offshore wind development – both opportunities to be grasped and adverse effects to manage – relative to Oregon coastal communities and state interests.
- An overview of key enforceable policies that are already in place in Oregon to address offshore wind energy effects of interest or concern.
- A catalog of policy “gaps” or opportunities that this Roadmap recommends be addressed through follow-on formal policymaking.
- A capacity assessment that describes the resources necessary for state agencies, local governments, and Tribal governments to fully participate in offshore wind energy decision processes.

Section 5 of the Roadmap provides recommended actions to better prepare Oregon for a future that could include offshore wind energy or to employ during future offshore wind decision-making processes. The actions are organized by policy objective categories provided in HB 4080. Many of these actions are referenced in the Oregon Pathway to Offshore Wind Energy in Section 4 and are described in further detail in Section 5.

The table below summarizes recommended policy actions to address these gaps. Additional recommendations and details are included in Section 3. The majority of policy gaps may be addressed by embarking on an amendment to Oregon’s Territorial Sea Plan, which contains sections dedicated to uses of the seafloor and the review of marine renewable energy facilities.

Roadmap Objective Area	Policy Gaps (Section 3)	Recommended Policies & Actions (Sections 3 and 5)
Meaningful Engagement & Permitting	• Lack of resources to engage fully • Unclear participation opportunities outside of formal comment opportunities • Desire for broad participation in science development and interpretation • Need for better coordination between state, communities, Tribes, federal agencies, and developers	• Fund state-led engagement capacity; coordinate outreach with federal agencies and developers • Build partnerships with local governments and NGOs • Develop an Oregon-specific research agenda • Create an Oregon-specific offshore wind science collaborative • Participate in a West Coast Science Collaborative initiated by California • Coordinate with federal agencies and developers on engagement • Steering committee for state engagement
Achieve State Energy & Climate Objectives	• Fragmented power procurement market increases developer risk • Path for needed transmission upgrades unclear • Reliability and resiliency value to the coastal grid from offshore wind needs to be clarified and integrated in planning • Goal 13 too narrow, no procurement authority, OSW not integrated, no resilience standards • Relative economic development opportunities of energy generation options should be considered in planning • Need policy incentives to reduce risk for long lead-time generation sources • No guarantee that offshore wind generated off Oregon would land in the state	• Consider policies in Statewide Planning Goal 13 or energy procurement regulations to value grid resiliency/reliability and job creation • Consider policy to require OSW to connect to the OR grid first • Quantify socioeconomic benefits and job opportunities • Refine Oregon Energy Strategy to account for changing assumptions, energy system benefits of offshore wind, and economic growth opportunities • Evaluate transmission and grid needs and support a statewide transmission entity for investment and planning support • Explore policy incentives for long lead-time energy resources • Coordinate regionally with CA and WA on regional power markets, supply chain, and transmission planning • Identify community investment needs to support offshore wind energy development
Protect the Environment & Species	• Opportunity to specify additional ecological protection standards and broaden their applicability in federal waters • Need for greater clarity on adaptive management, hazards planning, emergency response, and decommissioning standards • Need for more structured uncertainty/risk management and accountability measures	• Baseline/cumulative studies • Amend TSP for adaptive management • Update hazard/visual standards in the TSP • Refine adaptive management standards in the TSP • Broaden ecological protection policies in the TSP • Improve Goal 7 hazard policies • Amend the Territorial Sea Plan to address policy gaps • Develop and pursue an Oregon offshore wind research agenda

Roadmap Objective Area	Policy Gaps (Section 3)	Recommended Policies & Actions (Sections 3 and 5)
	• Need to more clearly connect mitigation options with the definition of significant adverse effect on the environment	• State-led spatial inventory of suitable sea space for offshore wind based on state policies • Participate in a West Coast Science Collaborative initiated by CA • Develop an Oregon offshore wind science collaborative • Invest in baseline ecological studies • Define a framework for monitoring and adaptive management; explore enforceable mechanisms post-permitting • Clarify and strengthen accountability measures throughout the offshore wind project lifecycle • Early state agency participation in site characterization and permitting information needs
Tribal Interests	• Incorporation of Traditional Ecological Knowledge and Tribal government policies in state decision-making • Need for more meaningful inclusion of Tribes in decision-making processes • Need for greater coordination between state, federal agencies, Tribes, and developers • Need for improved implementation measures around archaeological and cultural resource protection • Need for policy improvements to protect culturally significant areas and resources • Need to explicitly include Tribal cultural fishing uses in state fishery protection standards • Need for greater data access agreements and oversight. • Tribal capacity needs for full engagement in offshore wind processes	• Amend statutes for cultural site inventory protection • Require cultural site inventories • Recognize ceremonial/subsistence fishing in the TSP • Require Traditional Ecological Knowledge in reviews • Include visual effects of cultural significance in the TSP • Explore whether memorialized agreements with ocean users can be mandatory • Include all Nine Federally Recognized Tribes of Oregon in Joint Agency Review Teams • Require qualified marine archaeologists for certain offshore exploration • Support co-stewardship and business partnerships • Condition leases to include Tribal observers for potentially ecologically disturbing activities • Condition leases to exempt Tribes from archaeological credentialing requirements • Encourage local policies to protect cultural sites • Include Tribes in a state/regional research collaborative • Consider Tribal government policies comparable to state enforceable policies during offshore wind project reviews • Explore a natural resources endowment fund • Condition leases/permits to engage Tribes in overseeing ground disturbing activities • Data sharing agreements between state and Tribes

Roadmap Objective Area	Policy Gaps (Section 3)	Recommended Policies & Actions (Sections 3 and 5)
		• MOU/MOA with BOEM to outline simultaneous engagement with state and Tribes • State-convened tri-party meetings with Tribes and Developers post-leasing • Support Tribal capacity needs to participate in offshore wind processes
Support for Coastal & Regional Communities	• Community needs to support growth pressures from a potentially large new industry on the coast • Need to clearly understand potential community effects from offshore wind energy to inform community agreements and state review decisions • Need to update visual protection standards based on community values related to offshore wind • Need for enforceable mechanisms to encourage community agreements • Need for state support for community agreements	• Funding/support for local planning updates • Create a policy mechanism for Enforceable Community Agreements • Strengthen recreational protection standards • Broaden fisheries protection standards • Explore a legislative cap on total allowable offshore wind development • State guidance and technical support for enforceable Community Agreements • Socioeconomic studies to define and measure community benefit and adverse effects from offshore wind • Assess community investment needs (housing, childcare, healthcare, infrastructure) • Support local governments in amending plans and codes to address policy gaps • Explore requiring memorialized agreements with fisheries groups • Establish adaptive management and accountability for long-term impacts • Include communities in state-led offshore wind spatial suitability process • Include communities in state/regional science collaboratives
Economic Opportunity & Sustainment	• No enforceable local economic benefits, • Need to identify supply chain opportunities • Need to coordinate and support creation of market opportunities	• Assess investment needs for ports & industry • Clarify port development needs and coordinate with local plans • Assess supply chain market opportunities • Catalog port/industrial capabilities • State support for market opportunities and partnerships • Explore business partnerships with Tribes and communities
Offshore Wind Workforce	• Need to strengthen enforceability of workforce standards and labor agreements • Need to plan for training and apprenticeship to coincide with offshore wind energy development opportunities	• Enforce labor agreements with wage/equity/safety • Expand apprenticeships & training pipelines • Integrate workforce housing/healthcare/childcare • Supply chain and workforce assessment and planning • Plan for workforce-linked housing and services

Next Steps to Implement Recommendations

The following are identified resource needs identified in the Roadmap, beyond existing state agency staff resource capacity:

- Support completion of an offshore wind research agenda for Oregon. The Roadmap contains an initial research and prioritization framework developed by the Ocean Policy Advisory Council's Scientific and Technical Advisory Committee using volunteer resources. Further work is needed with funding support for expert time and workshops to complete the agenda.
- Rulemaking to update the Oregon Territorial Sea Plan to address offshore wind policy gaps identified in the Roadmap. The rulemaking would be undertaken by OPAC with staff support from DLCD and participation from other state agency staff resources. Additional technical studies or support may be needed to research policy options, especially updating state visual resource protection policies to account for offshore wind turbine heights, socioeconomic impacts, and public perceptions.
- State-led Offshore wind sea space suitability spatial inventory and planning process to inform future federal agency leasing actions in federal waters. This effort would involve significant engagement with fisheries, Tribes, and coastal communities; new data acquisition to support spatial inventories; facilitation support for planning meetings; and technical support for spatial decision support modeling.
- Agency capacity needs to support offshore wind involvement through multiple stages. The Roadmap contains a capacity assessment that includes state agencies, local governments, and Tribes and details capacity needs.
- Establish and support a Fisheries Offshore Wind Planning Collaborative to be a durable venue for ongoing planning discussions with fishing communities, negotiation of memorialized agreements with offshore wind developers, and other engagement activities.
- Establish and support an Oregon offshore wind science collaborative to gather interested parties in support of accomplishing the offshore wind research agenda and coordinating with a West Coast Science Collaborative initiated by California in support of regional offshore wind research. The Oregon science collaborative should include a framework for accepting and distributing funding to support relevant research and baseline data collection and participate in regional research opportunities.
- Various studies to support future offshore wind decision-making, including:
 - Coastal community infrastructure and support services needs assessment studies
 - Socioeconomic studies of offshore wind benefits and potential adverse impacts to coastal communities
 - Supply chain market analysis and Oregon supply chain capacity registry
 - Cumulative Impact Analysis for offshore wind development in Oregon and within the California Current Large Marine Ecosystem to support future leasing

Conclusion

Oregon's offshore wind future is uncertain, given shifting federal policies. However, by advancing state-led planning, engagement, and capacity-building now, Oregon can position itself to secure community

benefits, protect valued resources, and ensure readiness to decide whether to move forward as a state if and when federal policies once again support offshore wind development.

Oregon Offshore Wind Energy Roadmap

1 BACKGROUND AND INTRODUCTION

1.1 Purpose and Background

Under the direction of the 2024 Oregon Legislature through House Bill 4080, the purpose of the Oregon Offshore Wind Energy Roadmap is primarily to, “define standards to be considered in the processes related to offshore wind development and approval”. Built on broad engagement with interests along the coast and across the state, the Roadmap considers the potential benefits of offshore wind energy the state and coastal communities would want to realize with offshore wind, as well as the unwanted adverse effects that could result if offshore wind is not developed responsibly for the state. The Roadmap provides a framework for Oregon that could include offshore wind, including policy recommendations, investments or actions the state can take, and clear expectations for process steps along the path to responsible offshore wind development for Oregon.

House Bill 4080 builds on an informal discussion that began in 2023 around the question of offshore wind in Oregon’s future¹. HB 4080 identified the key topical areas that Oregon standards for offshore wind must support, including:

- Supporting local and regional coastal communities;
- The creation of economic opportunities and sustainment of existing local and regional economies;
- The creation of an offshore wind energy workforce that is local, trained, housed and equitable;
- Protection of Tribal cultural and archaeological resources, culturally significant viewsheds and other interests of Tribes;
- Protection of the environment and marine species; and
- Achievement of state energy and climate policy objectives, including energy resource diversity, reliability and resilience of state and regional energy systems.

This Roadmap describes objectives within each of these topic areas and identifies the policies, processes, strategic opportunities, and actions necessary to achieve those objectives consistent with values and interests of the state and affected communities.

It is important to make clear that this Roadmap is not the vehicle for deciding whether Oregon will pursue offshore wind energy development. The Roadmap provides recommendations for new or amended policies that may better position the state to secure its interests when participating in any future decision processes related to offshore wind development, centered around the objectives originally identified in HB 4080. The Roadmap also considers different possible futures, including those where no offshore wind arrays are sited off Oregon or where the state only focuses on developing the

¹ https://oregonconsensus.org/wp-content/uploads/2024/04/Considerations_Oregon-OSW-Roadmap-with-Exit-Ramps_04262024_final.pdf

supply chain opportunities to support offshore wind development elsewhere, and seeks to identify common features of these alternative future paths to further guide decision-making and investment. These strategic planning elements are intended to guide the best use of time and resources during the coming years, in recognition of the current federal policy direction around offshore wind energy and the ongoing efforts to develop an offshore wind industry in neighboring states.

The Roadmap defines a path to offshore wind for Oregon that is consistent with our values, interests, and needs, but it does not have the authority to establish specific offshore wind policies. This Roadmap identifies potential strategies for offshore wind in Oregon that would involve decision-makers at multiple levels, and the recommendations within the Roadmap are offered for consideration in subsequent legislative action, rulemaking, or other formal policymaking settings.

Finally, this Roadmap is not intended to answer all outstanding questions about the potential benefits or adverse effects of offshore wind for Oregon, make official decisions about the state of knowledge around offshore wind effects, or commission studies or new scientific research. The Roadmap does include an initial effort toward developing a research agenda to address the uncertainties related to offshore wind specific to Oregon's unique context, as well as recommended steps the state can take to address these uncertainties while engaging potentially affected coastal communities.

This Roadmap represents a snapshot in time as of 2026. There are currently no planned revisions of this Roadmap, pending additional direction from the Oregon Legislature; however, if directed, future revisions could build on this Roadmap and let it serve as a living document.

1.2 Offshore Wind Energy Roadmap Development Process

Following passage of HB 4080 (2024), the Department of Land Conservation and Development hired an Offshore Wind Energy Roadmap Coordinator and an Offshore Wind Enforceable Policy Specialist to lead development of the Roadmap and related policy and capacity assessments. DLCD contracted with Oregon Consensus to facilitate an advisory group of more than 50 members representing a broad spectrum of interests related to coastal communities, energy policy, environmental protection, labor, fisheries, economic development, Tribal interests, and academia. The Roundtable also invited agency advisors from an array of federal and state agencies with roles related to offshore wind siting, permitting, and oversight.

The Roundtable met monthly beginning in November 2024 in a variety of in-person coastal locations and virtually online. Each meeting was open to the public, with multiple opportunities for public comment during the meetings. Meeting materials and videos were available on the DLCD Offshore Wind Energy Roadmap website². DLCD also maintained a Roadmap email address through the duration of the process to receive public input or questions.

Prior to convening the first Roadmap Roundtable meeting, DLCD met with representatives and staff of the Nine Federally Recognized Tribes of Oregon to discuss their preferences for involvement in the Roadmap development process. In addition to reserving seats on the Roundtable for each Tribe, DLCD

² <https://www.oregon.gov/lcd/OCMP/Pages/Offshore-Wind-Roadmap.aspx>

established a separate “Tribes-Only Table” focused on direct discussion between DLCD and Tribal staff around Tribal interests concerning offshore wind energy in the state. After several discussions within the Tribes-Only Table, DLCD requested formal consultation on the Roadmap with each of the Nine Federally Recognized Tribes of Oregon.

During the Roadmap development process, it was recognized that additional time was needed to accomplish the level of engagement necessary with coastal communities, as well as review the Oregon Energy Strategy that was being developed in a parallel process. HB 3963 in the 2025 legislative session extended the deadline of the Roadmap from September 1, 2025, to January 1, 2027.

To further community engagement around the Roadmap, DLCD engaged professional services to assist in the development of in-person and virtual community meetings, a set of workshops with coastal Community-Based Organizations, and four focus groups focused on coastal tourism, coastal energy systems and affordability, supply chain challenges and opportunities, and perspectives from coastal youth. DLCD also conducted an individual focus group conversation with representatives of the offshore wind energy industry to discuss their perspectives on the challenges and policy opportunities in Oregon.

Additionally, DLCD led engagement efforts with Oregon’s fishing sector, including meeting directly with Oregon Seafood Commodity Commissions, individual engagement with representatives of recreational fishing associations, hosting of virtual listening sessions for fishing communities, and creation of a survey that was sent to all commercial fishing license holders in the state as well as the Sportfish Advisory Committee consisting of recreational sport and charter representatives. Oregon Sea Grant also provided expert input on fishing community engagement recommendations for the Roadmap.

As part of developing the Roadmap and the associated Enforceable Policy and Capacity Assessments, DLCD met with the planning staff of each city and county within the coastal zone. The purpose of these meetings was to discuss community-specific questions and concerns related to offshore wind and evaluate each jurisdiction’s enforceable policies and capacity needs.

In XXXXX 2026, the Roadmap was released for formal public review and comment. A summary of comments and responses is provided in Appendix X.

1.3 Current Status of Offshore Wind in Oregon

In Oregon, the conversation around offshore wind is framed within the larger goal of expanding renewable energy to 50 percent of all electricity generated from the large utilities by 2040³ and to reduce emissions from Oregon’s large electricity service providers to 100 percent below baseline emissions levels by 2040. These emission reduction targets are driving much of the interest in renewable energy.⁴

³ Relating to Public Utilities, SB 1547. (2016). Accessed at <https://www.oregon.gov/energy/energy-oregon/pages/renewable-portfolio-standard.aspx>.

⁴ Clean Energy Targets Bill, HB 2021. (2021). Accessed at <https://www.oregon.gov/deq/ghgp/Pages/Clean-Energy-Targets.aspx#:~:text=In%202021%20Oregon%20State%20Legislature,with%20the%20electricity%20they%20provide>

Offshore wind may also be an effective way to meet Oregon’s growing electricity demand in the coming decades. Modeling conducted in support of the 2025 Oregon Energy Strategy forecasted that the total electricity demand could be approximately double the current generation capacity for the state⁵. This projected increase is led by the conversion of the transportation sector to electricity instead of fossil fuels and demand growth from the tech industry such as data centers and chip manufacturing facilities. Meanwhile, the electricity Oregon generates derives approximately 62 percent from non-greenhouse gas emitting resources, with the hydroelectric system comprising the majority at 51 percent of in-state electricity generation. However, much of Oregon’s electricity demand is met by resources imported from other states. When accounting for electricity imports, the state meets approximately 50 percent of its demand from non-emitting resources today. To achieve state energy goals of 100 percent clean energy, the state must not only replace half of its current electricity with renewable resources, but it must also meet the challenge of a doubling in electricity demand with a renewable energy supply during the next 30 years.⁶

In a regional context, a technical study from 2019⁷ projected that 80 GW of new solar and wind capacity is needed to meet the Pacific Northwest’s collective greenhouse gas reduction goals by 2050, which is roughly eight times the amount of solar and wind the region has added during the past 20 years (ODOE, 2022). The Northwest Power and Conservation Council (NWPCC) included modeling results in its 2021 Northwest Power Plan that projected an estimated need to add more than 350 GW of new renewables across the entire Western electric grid by 2041 to meet load growth expectations and all the various requirements of western electric utilities, including the clean energy targets of all western states⁸.

Ocean atmospheric conditions offshore Oregon, combined with the energy demand profile in the Pacific Northwest, are well suited for offshore wind energy. Wind speeds are especially high off Oregon’s southern coast, but all areas offshore Oregon consistently have high enough wind speeds to support offshore wind energy. The map below shows the annual average wind speeds offshore Oregon along with the five electrical transmission lines and substations that connect the coast to the rest of the state. All energy demand from coastal communities is served through these connections, and there is currently no significant electricity generation west of the Coast Range.

⁵ <https://www.oregon.gov/energy/Data-and-Reports/Documents/2025-OES-Technical-Report.pdf#page=28>

⁶ <https://www.oregon.gov/energy/Data-and-Reports/Documents/DRAFT-Oregon-Energy-Strategy.pdf>

⁷ https://github.com/cleanenergytransition/mtc-report-EER-technical-report/raw/gh-pages/EER_Northwest_Deep_Decarbonization_Pathways_Study_Final_May_2019.pdf?raw=true

⁸ https://www.nwcouncil.org/fs/17680/2021powerplan_2022-3.pdf

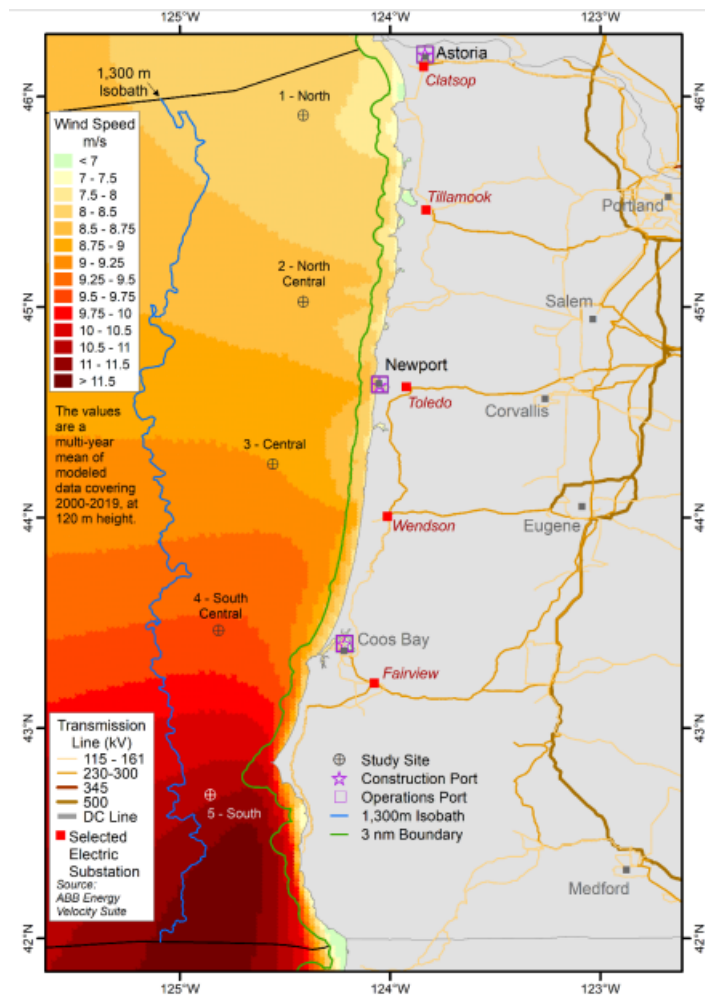


Figure 1. annual average wind speeds offshore Oregon along with electrical transmission lines and substations. (Source, PNNL, 2020)

1.3.1 Current Status of Offshore Wind in Oregon

In December 2010, Governor Kulongoski requested the establishment of a state-federal task force to address the use of the ocean for renewable energy development. The Governor designated the Oregon Department of Land Conservation and Development (DLCD) Coastal Management Program (OCMP) as the State agency lead to coordinate with BOEM. Meetings began in 2011 through 2014, when meetings were paused for several years. In 2019, responding to industry interest in offshore wind development, the Task Force initiated a conversation among federal, Tribal, state, and local governmental bodies regarding potential offshore wind planning offshore Oregon. In 2020, BOEM and the State committed to move forward with offshore planning in Oregon.⁹ BOEM led the Task Force, composed of state, local, federal, and Tribal government entities, to perform preliminary planning and analysis. The task force engaged with the public, developers, and other interested parties to inform the identification of call areas.

⁹ <https://www.boem.gov/sites/default/files/documents/regions/pacific-ocs-region/BOEM-OR-OSW-Engagement-Plan.pdf>

In 2021, House Bill 3375 ([2021](#)) required the Oregon Department of Energy (ODOE) [to develop a legislative report](#) that identifies the benefits and challenges of integrating up to 3 GW¹⁰ of floating offshore wind by 2030, consistent with the planning goal established in HB 3375¹¹. ODOE completed the [Floating Offshore Wind Study Report](#) in 2022¹².

After a multi-year siting process, BOEM designated two Wind Energy Areas (WEA) off the coast of Coos Bay/Reedsport and Brookings in 2024. BOEM then announced an intent to conduct a leasing auction for the two WEAs, for the purpose of exploring offshore wind energy development projects.

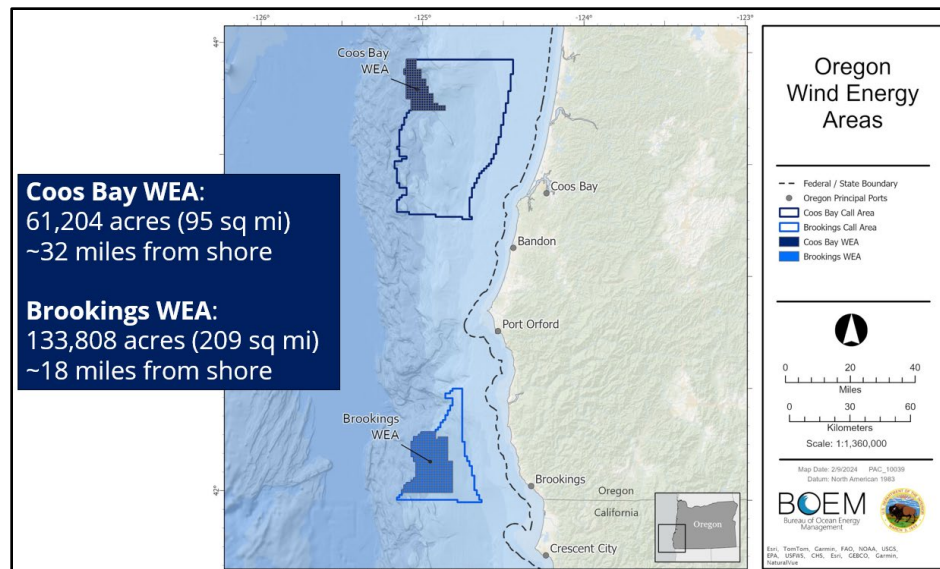


Figure . BOEM-Designated Wind Energy Areas off the Coast of Oregon (2024).

Before the federal agency leasing activity could proceed, BOEM was required under the federal Coastal Zone Management Act to submit the proposed leasing action for federal consistency review by the State of Oregon. Federal Consistency review is a mechanism by which states may evaluate proposed federal actions with coastal effects against that state’s relevant enforceable policies. The outcome of a review may be a **concurrence** that the action is consistent, **objection** to the action based on an inconsistency with state enforceable policies, or a **concurrence with conditions** that would make the action consistent if applied.

The issuance of a lease grants the lessee the exclusive right to conduct site assessments and to submit to BOEM a Site Assessment Plan (SAP) and/or a Construction and Operations Plan (COP) at a future date.

¹⁰ 1 gigawatt (GW) = 1,000 megawatts (MW). For example, the nameplate capacity of the Bonneville Hydropower Dam is 1.2 GW (1,200 MW). Nameplate capacity indicates the maximum amount of electricity a resource is technically capable of generating at a single point in time.

¹¹ HB 3375 includes a legislative finding and declaration of a state goal to plan for the development of up to 3 GW of OSW within the federal waters off the Oregon coast by 2030. It is important to note that the state goal to plan for OSW development is not a deployment target and does not mandate or incentivize the procurement of OSW by Oregon utilities, nor does it represent either a “floor” or “ceiling” to potential OSW development off Oregon’s coast over the near or long-term.

¹² <https://www.oregon.gov/energy/Data-and-Reports/Documents/2022-Floating-Offshore-Wind-Report.pdf>

A reasonably foreseeable effect of the issuance of the leases is that lessees would conduct environmental and site assessments in the lease areas and on the Outer Continental Shelf, such as vessel surveys, geotechnical exploration of the seafloor, and placement of anchored meteorological buoys. However, it is important to note that the decision to lease areas of the Outer Continental Shelf for offshore wind characterization and exploration activities does not equate to a decision to permit the construction or operation of an offshore wind development project. A BOEM decision whether to approve a Construction and Operations Plan for an actual wind energy facility would be subject to Federal Consistency review by the state at a later time, after years of additional site assessment and project design.

In mid-2024, the Oregon Coastal Management Program began its federal consistency review¹³, which involved close coordination with its network of state agency partners and a public engagement process that included five public meetings (one virtual and four in-person on the Oregon coast) and a public comment period. The OCMP also coordinated with the Nine Federally Recognized Tribes of Oregon during the review. After considering the feedback received from its agency partners, the tribes and the public, the OCMP issued a concurrence that the leasing action would be consistent with state policies, provided BOEM agreed to 19 conditions that included topics such as environmental safeguards during surveying activities, ongoing state involvement in survey plan reviews, and engagement with Tribes, fishing communities, and local communities. BOEM agreed to all conditions.

Due to several factors, including insufficient bidder interest and the knowledge that the state was embarking on a Roadmap effort under HB 4080, BOEM postponed the Oregon leasing auction in September 2024. Simultaneously, Governor Kotek withdrew Oregon from the Oregon Intergovernmental Renewable Energy Task Force. In a letter to the Bureau, the Governor cited the need to complete the Oregon Offshore Wind Energy Roadmap before a lease sale; concerns of tribes, sectors, and the public; the risks that a failed lease process would pose to Oregon’s developing supply chain industry; and potential risks to offshore ecosystems; while also stating her confidence “that offshore wind holds exciting promise to be part of our nation’s clean energy future” (Kotek 2024¹⁴). Development of the Offshore Wind Energy Roadmap began in September 2024. In July 2025, the new federal administration rescinded all Wind Energy Areas in the United States, including the two off the coast of Oregon (further discussed below).

1.3.2 Status of Offshore Wind in the United States

In 2021, the Federal administration established an ambitious domestic goal of deploying 30 gigawatts (GW) of offshore wind energy by 2030. In 2022, the administration set an additional goal of deploying 15 GW of floating offshore wind energy by 2035 to encourage the development of this resource in deep-water sites like the Pacific Coast and the Gulf of Maine.¹⁵

¹³ <https://www.oregon.gov/lcd/ocmp/pages/offshore-wind-energy-leasing.aspx>

¹⁴ https://www.opb.org/pdf/GovernorKoteklettertoBOEMDirectorKlein_1727455319170.pdf

¹⁵ The White House. (2022). FACT SHEET: Biden-Harris Administration Announces New Actions to Expand U.S. Offshore Wind Energy. Accessed at <https://www.whitehouse.gov/briefing-room/statements-releases/2022/09/15/fact-sheet-biden-harris-administration-announces-new-actions-to-expand-u-s-offshore-wind-energy/>.

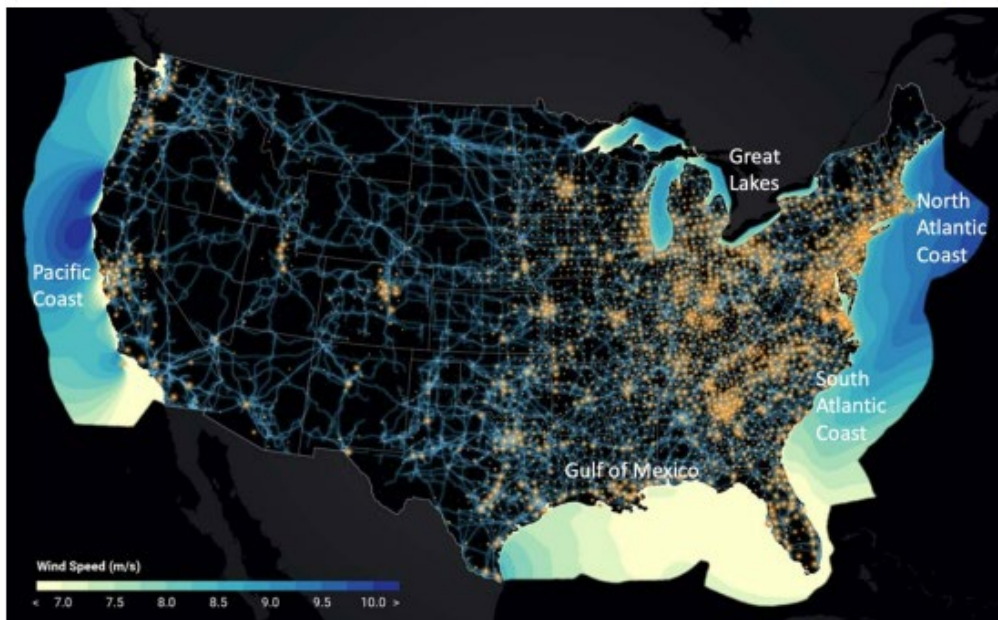


Figure 2. Map of the United States depicting offshore wind speeds and nighttime light emissions, with the latter representing relative differences in electricity demand in different parts of the country. (NREL)

The United States has three fully constructed and operational offshore wind energy projects totaling 174 megawatts [MW], as of October 2024. These projects are the Block Island Wind Farm, installed off of Rhode Island in 2016; Coastal Virginia Offshore Wind, the first phase of which was installed off of Virginia in 2020; and the South Fork Wind Project, installed off of Rhode Island in 2024. Projects under construction in October 2024 totaled 4,097 MW, and projects totaling more than 15 GW had been approved for construction by the federal government as of September 2024. Several other areas off the east coast have been leased for offshore wind development but have not yet obtained the necessary authorizations to proceed to construction. Recent federal policy changes discussed below make the future of these projects uncertain. All of the projects on the east coast involved fixed-bottom turbines, whereas offshore wind on the west coast would most likely be floating due to the depth of the continental shelf.

In 2022, BOEM issued five leases in federal waters off California, and the winning lessees are currently in the process of exploring the lease areas and preparing permit applications and Construction and Operation Plans for federal, state, and local government review. The California Energy Commission, Governor, and legislature have committed to developing 2 to 5 gigawatts (GW) of OSW by 2030 and 25 GW by 2045. Additionally, the state and developers recognized that coastal port infrastructure requires new construction and upgrades to support the specialized equipment required by industry. Two ports were identified for development into OSW hubs: Humboldt Bay and the Port of Long Beach.

The Humboldt Harbor District has publicly committed to developing approximately 168 acres on the Samoa Peninsula as the “Humboldt Bay Heavy Lift Multipurpose Marine Terminal” to support OSW

energy development.¹⁶ The Port of Long Beach has also announced plans to develop the Pier Wind Project, which could serve as a multi-function site that could fully support offshore wind development needs.¹⁷ This proposed 400-acre project is currently expected to cost between \$3.3 billion and \$7.0 billion.¹⁸

In 2024, California passed Proposition 4, a \$10 billion climate bond, which included \$475 million for the purpose of OSW-related port upgrades. The Humboldt project also received a \$426 million grant from the US Department of Transportation under the previous federal administration, but this funding was rescinded in August 2025 under new federal direction. Given the large cost of these infrastructure projects, it is expected that additional state and federal funding will be needed to realize these projects.

Under the current administration, the policy approach to offshore wind has shifted. In January 2025, the White House issued an Executive Memorandum titled, “Temporary Withdrawal of All Areas on the Outer Continental Shelf from Offshore Wind Leasing and Review of the Federal Government’s Leasing and Permitting Practices for Wind Projects”. This Memorandum withdraws all areas of the Outer Continental Shelf (federal waters) from further leasing for the purposes of offshore wind until the Memorandum is revoked. The Department of the Interior was also directed to, “conduct a comprehensive review of the ecological, economic, and environmental necessity of terminating or amending any existing wind energy leases, identifying any legal bases for such removal, and submit a report with recommendations to the President, through the Assistant to the President for Economic Policy.” The Memorandum further directed all federal agencies to, “. . . not issue new or renewed approvals, rights of way, permits, leases, or loans for onshore or offshore wind projects pending the completion of a comprehensive assessment and review of Federal wind leasing and permitting practices.

In July 2025, the Bureau of Ocean Energy Management issued a press release declaring that all existing Wind Energy Areas, including the two offshore Oregon, have been rescinded. This action was part of implementing *Secretarial Order 3437 - Ending Preferential Treatment for Unreliable, Foreign Controlled Energy Sources in Department Decision-Making*.¹⁹ The current BOEM regulations require the establishment of “area identification” prior to any lease auction for offshore wind, so the rescission of the Oregon WEAs essentially removed a viable area identification that would allow BOEM to proceed to leasing under the regulations. It is unclear whether the federal government would seek to re-establish the same WEAs in the future or whether the leasing process would need to restart at the “call area” stage prior to formal area identification through WEAs or other administrative means.

In August 2025, the Department of Interior announced that it is launching an overhaul of the offshore wind regulations, including the Renewable Energy Modernization Rule that was promulgated in 2024

¹⁶ Humboldt Bay Harbor, Recreation, and Conservation District, “Humboldt Bay Offshore Wind Heavy Lift Multipurpose Marine Terminal Project—Draft Project Description,” May 3, 2023, <https://humboltdbay.org/sites/humboltdbay.org/files/Marine%20Terminal%20-%20ProjectDescription%20-%202023%200510.pdf>

¹⁷ https://www.nrdc.org/sites/default/files/2025-05/CA_Offshore_Wind_R_25-05-A_06_locked.pdf

¹⁸ <https://polb.com/download/547/pier-wind/17042/2023-04-20-pier-wind-concept-report-final.pdf>

¹⁹ <https://www.doi.gov/document-library/secretary-order/so-3437-ending-preferential-treatment-unreliable-foreign>

and directly regulates the issuance of offshore wind leasing.²⁰ The outcome of this overhaul is uncertain at this time but could lead to additional changes to the process and standards for offshore wind leasing in the future.

1.3.3 Global Offshore Wind Status and Outlook

As of 2025, 83 GW of offshore wind are installed worldwide, with 8 GW installed in 2024 (a decrease from 11 GW in 2023). The global offshore market grew on average by 10 percent each year in the past decade, and the total installation amount represents 7.3 percent of total global wind capacity as of the end of 2024. The countries leading development of offshore wind are China, the UK, Taiwan, Germany, and France, which together comprise 94 percent of the new additions in 2024 (GWEC Global Wind Report 2025; Global Offshore Wind Report 2025)^{21,22}. Other leading countries include the Netherlands, Denmark, and Belgium. Continued growth of offshore wind faces challenges related to rises in commodity prices, cost of labor, logistics, and higher costs of capital due to interest rates and risk premiums, which affect the economic viability of new projects. International trade barriers and tariffs are also likely to present challenges to economic viability of projects. Other challenges include grid infrastructure upgrade needs, social acceptance, and in some areas local content requirements that mandate local sourcing of supply chain materials for offshore wind platforms and components. The levelized cost of energy (LCOE) for US offshore wind projects increased 50 percent from 2021 to 2023 due to inflation, the rising cost of capital, permitting delays, grid connection challenges, and an urgent need to establish local supply chains.

Despite the challenges brought by inflation, increased capital costs, supply chain constraints, grid connection delays, and regulatory uncertainty in the US market, annual growth of the global offshore wind capacity is expected to increase from 8 GW in 2024 to 34 GW in 2030 (GWEC Global Offshore Wind Report 2025).

Specific to floating offshore wind, as of July 2025, there are five operational projects, all of which are either demonstration-scale or early commercial. These include:

- Hywind Demo (Norway)
- Hywind Scotland (UK)
- WindFloat Atlantic (Portugal)
- Kincardine (UK)
- Hywind Tampen (Norway)

Additional projects are currently planned for South Korea (FireFly/Ulsan project – 800MW), Scotland (Green Volt – 560MW; Stromar and Salamander – 100MW-1GW).

The deepest installed floating wind array is the Hywind Tampen project, which is installed in 300 meters water depth. By comparison, the proposed theoretical depth limit for installation offshore Oregon is 1,300 meters. A project proposed in Italy would be installed in 300-900 meters of water depth.

²⁰ [Interior Launches Overhaul of Offshore Wind Rules to Prioritize American Energy Security | U.S. Department of the Interior](#)

²¹ [GWEC Global Wind Report 2025.pdf](#)

²² [GWEC's Global Offshore Wind Report](#)

Developers are in the process of designing and certifying floating wind foundations capable of installation up to 1,300 meters and up to 15 MW capacity per turbine, with plans to increase capacity up to 21 MW²³.

1.3.4 Oregon Offshore Wind Permitting Process and Roles

The regulatory and permitting process associated with an offshore wind project is complex, involving multiple entities at multiple scales of government. Within each project, there may be multiple components, such as shoreside support facilities, navigation channel modifications, transmission infrastructure improvements, and the offshore installation itself, which may require separate but interdependent permitting processes. The 2022 Oregon Department of Energy Floating Offshore Wind Study provides an overview of the federal and state roles and processes related to offshore wind energy permitting.²⁴ Relevant information is reproduced in this section.

The table and figures below outline the collection of federal, state, and local permits, authorizations, and consultations that would be required before an offshore wind project installation would be allowed to proceed. The primary authorizations for a project located in federal waters would be a Construction and Operations Plan from the Bureau of Ocean Energy Management and a permit issued by the US Army Corps of Engineers under the Clean Water Act and the Rivers and Harbors Act. These federal authorizations also trigger the need for an assessment of environmental impacts under the National Environmental Policy Act and state federal consistency review under the Coastal Zone Management Act. Altogether, the permitting process for an offshore wind project may take multiple years of coordinated effort, and the need for information is likely to be significant.

²³ <https://knowledge.odfjelloceanwind.com/news/odfjell-oceanwind-launches-the-deepsea-star-15mw-floating-wind-foundation>

²⁴ <https://www.oregon.gov/energy/Data-and-Reports/Documents/2022-Floating-Offshore-Wind-Report.pdf>

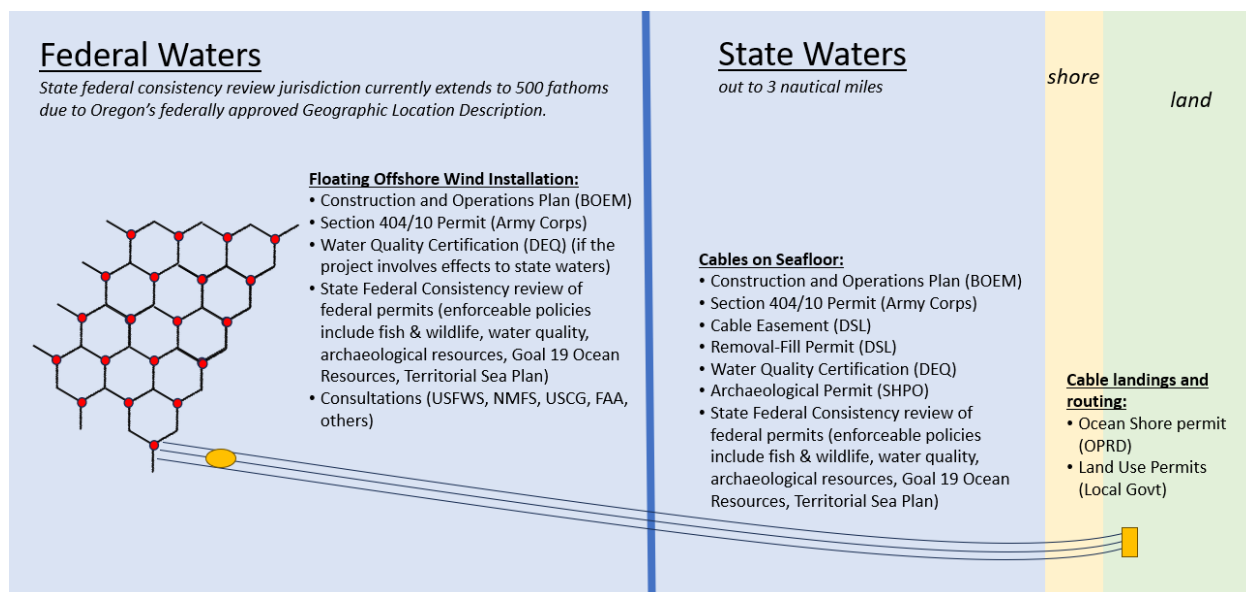


Figure 3. Regulatory Overview Pictogram for an Offshore Wind Installation in Federal Waters (does not include transmission projects or shoreside facilities beyond cable landing).

Table 1. Table: Regulatory Overview of an Offshore Wind Installation. Aspects included in federal consistency review are shaded in salmon color.

Authority	Agency	Application	Decision Type	Purpose
Federal Regulatory	BOEM	Construction & Operations Plan	Approval to Develop	Approves the use of the Outer Continental Shelf to produce energy.
	US Army Corps	§ 404 (CWA) § 10 (RHA)	Permit Permit	Regulates discharges to waters of the United States and permits construction of structures in or over any navigable water of the US.
Federal Consultation	NOAA NMFS	Magnuson Stevens & MMPA	Biological Opinion	Conserve Essential Fish Habitat for fish; marine mammals
	USFWS	ESA Consultation	Biological Opinion	The action should not jeopardize endangered populations or critical habitat.
	US Army Corps	NHPA §106 Consultation	Report, MOA	Protect historical properties and archaeological resources
State/Fed Delegated Authority	DEQ	§ 401 CWA Beneficial Use	§ 401 Certification	Protection of water quality standards
	DLCD/OCMP	Consistency Certification + Necessary Information	Federal Consistency	Federal licenses and permits must be fully consistent with state enforceable policies
State Agency Regulatory Authority	DSL	Removal-Fill	Permit	Protect wetlands and waters for home, commercial, wildlife habitat, public navigation, fishing and recreational uses.
		Proprietary Lease	Lease	Manage state submerged and submersible lands in the public trust.

	OPRD	Ocean Shore	Permit	Approve ocean shore alterations and protect the free and uninterrupted use of ocean shores
	OPRD-SHPO	Archaeological Resources	Permit	Protect historical properties and archaeological resources
State Consultation	ODFW		Consultation	Optimal management of food and fish; protection of wildlife
	ODOE		Consultation	
Local Government	City or County	Permit (Conditional Use)	Land Use	Shoreside portions of projects must be consistent with Oregon Statewide Planning Goals

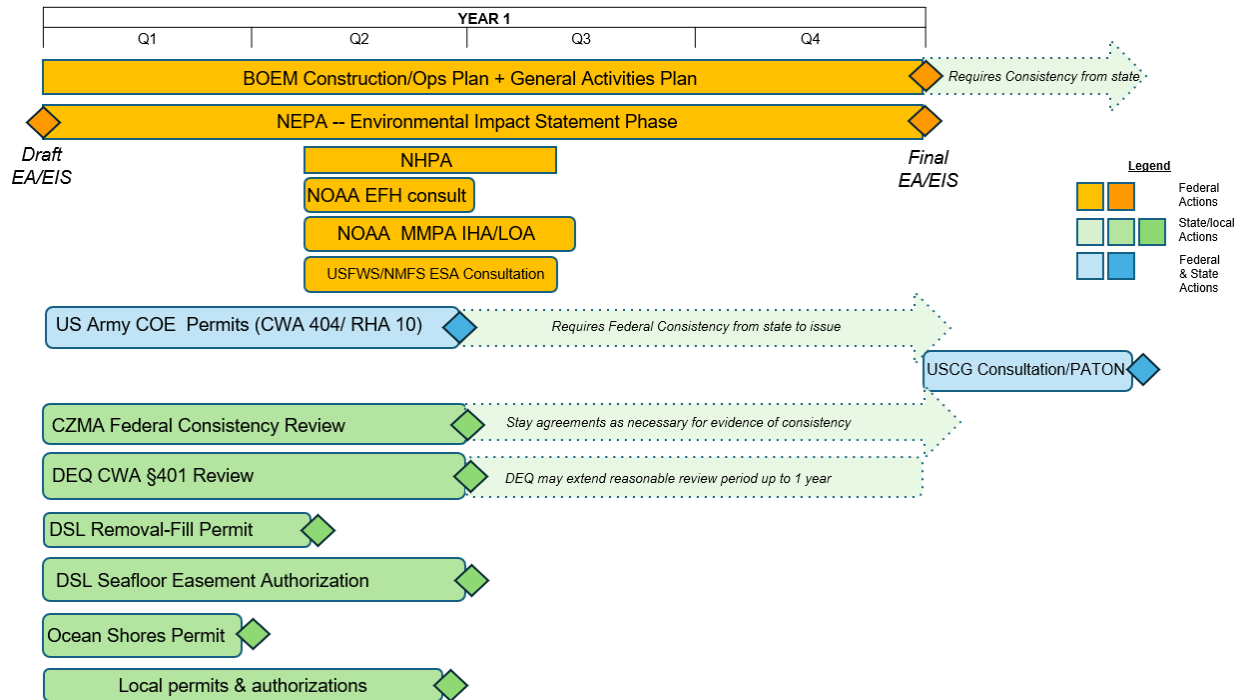


Figure 4. Regulatory processes and timelines related to review of an offshore wind energy project Construction and Operations Plan and US Army Corps of Engineers Section 404/10 Permit (occurring up to five years post-leasing). This figure represents an idealized process, and individual state or local processes may not begin at the same time. The state's federal consistency decision would not be issued until all state and local permits and authorizations have been obtained. The federal consistency review may be extended through stay agreements if additional information is needed to demonstrate consistency with state enforceable policies.

Offshore Wind Projects in Federal Waters – Federal Authorities and Roles

Offshore wind projects can be located in federal or state waters. To date, Oregon has asked the offshore wind industry to focus on federal waters adjacent to Oregon's coast. Federal waters begin where Oregon's Territorial Sea ends (state waters end three nautical miles from the westernmost point of land) and extends out to 200 nautical miles. Oregon's policy preference to consider federal waters is in part based on the likelihood of increased conflicts closer to shore, including viewsheds, fisheries/navigational conflicts, and other recreational uses. However, in 2024, the state did receive an inquiry regarding the

potential to locate a fixed-bottom offshore wind project in state waters off Camp Rilea on the north coast.

Federal Bureau of Ocean Energy Management (U.S. Department of Interior)

BOEM is responsible for the leasing of ocean areas in federal waters and is the lead agency for siting and permitting potential OSW projects sited off Oregon’s coast. BOEM's mission is to facilitate the responsible development of renewable energy resources on the Outer Continental Shelf through conscientious planning, stakeholder engagement, comprehensive environmental analysis, and sound technical review.

The Energy Policy Act of 2005 authorized the development of regulations for the Outer Continental Shelf Renewable Energy Program. This regulatory framework provides a process for issuing leases, easements, and rights-of-way for offshore wind projects, which require environmental review and significant site-specific research prior to the siting of offshore facilities. Each project is subject to a review under the National Environmental Policy Act as well as consultations with the National Marine Fisheries Service and the U. S. Fish and Wildlife Service under the Endangered Species Act and the Magnuson-Stevens Act. Tribal consultation is also conducted under Section 106 of the National Historic Preservation Act. In addition to multiple levels of review, BOEM develops, funds, and manages a rigorous scientific research program. The following outlines the current administrative processes in the federal regulations²⁵, but it should be noted that in August 2025 the Department of Interior announced an intention to undertake a “full review of offshore wind energy regulations”²⁶.

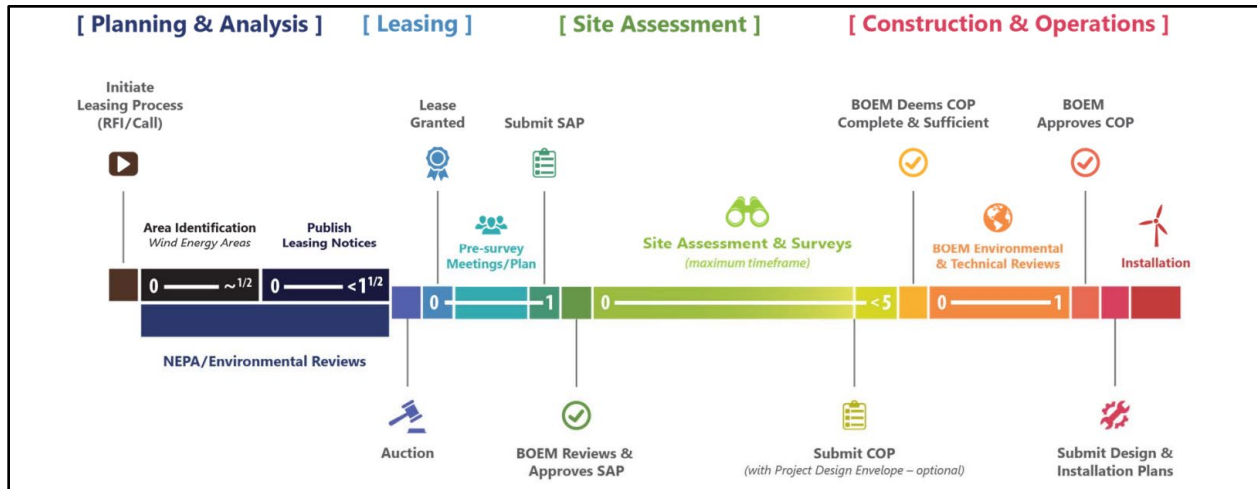
1. BOEM-State Intergovernmental Task Force by state request (Preliminary planning & analysis)
 - a. Key BOEM Actions - Collaborate with local/state/federal/Tribal entities, while also engaging with the public, developers, and other interested affected parties to inform identification of Call Areas based on the best available data and information.
2. Identification of Call Areas (Large ocean areas)
 - a. Key BOEM Action - Request for Information on Call Areas, including nominations of interest for leasing.
3. Identification of Wind Energy Areas (Smaller ocean areas with potential for multiple projects)
 - a. Key BOEM Action - NEPA Environmental Assessments for Wind Energy Areas
 - b. Key State Action - Federal consistency review of BOEM’s NEPA EA for Wind Energy Areas and site assessment activities under authority of the Coastal Zone Management Act and Oregon’s Coastal Management Program (see next page for more information).
4. BOEM Auction and Issuance of Leases to Developers for Lease Areas (Smaller portions of Wind Energy Areas for specific projects)
5. Site Assessment Plans and Site Characterization Activities by Developers
 - a. Key BOEM Action – BOEM review of developer’s Site Assessment Plans.
6. Construction and Operations Plans by OSW Developers & BOEM Review

²⁵ <https://www.ecfr.gov/current/title-30/chapter-V/subchapter-B/part-585>

²⁶ <https://www.doi.gov/pressreleases/interior-launches-overhaul-offshore-wind-rules-prioritize-american-energy-security>

- a. Key BOEM Action – BOEM review of Construction and Operations Plans, including NEPA Environmental Impact Statements with assessment of potential cumulative impacts of past, present, and reasonably foreseeable future activities.
- b. Key State Action - Federal consistency review of Construction and Operations Plans under authority of the CZMA and OCMP (see next page for more information).

Figure 5. Typical BOEM Offshore Wind Energy Development Regulatory Timeline



Federal Consultations

BOEM consults with NMFS and other federal agencies to meet the requirements of the Endangered Species Act, the Magnuson-Stevens Act and Marine Mammal Protection Act²⁷.

Additionally, the Department of Defense has a significant influence in identifying "no-go" zones for wind energy development. The BOEM-designated Call Areas in Oregon were found to include extensive areas designated as no-go areas, which substantially limited the area available to progress to Wind Energy Areas within the original Call Areas.

Oregon Regulatory Framework for Offshore Wind Project Reviews

Under the Coastal Zone Management Act, federally approved state coastal programs have the authority to review federal actions (which includes leasing of the Outer Continental Shelf for offshore wind energy exploration and federal licenses and permits for offshore wind) that may affect coastal Oregon resources and uses for consistency with state "enforceable policies." These enforceable policies are drawn from existing state statutes and rules, the 19 Statewide Planning Goals, and the local embodiment of the Goals in city and county plans and codes.

In the case of Oregon, the state's review authority has been approved by the NOAA Office for Coastal Management to extend out to a depth of 500-fathoms (i.e., into federal jurisdictional waters) for marine renewable energy projects, in recognition that a project in federal waters would have reasonably

²⁷ <https://www.boem.gov/renewable-energy/environmental-consultations-offshore-renewable-energy-projects-atlantic-outer>

foreseeable effects to state coastal uses and resources. This means that Oregon has the ability to apply its state enforceable policies to the entirety of an offshore wind project located within federal waters or within the state's coastal zone²⁸. The portions of projects that would exist within state jurisdiction would also be subject to permits and authorizations, such as those relating to water quality, uses of the seafloor, effects to the ocean shore, and effects to estuaries, shorelands, and uplands within local jurisdiction. Any alterations to Oregon shoreline, estuaries, wetlands, or navigation channels to facilitate the deployment of offshore wind projects would also be subject to Federal Consistency review. The Oregon Department of Land Conservation and Development is the lead state agency for these reviews.

The Oregon Coastal Management Program within DLCD would coordinate with other local, state, and federal agencies and consult with Tribal nations in the federal consistency review of any offshore wind-related federal actions within its jurisdiction. At the conclusion of the review, the OCMP can concur that the activity is consistent, concur with conditions, or object on the grounds that the activity is inconsistent with the state's enforceable policies. If a review of a federally permitted project results in an objection, the federal agency will not issue the permit to the applicant. The applicant may appeal an objection to the U.S. Secretary of Commerce. The OCMP consists of a network of 41 local and 11 state agency partners with authority in the coastal zone and enforceable policies to be used in federal consistency review. The state agencies that make up the OCMP are listed below:

- Oregon Department of Land Conservation and Development
- Oregon Department of Fish and Wildlife
- Oregon Department of State Lands
- Oregon Parks and Recreation Department
- Oregon Watershed Enhancement Board
- Oregon Department of Environmental Quality
- Oregon Water Resources Department
- Oregon Department of Geology and Mineral Industries
- Oregon Department of Agriculture
- Oregon Department of Forestry
- Oregon Department of Energy (as staff for the Energy Facility Siting Council)

Although Tribal nations within Oregon's coastal zone are not networked partners with the OCMP, OCMP recognizes and respects that Oregon Tribal nations are each separate and sovereign nations with deep cultural and historical connections to the Oregon Coast. OCMP currently uses the broader DLCD government-to-government consultation policy to consult with Tribal nations during federal consistency reviews.

DLCD, through coordination with local, state, and federal agencies, and in consultation with Tribal nations within the Coastal Zone, leads analyses of the potential direct and indirect impacts, including consideration of cumulative and secondary impacts that have reasonably foreseeable effects on coastal resources or uses. Coastal effects cover five major categories: natural resources, cultural resources, coastal economies, aesthetics, and recreation/public access.

²⁸ <https://www.oregon.gov/lcd/ocmp/pages/coastal-zone.aspx>

An offshore wind project would also be required to obtain several state or local government permits or authorizations related to portions of the project located within state waters or onshore. These components would include subsea transmission cables, shoreside cable landing interconnections, and transmission lines from the interconnection to the larger coastal electricity grid. The necessary permits and authorizations are listed in Table 1 and generally consist of:

- Clean Water Act Section 401 Water Quality Certification (Oregon DEQ)
- Seafloor Special Use Easement Authorization (Oregon DSL for cable placement)
- Removal-Fill Permit (Oregon DSL for cable installation or other alterations to state submerged lands or onshore wetlands)
- Proprietary Authorization for uses of state submerged lands for other project-related uses of state submerged lands (Oregon DSL e.g., wharves, docks, fill, etc.)
- Ocean Shores Permit (Oregon Parks and Recreation Department for activities on or under the beach, e.g., horizontal drilling and placement of cables)
- Archaeological Permits (OPRD State Historic Preservation Office for offshore or onshore ground disturbance activities)
- County or City land use authorizations or permits (onshore cable interconnection and grid infrastructure)
- State Federal Consistency Review Decision (Oregon Department of Land Conservation and Development)
- Navigation Hazard Determination (Oregon Department of Aviation)

Power Procurement

Investor-owned utilities (PGE, Idaho Power, Pacific Power) account for growth in customer demand and assess the ability of existing and new energy projects to meet demand in public planning processes that identify least-cost, least-risk solutions and actions (e.g., Integrated Resource Planning). The Oregon Public Utility Commission (PUC) reviews the costs and risks of investor-owned utility plans and determines if any procurement plan, such as procuring OSW energy, achieves the best balance of cost and risk for customers. If an investment in a new generation source is determined to not meet the PUC's Request for Proposal evaluation criteria for prudence²⁹ (e.g., if the cost of power from an OSW installation were deemed to be not "least-cost, least-risk" in the interest of Oregon ratepayers), the PUC can prevent the investor-owned utility from recovering the cost of its investment using ratepayer fees.

30

The PUC does not regulate cooperatives, utility districts, or municipality-owned utilities, except in matters relating to the safety of their operation and facilities. Public Utility Districts, like those serving the coast, are not regulated by the PUC beyond safety considerations and primarily purchase power for their retail customers directly from the Bonneville Power Administration. Oregon's consumer-owned utilities (COUs are currently engaged in 20-year Regional Dialogue Contracts with BPA that are due to

²⁹ <https://apps.puc.state.or.us/orders/2007ords/07-047.pdf>

³⁰ https://www.oregon.gov/lcd/OCMP/Documents/UPDATE_PUC_OSW-Roundtable_010925.pdf

expire in 2028.³¹ BPA recently initiated a series of public workshops to address the development of the policies and contracts that it will offer to its customers to meet their evolving needs post-2028³². Under the current contract, some of the state’s COUs receive a fixed slice of BPA’s power output, while that utility supplements the electricity delivery from BPA with output from its own generating resources or from other power contracts. The majority of the COUs that serve Oregonians, however, are full requirements customers of BPA, meaning that they “generate no power, relying instead on BPA for all of the power needed to meet their total load requirements.”

1.4 Existing research and information relevant to Oregon Offshore Wind

2022 Oregon Department of Energy Floating Offshore Wind Study

In response to House Bill 3375 in the 2021 Legislative session, the Oregon Department of Energy (ODOE) produced a study outlining the key benefits and challenges associated with developing 3 GW of floating offshore wind technology off the coast of Oregon. This study provides a comprehensive discussion of relevant information to this Roadmap and may be considered a companion document. The Roadmap repeats select findings of the ODOE study where appropriate, but the original report provides a more complete discussion of the topic. At a summary level, the ODOE study describes the key benefits of offshore wind for Oregon to include:

- Scale of OSW Resource – The winds offshore Oregon have the potential to provide many gigawatts of power to the regional electricity grid.
- Generation Diversity Value – Offshore wind could play a critical role in helping the state achieve its clean energy goals, particularly because of its ability to complement other renewables during certain times of the year, like the winter months when solar is less available.
- Offsetting Land Use Impacts from Onshore Renewable Development – The development of offshore wind resources can help offset the significant amounts of onshore renewable resource development, and associated land use impacts, that will be required to achieve Oregon’s clean energy and climate goals.
- Power System Reliability – The addition of commercial-scale electricity generation projects offshore could improve the reliability of the state and regional grid, especially for Oregon’s coastal communities.
- Local Energy Resilience – The deployment of offshore wind projects could expand opportunities for additional community energy resilience projects along Oregon’s coast.
- Economic Development – The need for a skilled workforce to build and maintain floating offshore wind projects, and to develop supporting infrastructure and supply-chains, could support direct, indirect, and induced job development, especially in coastal communities where construction and maintenance activities would be based.

³¹ <https://www.bpa.gov/energy-and-services/power/regional-dialogue>

³² <https://www.bpa.gov/energy-and-services/power/provider-of-choice>

US Department of Energy Offshore Wind Guide

In 2024, the US Department of Energy (USDOE) produced an overview guide to the technologies, systems, effects, and processes related to both fixed-bottom and floating offshore wind. This guide represents an excellent primer on the topic of offshore wind at its present state of development.³³ The Guide describes the main components of offshore wind energy, including:

- Turbines and floating foundations
- Interarray transmission cables within the water column between turbines
- Offshore electricity substation (likely floating or on the seafloor) to aggregate power from multiple turbines for export to shore
- Subsea aggregated energy transport cables to shore with landfall interconnection vault
- Ports, vessels, and manufacturing facilities to fabricate, assemble, and install completed turbines and perform ongoing maintenance during operation

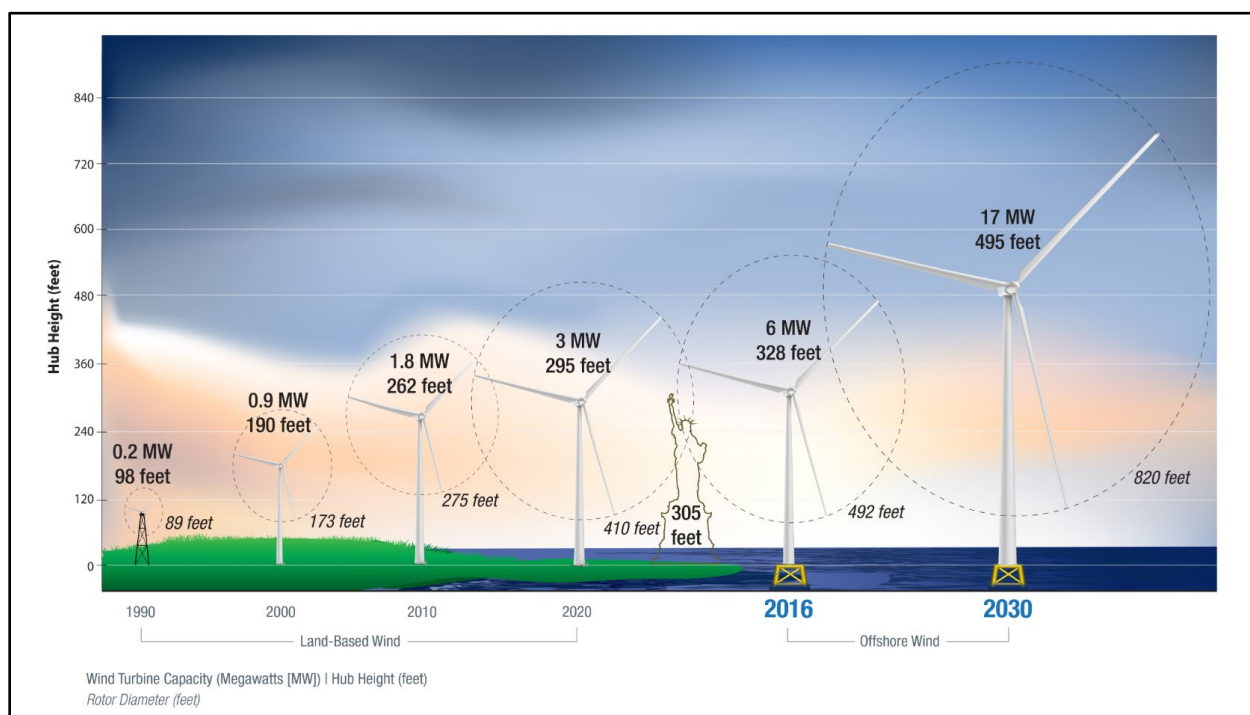


Figure 6. Land-based turbines of different heights compared to offshore wind turbines of different heights (USDOE, 2024)

Floating Offshore Wind Project Design Envelope

In 2024, the National Renewable Energy Laboratory published a report titled “Representative Project Design Envelope for Floating Offshore Wind Energy: A Focus on the California 2023 Federal Leases,”³⁴ which provides estimates of the scale and number of components in a floating offshore wind facility to assist in the evaluation of potential impacts from a project. This report is a helpful resource for understanding a practical range of technology options that may be deployed on the US west coast, accounting for major physical constraints and technical readiness.

³³ U.S. Department of Energy. 2024. "Offshore Wind Energy Guide" Office of Energy Efficiency and Renewable Energy Wind Energy Technologies Office: WINDEXchange. <https://windexchange.energy.gov/offshore-wind-energy-guide>

³⁴ <https://www.osti.gov/servlets/purl/2438557>

OCCRI Offshore Wind Summary

In 2024, the Oregon Climate Change Research Institute published its biennial assessment of the state of climate change science as it relates to Oregon.³⁵ Within the report is a summary of offshore wind energy's potential to represent a built-environment response to Oregon energy and climate goals, as well as an overview of the current known state of the science regarding offshore wind environmental and socioeconomic effects.³⁶

BOEM Studies Supporting West Coast Offshore Energy

In support of offshore leasing activities, BOEM has completed many studies of environments, species, technologies, socioeconomic effects, energy systems, and infrastructure that could support west coast offshore wind. BOEM retains a repository of completed environmental and technical studies for future reference.³⁷

NOAA NMFS Science Strategy for Offshore Wind

In 2024, NOAA released a document titled “NMFS West Coast Offshore Wind Energy Strategic Science Plan”. The Plan outlines research directions that are needed to: a) fulfill NMFS’ consultation and authorization mandates with respect to offshore wind energy development; b) advance the scientific understanding of the interactions between offshore wind energy development and NMFS trust resources on the U.S. West Coast, including assessing the effects of planned offshore wind energy activities on fish, fisheries, protected species, habitats, and ecosystems; and c) support the development of strategies to mitigate impacts. The plan outlines six priority areas for research:

1. Habitat impacts
2. Physiological and physical effects
3. Species abundance and distribution
4. Fisheries socioeconomic impacts
5. Ecosystem and climate interactions
6. Impacts to NMFS’ scientific surveys

Oregon Port Studies to Support Offshore Wind

A collection of studies evaluated the potential for ports in Oregon to provide the infrastructure and services necessary to support an offshore wind industry presence in the state.

³⁵ <https://blogs.oregonstate.edu/occric/oregon-climate-assessments/>

³⁶ <https://oregonstate.app.box.com/s/j85nuhy5tgieoxdnszoie8e9xotzrsz>

³⁷ <https://www.boem.gov/environment/recently-completed-environmental-technical-studies-pacific>

- BOEM conducted a Port of Coos Bay Infrastructure Assessment for Offshore Wind Development³⁸ in 2022 that evaluated key features and challenges of developing the various types of infrastructure that would be necessary to fully support OSW fabrication, integration, installation, and ongoing maintenance.
- Also in 2022, the SimplyBlue Group performed a similar study of the Coos Bay Port Infrastructure needs and challenges.³⁹
- In 2023, NREL conducted a study of the ports along the US west coast and evaluated the impacts of developing a port network to support floating offshore wind. This study included a port-by-port evaluation of whether each would be suitable for Manufacturing & Fabrication facilities, Operations and Maintenance, or large-scale Staging & Integration facilities.⁴⁰ This study found that Coos Bay is the only port in Oregon suitable for a full S&I facility, but other ports may be able to sustain the other types of needs depending on their physical characteristics.

Port location	Capabilities			Notes
	S&I	MF	O&M	
Hammond Boat Basin			X	U.S. Army Corps of Engineers maintains channel. Not much space available.
Warrenton		X	X	Water depth can accommodate barges
Astoria			X	Not much land available. Adequate water depth for operations and maintenance vessels.
Wauna				Currently in use, no land available
Port of Columbia County		X		Industrial land, deep-draft access, multiple sites
Port of Portland		X		Multiple sites
Nehalem				No maintained channel
Tillamook Bay at Garibaldi			X	4.5 m (18 ft.) deep, crew transfer vessel only for operations and maintenance, not as close to wind energy areas
Depoe Bay				Entrance channel not adequate for operations and maintenance
Yaquina River/ Toledo/Newport		X	X	U.S. Army Corps of Engineers maintains channel. A maximum of 16 ha (40 acres) may be available.
Waldport				No maintained channel
Siuslaw River at Florence				No land available
Umpqua River at Reedsport		X	X	Shallow water depth in channel
Coos Bay	X	X	X	Best option, but airport and dredging create challenges
Bandon			X	Coquille River depth is 4 m (13 ft.). Crew transfer vehicle only for operations and maintenance site.
Port Orford				No protected harbor
Rogue River (Gold Beach)			X	Crew transfer vessel only due to channel depth
Brookings Harbor at Chetco			X	Crew transfer vessel only due to channel depth

Figure 7. Oregon Port Capabilities to Support Different Offshore Wind Development Needs. Green, yellow, and red indicate good, moderate, and unlikely candidate sites, respectively. S&I = Staging and Integration; MF = Manufacturing and Fabrication; O&M = Operations and Maintenance. (Source: Oregon Seventh Climate Change assessment, OCCRI, 2024)

National and International Research on Offshore Wind Energy Effects

Much effort and investment are being made around the US and the world to better understand the potential environmental effects of offshore wind energy to the ocean environment and species. A vast knowledgebase is forming around this topic, including:

- Pacific Northwest National Laboratories TETHYS knowledgebase: TETHYS is an online database dedicated to advancing the wind energy industry by providing access to environmental information and research findings that can support siting, permitting processes, management

³⁸ <https://www.boem.gov/sites/default/files/documents/renewable-energy/studies/BOEM-2022-073.pdf>

³⁹ <https://simplybluegroup.com/wp-content/uploads/2022/03/Coos-Bay-Offshore-Port-Infrastructure-Study-Final-Technical-Report.pdf>

⁴⁰ <https://docs.nrel.gov/docs/fy23osti/86864.pdf>

decisions, and operational strategies while minimizing risk to the environment. TETHYS contains thousands of documents on the environmental effects of land-based wind energy, fixed offshore wind energy, and floating offshore wind energy, as well as marine energy. Since launching in 2012, TETHYS has a rich history of providing access to authoritative environmental information and continues to create new resources. TETHYS has collected more than 3,600 documents related to the environmental effects of wind energy (land-based and offshore). All documents are available in a table format via the TETHYS Knowledge Base.

- US Offshore Wind Synthesis of Environmental Effects Research: The U.S. Offshore Wind Synthesis of Environmental Effects Research (SEER) effort aims to synthesize key issues and disseminate existing knowledge about environmental effects, inform applicability to U.S. waters, and prioritize future research needs. The work includes research briefs, webinars, research recommendations, and information on Pacific coast environmental research relevant to offshore wind.
- Wind Energy-Environmental Research & Engagement Network (WREN): WREN was established by the International Energy Agency (IEA) Wind Technology Collaboration Program in October 2024 to focus on environmental issues associated with commercial development of land-based and offshore wind energy projects. The primary objective of WREN is to advance the coexistence of wind energy and the environment through international collaboration. Their work includes publications, science summaries, wind monitoring and mitigation technology catalog, and webinars.

2025 GAO Report on Offshore Wind Development

In 2025, the Government Accountability Office (GAO) released a report titled “Offshore Wind Energy: Actions Needed to Address Gaps in Interior’s Oversight of Department”. The GAO found that U.S. offshore wind projects bring potential benefits—including reductions in greenhouse gas emissions, better air quality, and economic and community development—but also carry uncertain risks to marine life, ecosystems, commercial fishing, Tribal resources, radar and defense systems, maritime navigation, and cultural landscapes.

In its recommendations, the GAO noted gaps in the federal oversight process by BOEM and the Bureau of Safety and Environmental Enforcement (BSEE), particularly regarding meaningful Tribal consultation, engagement with the fishing industry, community outreach, and regional capacity. The GAO recommended that BOEM improve oversight and stakeholder engagement and provided six key recommendations:

1. Congress should consider amending language in legislation to address limitations in BOEM’s authority to enable it to provide adequate support for capacity building for Tribes and tribal organizations that provide Indigenous expertise to the offshore wind leasing process.
2. The BOEM Director should take steps to address gaps in its approach to tribal consultation, including clearly demonstrating and routinely reporting on its progress. This should include ensuring that annual tribal consultation reports clearly document decisions regarding tribal implications and preparing and submitting to Tribes a record of consultation that describes input and how it was addressed, as well as the reasoning for any instances in which input was not incorporated.

3. BOEM should take steps to ensure that it adequately demonstrates and publicly reports its consideration of fishing industry input.
4. BOEM and BSEE should establish guidance for lessees with respect to lessees' communication and engagement plans, clearly define the agencies' respective roles and responsibilities, and develop a plan to monitor implementation of these plans.
5. BOEM and BSEE should take steps to ensure that they have sufficient resources in place to oversee offshore wind energy development, including by establishing a physical office to oversee development in the North Atlantic region.
6. BOEM should develop guidance and specific requirements for lessees' data collection and sharing across offshore wind energy projects.

2025 Oregon Energy Strategy

In 2023, HB 363011 directed the Oregon Department of Energy to develop a state energy strategy and to submit a final report to the Governor and Legislature by November 1, 2025. That report must: (1) summarize the state energy strategy and pathways to achieving the state's energy policy objectives; (2) describe the department's engagement process and how perspectives informed the energy strategy; and (3) recommend legislation or changes to policy necessary to implement the state energy strategy. The Strategy presents pathways to achieving Oregon's energy policy objectives and legislative and policy recommendations and summarizes the process undertaken to develop the pathways and recommendations, including the technical analysis and engagement to inform pathways and policies.

Grid implications of Offshore Wind for Oregon and the Region

The National Renewable Energy Laboratory (NREL) has completed multiple studies of the potential grid impacts of offshore wind for Oregon and the associated cost of energy. A 2019 study⁴¹ found that by 2032, the levelized cost of energy (LCOE) for offshore wind is expected to range between \$75/MWh in the north and \$50/MWh in the south (\$0.075-0.05 per kWh) if built at a scale of 67 x 15MW turbines with a 1GW total plant capacity at approximately 1 mile spacing. (NREL⁴²). These costs compare against a projected average Northwest wholesale price of \$0.067 in 2024⁴³ and the wholesale electricity rate charged by BPA to consumer-owned utilities of \$0.035⁴⁴. The cost improvements for floating offshore wind over time are estimated to derive from technology improvements (larger turbines, better control algorithms, improvement in materials, digitalization), increasing plant sizes as economies of scale grow, maturing supply chains, industrialization and serial production, increased competition, and lower risk from industry maturing. It should be noted that these costs do not include the costs of support needs such as port upgrades and bulk transmission system upgrades.

⁴¹ <https://docs.nrel.gov/docs/fy20osti/74597.pdf>

⁴² <https://docs.nrel.gov/docs/fy22osti/80908.pdf>

⁴³ <https://www.eia.gov/todayinenergy/detail.php?id=61244>

⁴⁴ <https://www.bpa.gov/energy-and-services/rate-and-tariff-proceedings/power-rates>

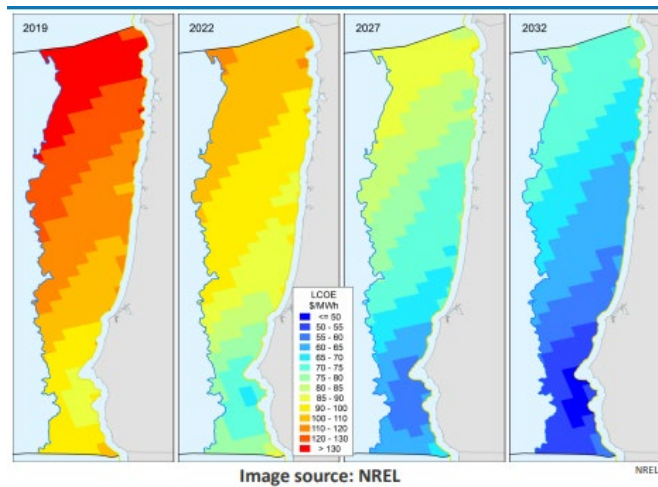


Figure 8. Estimated Levelized Cost of Energy Based on Offshore Wind Energy Location Offshore Oregon (PNNL, 2021)

An additional factor is the compatibility of offshore wind generation with the demands on the grid in Oregon and the Pacific Northwest. Oregon currently derives approximately 40 percent of its electricity from the hydroelectric system, but in late summer this energy source can be constrained by low river flows due to depleting water resources and increasing water temperatures that require a higher amount of “spill” over the dams to maintain river flow. By contrast, offshore wind holds a more consistent production profile through the summer than hydroelectric resources (PNNL)^{45, 46}. In winter months, offshore wind coincides well with peak demands in Washington⁴⁷. The net capacity factor in the modeled offshore wind scenario was expected to range from 39 percent in the north to 57 percent in the south, which compares favorably to the 39.8 percent capacity factor for onshore wind in the Columbia Gorge and 16-20 percent for utility-scale solar in Oregon. Two separate studies found that the total system benefits of adding offshore wind to the grid would outweigh the costs⁴⁸.

Offshore wind also holds potential benefits to overall northwest grid reliability and resiliency, with the ability to stabilize coastal grids through reduced costs of power outages, reduction in need for backup systems, and sources of power that are resilient to disasters such as wildfires, winter storms, or earthquakes. A capacity of 1 GW of offshore wind power off the Oregon coast would also relieve the capacity of the west-east transmission lines between the coast and the rest of the state grid, which would in turn free up transmission to serve additional inland loads. (PNNL 2020) The PNNL study also found that the current regional transmission system can accommodate up to 2.6 GW of new offshore wind generation with minimal transmission investment, but the generation would need to spread across the entire north-south span of the coast to utilize the five existing transmission lines that cross the coast range. Under this scenario, the equivalent of up to 84-89 percent of coastal power loads could be served by OSW. A study commissioned in 2022 found that significant transmission upgrades would be required to support a 3 GW build-out of offshore wind generation, if development focused only on the south coast BOEM call areas, and could require costly and long lead time efforts, potentially costing up to 1.2

⁴⁵ <https://docs.nrel.gov/docs/fy22osti/81244.pdf>

⁴⁶ https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-29935.pdf

⁴⁷ E3 offshore wind grid impact study, 2023.

⁴⁸ <https://docs.nrel.gov/docs/fy22osti/81244.pdf>

billion dollars and taking 10-15 years before construction could begin. (NorthernGrid, 2022⁴⁹). By contrast, a smaller scale capacity of approximately 1.1 GW may require only moderate grid infrastructure investment (\$45-68 million).

Offshore Wind Point of Interconnection	Max Nameplate Capacity (MW)	Max Injected power* (MW)
Clatsop (1-North)	361	301
Tillamook (2-North Central)	553	461
Toledo (3-Central)	156	130
Wendson (4-South Central)	613	512
Fairview (5-South)	941	785
Total	2625	2189

Figure 9. Current maximum additional energy capacity capabilities at the five coastal substations connecting to the Willamette Valley.

The PNNL study found that transmission congestion is the main driver of offshore wind curtailment. If the trans-coastal transmission is upgraded, power can be delivered into the Willamette Valley and curtailment⁵⁰ of offshore wind off the coast of Oregon would be minimal. As an alternative, co-located energy storage on the coast could reduce offshore wind curtailment by approximately 15 percent (NREL 2021⁵¹). Grid upgrades could also facilitate export of power from Oregon to California to serve evening loads, but interstate transmission congestion limits this ability presently. The southern sites included in this study have higher average wind speeds than the northern sites, but they are also farther from existing coastal substations. If the cost of undersea transmission were studied, trade-offs between the cost of interconnection and capacity factors might be discovered. These studies do not capture the barriers to smaller scale transmission between the offshore wind turbines and the high voltage coastal substations, like right-of-way and reactive power support.

Economic Development Potential Related to Oregon Offshore Wind Energy

Offshore wind energy projects require substantial supporting infrastructure, including port upgrades, local supply chains, assembly and installation work, ongoing maintenance, and likely transmission grid upgrades. Coastal economies have the potential to benefit from the high-quality, well paying “family wage” jobs that contribute to a diversified economic activity. The overall job forecasts for total floating offshore wind jobs can range significantly.

A 2016 study by NREL⁵² estimated the potential for jobs and economic impacts in Oregon coastal counties from two future offshore wind development scenarios: a 5.5GW and 2.9 GW total deployment between 2020-2050. Under the 5.5GW scenario, it estimated that development would add between

⁴⁹ https://www.northerngrid.net/private-media/documents/2022_ESR_OSW_Approved.pdf

⁵⁰ “Wind curtailment is defined here as the percent of energy not delivered, or spilled, to the electric grid relative to the possible output of the OSW site.” (PNNL, 2020)

⁵¹ NREL, 2021. Evaluating the Impact of Oregon Offshore Wind Josh Novacheck and Marty Schwarz

⁵² <https://docs.nrel.gov/docs/fy16osti/65432.pdf>

\$1.6-2.8 billion to the gross domestic product of the coastal counties through 2050 and support 1,600 – 3,000 long-term jobs in Oregon coastal counties for the duration of the offshore wind project’s operational life. In addition, the construction phase would add 18,000-33,000 FTE job-years between 2020-2050.⁵³ The 2.9GW scenario was estimated to support 680 – 1,100 long-term jobs, with 12,000-14,000 construction-phase job-years. These estimates were found to be highly dependent on the proportion of locally sourced parts, equipment, and labor.

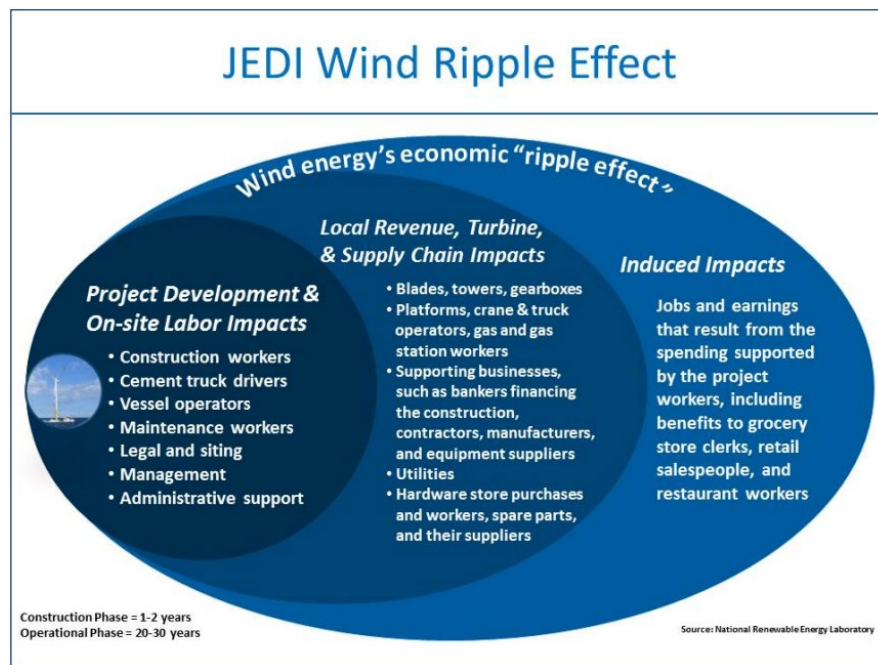


Figure 10. Economic Ripple Effects from Offshore Wind Energy Development (NREL, 2016)

A more recent study from 2025 by the Schatz Energy Research Center in California conducted a modeling assessment of the workforce opportunities that could result from supporting a single 1.5 GW offshore wind project.⁵⁴ An important finding of the study was not only the total number of jobs, but how the workforce needs varied by project phase and job type. Component supply chain activities accounted for approximately 60 percent of the jobs, and 76 percent of those were associated with producing the materials for fabrication and manufacturing (e.g., steel production). These represented approximately 6,000 FTEs for a duration of four years. The staging, assembly, and installation of the project only accounted for 10 percent of jobs (1,000 FTEs for four years), and of these 44 percent were associated with specialized vessel operations. Development and soft costs (including onshore electrical interconnection, site assessment, project management, and other professional services) accounted for 11 percent of jobs (averaging 740 FTEs across six years of pre-operation). Long-term operations and maintenance accounted for 18 percent of the total jobs, representing 4.92 FTEs/MW or 210 jobs lasting through the 35-year operation of the project post-construction. Of the jobs represented, approximately

⁵³ A job-year is one full time job for one year. For example, 1 person working full time for 10 years, or 5 people working full time for 2 years each total 10 job-years.

⁵⁴ <https://schatzcenter.org/docs/2025-OSW-R1-workforce-SchatzCenter.pdf>

40 percent constituted professional occupations such as engineering, life and physical sciences, or management.

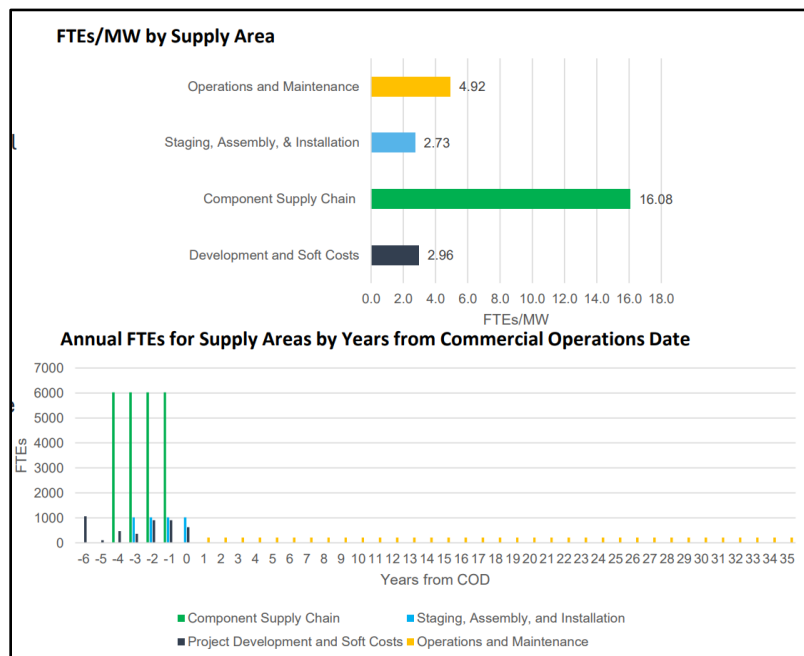


Figure 11. Summary Data of Job Duration and Supply Area Over the Course of an Offshore Wind Project Lifecycle (Schatz, 2025)

1.5 Oregon Definitions of Success for the Roadmap

Oregon is one of six western states with a 100 percent clean energy mandate, with significantly increasing demand growth projected as the state’s economy, industries, and households decarbonize. Offshore wind energy represents a significant opportunity to help Oregon meet its energy and climate goals, if it can be realized in a responsible way that protects the coastal communities, cultures, economies, and the natural environment that already bring so much value to the state. Additionally, the Oregon coast is recognized as an area of the state that faces electricity reliability and resiliency challenges, for which grid investment and new generation sources west of the Coast Range could bring system stability benefits and support community resiliency that in turn benefits the entire Pacific Northwest region. Offshore wind energy also presents a potential opportunity for economic growth and job creation for coastal communities and manufacturing areas along the Columbia River that could result from the establishment of a new Oregon-based industry, but it is important that this growth occurs in a way that fosters the well-being of communities and aligns with their goals for the future.

Offshore wind also faces challenges that make its future in Oregon uncertain. The community, cultural, and environmental impacts of offshore wind development for the state are still unclear, and the federally-led process of progressive leasing and project design left many in coastal communities wanting answers to key questions and assurances that their interests and values would be protected before proceeding. The offshore wind technologies proposed for Oregon are still unproven in the depths and ocean conditions characteristic of the Pacific west coast, and development of the industry requires high initial costs and substantial port and vessel infrastructure that carries its own complexity in terms of

logistics, cost, permitting, and coastal effects. Oregon’s coastal grid also needs upgrades and expansion to make the most use of the new generation that could come from offshore wind, and that power needs the right energy market conditions to find accessible and reliable buyers. Much work remains to prepare the state for a future that could include offshore wind energy.

“In Oregon, we are working towards clean electricity, 100 percent clean electricity, by 2040. That means what we’re doing now, we have to do more of, and we need to put new options on the table. And that means offshore floating wind as a possibility. This is an opportunity. It’s also a challenge. But we have to try.”

-Governor Tina Kotek ⁵⁵

Globally, offshore wind industry is growing and continues to improve its technological capabilities, power output, and scientific knowledge concerning the environmental effects of offshore wind installations. Oregon is interested in keeping open the option of offshore wind development in federal waters off the coast, if it can be achieved consistent with Oregon policies, goals, and principles.

A significant wind resource exists off Oregon’s coast, and Oregon has a growing need for new renewable energy sources to maintain a reliable electrical grid and achieve our state energy and climate policy objectives. The state of Oregon is interested in better defining, through this Offshore Wind Energy Roadmap, the conditions, process, and standards under which the state might responsibly utilize its offshore wind resource to benefit local communities, state climate responsibilities and energy resilience objectives, and strengthen efforts to decarbonize the entire western electricity grid. This Roadmap recognizes that the decision to travel the path toward offshore wind development has not been made, and current federal policy is not supportive of continued offshore renewable energy growth as it has been in recent years. Changing federal policies have recently withdrawn policy and financial support from continued OSW development. While current federal policies do not preclude offshore wind indefinitely, the state is facing a period of time when there is no foreseeable movement to develop offshore wind in a formal way. While the recent decision by BOEM to rescind the two Oregon Wind Energy Areas takes the process for offshore wind development back a step, it does not preclude offshore wind indefinitely for the state. The intent of this Roadmap is to clearly articulate what the path to offshore wind energy for Oregon could look like, and the ways the state can make best use of this time by pursuing the policies, processes, research, or planning work that aligns with our interests and values and leaves us better prepared if and when offshore wind returns.

1.6 How to Use this Document

- Section 2 describes principles and scenarios that guide the recommended pathways, strategies, and actions in the Roadmap. It includes:
 - General principles for responsible offshore wind energy development in Oregon, based on Oregon’s coastal management policy structure, feedback from the Roadmap process,

⁵⁵ <https://apnews.com/article/wave-wind-energy-floating-offshore-oregon-5dbf36ac5614639de39b5d4f68620b39>

- and the experience of marine renewable energy development in Oregon and other places.
 - Characteristics of a state regulatory, economic, and policy landscape necessary for offshore wind energy investment by developers
 - Principles of meaningful engagement for offshore wind
 - Alternative futures considered and discussed in the creation of this Roadmap.
- Section 3 contains an assessment of the enforceable policies and other standards the state might use in the future when reviewing federal permits and other proposals related to offshore wind development. It includes:
 - Discussion of the potential effects of offshore wind development – both opportunities to pursue and adverse effects to manage – relative to Oregon coastal communities and state interests.
 - An overview of key enforceable policies that are already in place in Oregon to address offshore wind energy effects of interest or concern.
 - A catalog of policy “gaps” or opportunities that this Roadmap recommends be addressed through follow-on formal policymaking
 - A capacity assessment that describes the resources necessary for the state, local governments, and Tribal governments to fully participate in offshore wind energy decision processes.
- Section 4 lays out an Oregon Pathway to Offshore Wind Energy that emerged from the Roadmap development process. This path includes the strategies and actions recommended in this Roadmap, separated by the major phases in the total offshore wind lifecycle: Siting/Planning, Leasing, Permitting, Construction, Operation, and Lease Renewal or Decommissioning.
 - Section 3 also contains a pathway focused on a “Supply Chain Only” alternative future.
- Section 5 provides recommended actions to better prepare Oregon for a future that could include offshore wind energy or to employ during future offshore wind decision-making processes. The actions are organized by policy objective categories provided in HB 4080. Many of these actions are referenced in the Oregon Pathway to Offshore Wind Energy in Section 3 and are described in further detail in Section 5.

There are also a number of appendices that provide more information about specific aspects of the Roadmap, including an initial Oregon Research Agenda Concept, a detailed enforceable policy analysis and capacity assessment, and **XXXXXX**.

2 PRINCIPLES & ALTERNATIVE FUTURES FOR OFFSHORE WIND IN OREGON

2.1 Oregon Principles Guiding the Offshore Wind Roadmap

During the Roadmap development process, a number of principles were identified to guide the state's approach to offshore wind energy decision-making and the implementation of its policies and authorities. These principles should be integral to the state's consideration of potential offshore wind development, and whether to either proceed with offshore wind energy development or "exit" from further consideration.

These principles hold that decisions regarding offshore wind energy for Oregon should be:

- Be based on the best available science, with forward-looking plans to manage uncertainty and risk.
 - Use a precautionary approach⁵⁶ to decision-making when information is limited and actions have the potential for irreversible harm to irreplaceable resources and uses.⁵⁷
 - Include sufficient information to demonstrate consistency with Oregon's statutes, rules, statewide planning goals, and other relevant state and local policies and permit authorities.
 - Commit to ongoing learning through effective and relevant monitoring.
 - Be adaptive in a thoughtful manner⁵⁸.

⁵⁶ "[I]n order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." Source: <https://www.noaa.gov/precautionary-approach>

⁵⁷ Embedded in Oregon's enforceable policies (Statewide Planning Goal 19: Ocean Resources) is a precautionary approach, recognizing that where there is a reasonable threat of irreversible harm to an irreplaceable resource, such actions should be treated with caution, and it is the responsibility of the proponent of an action to prove the absence of harm. Territorial Sea Plan Part Five defines the Precautionary Approach as, "*The application of a planning and regulatory decision making system that accounts for circumstances where information about marine resources and uses is limited, and there are increased levels of risk and uncertainty related to the outcome of the action. The principle of the precautionary approach is found in the Management Measures provided in Part One, section G. and in Goal 19 Ocean Resources*".

⁵⁸ The concept of adaptive management is a risk management approach that has been described as walking "hand in hand" with the precautionary principle (Francis et al., 2007). It is predicated on the basic premise that, "if human understanding of nature is imperfect, then human interactions with nature [e.g., listing or delisting species] should be experimental" (Lee 1993, p 53). Proponents of adaptive management assert that ecosystem-based management of fisheries should incorporate scientific trial and error, with extensive monitoring regimes to investigate the effects of the management decision and plan the next iteration (Morrison-Saunders et al. 2007; Stankey, 2003). "As originally proposed by Holling (1978) and refined by Lee (1993), adaptive management treats economic uses of nature as experiments so that we may learn efficiently from experience" (Francis et al., 2007, p. 220).

- Utilize the mitigation hierarchy⁵⁹.
- Be based on an understanding of impacts and risks to the ocean and shoreline environments, and/or identify any needed studies on impacts and risks.
- Understand that perfect data and science will never be available, and that baseline environmental data is changing with anthropogenic activity and climate change (with or without OSW).
- Feature clear and enforceable accountability measures and agreements with affected communities to provide assurances that standards will be upheld, interests are preserved, and benefits balance with costs.
- Recognizes and incorporates Tribal sovereignty, treaty rights, cultural and resource interests, consultation obligations, and the importance of free, prior, and informed consent.
- Considers an accounting of costs and benefits, inclusive of both the environment and coastal communities, with benefits balancing or exceeding fully accounted costs. The interests of existing ocean users, including Tribes, are recognized and included in this principle.
- Adheres to Statewide Planning Goal 1: Citizen Involvement, which calls for “the opportunity for citizens to be involved in all phases of the planning process,” and embodies this value in the permitting and consenting process for any offshore wind project.
- Considers and integrates all phases of offshore wind development, including Siting, Leasing, Permitting, Construction, Operations and Maintenance, and Decommissioning.
- Includes labor standards that foster a safe, professional, well-trained, well-supported workforce to promote quality work and community well-being.
- Considers all aspects of energy development as an interdependent system, including port infrastructure development, transmission needs, manufacturing, workforce development, transportation and shipping, and community support services.

2.2 Characteristics of an Offshore Wind Path Forward that Provides Clarity for Development

This Roadmap does not decide whether offshore wind energy is viable or not, but it articulates the steps along a viable path to an offshore wind energy project. The Roadmap describes some of the characteristics of those steps that might increase clarity along the way:

- State leadership is essential to communicating an invitation for the OSW industry to seek development opportunities in Oregon and discuss expectations, needs, and opportunities.
- Regulatory certainty is more likely to bring investment. Transparency regarding expectations for information, mitigation measures, and community agreements will increase certainty.

⁵⁹ Mitigation includes: (a) Avoid; (b) Minimize. (c) Rectify or restore. (d) Reduce or eliminate over time; (e) Compensate. Sources: <https://www.govinfo.gov/content/pkg/CFR-2002-title40-vol28/pdf/CFR-2002-title40-vol28-sec1508-20.pdf>; <https://www.oregon.gov/lcd/OCMP/Documents/TSP%20Part%20Four%20-%20Uses%20of%20the%20Seafloor%20.pdf>; <https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=173482>

- Market certainty brings investment. Offshore wind is a long lead-time investment that may necessitate market signals from the state to attract and sustain interest. Signals may include policies, incentives, financing, high quality public engagement and indicators of public support/opposition, or procurement mechanisms. For the state to offer these signals, the value of offshore wind to Oregon’s energy system, climate goals, community benefit, and economic development needs to be clearly articulated.
- Offshore wind in Oregon relies on shoreside support infrastructure and port development. These developments need to be planned in advance on a local and regional level, including consistency with state and local policies and regulations.
- The siting of offshore wind arrays significantly affects the cost and feasibility of a project. Careful and thoughtful siting can identify issues early and increase confidence that a project may be viable.
- Offshore wind development requires a trained workforce that has adequate access to housing and other services.
- Early community engagement and education can build trust and repair damage caused by other historical examples of development that have not met community interests.
- Offshore wind is a regional opportunity for the west coast. An efficient industry requires regional cooperation with California and Washington regarding transmission infrastructure, supply chain development, and port capabilities.
- State investment may be required in communities, monitoring and research, and infrastructure to support the integrated system that would be needed to realize an offshore wind industry that is consistent with Oregon’s interests and values.

2.3 Principles of Effective Engagement

The State of Oregon should be central in leading engagement efforts with Tribes, communities affected by offshore wind development (in both positive and negative ways), and others who care about how floating offshore wind is planned for, built, and operated.

By actively engaging coastal communities and making decisions about OSW energy in consideration of Oregon’s diverse communities, this Roadmap aims to not only maximize the positive and minimize any negative effects of OSW energy but also maximize community participation in the benefits offered by OSW energy. Transparent communication and inclusivity are key, ensuring communities are involved from the ground up in OSW energy development. This approach can address community concerns and foster a sense of ownership and shared benefits, paving the way for a collaborative and positive future.

The State of Oregon must operate consistent with state law and policy related to consultation with the Nine Federally Recognized Tribes of Oregon. The Oregon Coastal Management Program included conditions in its Federal Consistency decision for the proposed BOEM leasing action requiring developers to notify and involve Tribes in the exploration of offshore and onshore areas with potential to contain cultural or archaeological resources. A condition also required BOEM to require lessees to

make all reasonable efforts to demonstrate two-way dialogue with Federally Recognized Tribes that could be affected by future offshore wind development, including multiple specific provisions. These conditions should be retained in future actions and further discussed with Tribes for any additions or amendments over time. State engagement should remain consistent with Federal standards for Tribal Consultation, and the state should co-design offshore wind engagement with Tribes. The state should also make efforts to support the attainment of adequate resources for full Tribal engagement

Meaningful engagement with all affected parties is defined by two-way communication that allows for information and ideas to be shared with a broad range of constituencies, knowledge holders, and rights holders. Meaningful engagement relies on trust and good faith. Every Oregon resident should have an opportunity to engage, but particular attention should be given to those most affected by OSW (e.g., Tribes, coastal communities, and existing ocean users). There are different levels of citizen participation in government decisions ranging from no participation to government providing information, to consultation, to forms of partnership with more delegated power to citizens and communities. Meaningful engagement can range from informing to partnership depending on the type of decision and interests from people wanting to shape a decision.

Opportunity for engagement should occur throughout the OSW lifecycle from planning to construction to decommissioning. Many communities have engaged already, and any future work should honor what Tribes, communities, and others have shared in past comments. Any engagement effort should:

- Provide early and transparent information on when engagement is occurring, who can participate, how feedback will be used, and when key decisions are being made—so people can plan and make informed decisions on when and how to participate;
- Consult meaningfully with federally recognized Tribes and cultivate long-term relationships;
- Include diverse modes of engagement to be as inclusive and accessible as possible—tailor specific approaches to specific project stages and community needs to be flexible and intentional. Provide high quality information and ongoing community education over time, in multiple and accessible languages with visuals as much as possible, and with access to subject matter experts, so people engage with a similar understanding of the problem to be solved and potential solutions;
- Be coordinated with state and federal agencies, developers, local governments and others with engagement responsibilities so engagement is efficient, effective, and accountable;
- Apply a definition of equity that is consistent with related state and federal initiatives;
- To the extent possible, weave engagement into existing community gatherings and venues. Partner with local groups to co-host engagement, accessible community education, and community visioning and planning activities prior to formal government review periods;
- Be clear on why engagement is happening, and what level of decision authority is being shared (or not shared) with the people engaging;
- Create the space for multiple perspectives from the entire state, and across generations from youth to elders, to be offered and listened to by the State of Oregon and others;

- Commit to be data-driven and transparent, understanding that uncertainties will remain and cannot all be eliminated. Be clear about what is known and unknown, and how unknown information will be brought into the process in the future; and
- Be timely and accountable in providing responses and demonstrate that feedback has been received (e.g., by publishing regular summaries of feedback received, frequently asked questions tools, and how feedback will shape decisions). Document which ideas were not advanced and why.

2.4 Oregon's Responsibility to Tribes

The ocean is a source of life and subsistence for Tribes, and the ocean represents creation for many Tribal people. DLCD recognizes and respects that Oregon tribal nations are each separate and sovereign nations with deep cultural and historical connections to the Oregon Coast. The development of offshore wind has the potential to affect the interests of Tribes in myriad ways, and HB 4080 specifically directs this Roadmap to define standards for offshore wind that would accomplish, "Protection of tribal cultural and archaeological resources, culturally significant viewsheds and other interests of Indian tribes."

The State of Oregon respects that Tribes have a deep ongoing cultural and historical connection to the natural resources that have been an integral part of lifeways since time immemorial and are still important and relevant for Tribes today. Natural resources should be protected for their cultural value as well as their intrinsic and economic value. The state's system of enforceable policies demonstrates a shared value in protecting the species, habitats, and other natural resources that enhance the lives of all who call Oregon home.

In 2001, Senate Bill 770 (SB 770) established a framework for communication between state agencies and tribes. Effective government-to-government communication increases our understanding of tribal and agency structures, policies, programs, and history. These state and tribe relations inform decision makers in both governments and provide an opportunity to work together on shared interests.⁶⁰

2.5 Alternative Futures

As an early exercise of the Oregon Offshore Wind Roadmap Roundtable, participants were asked to imagine versions of alternative futures:

- A future with wind turbines off the Oregon coast; and
- A future without wind turbines off the Oregon coast.

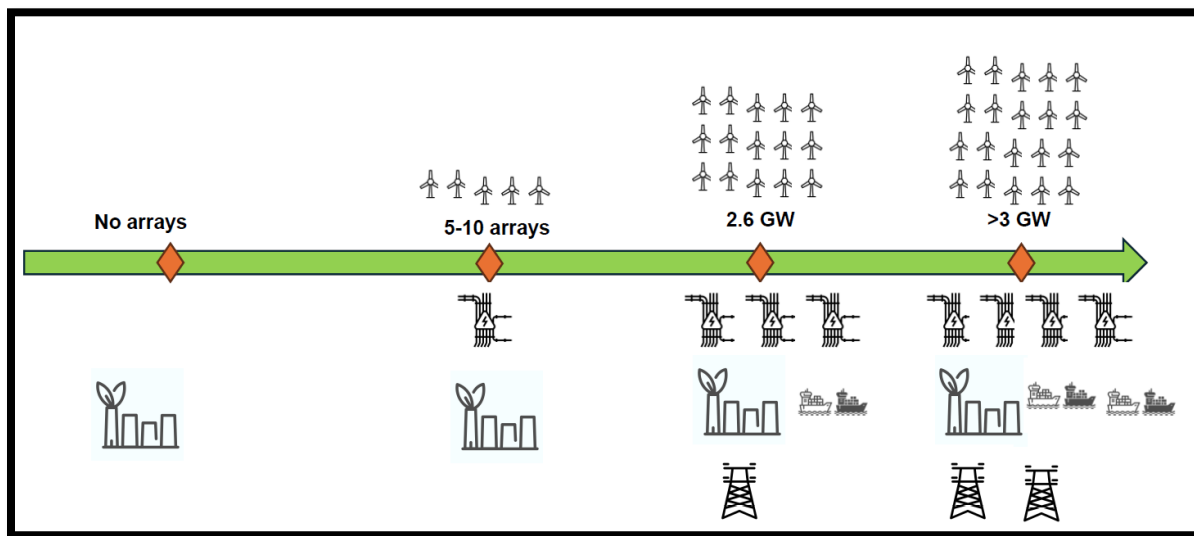
For both futures, Roundtable members were asked to identify the characteristics of each future where they would have "no regrets". The alternative futures were expanded and refined through continuing

⁶⁰ The state statute created from SB 770 is [ORS 182.162-168](#), which followed Executive Order [EO-96-30](#). This Executive Order, established in 1996, defined a process to "assist in resolving potential conflicts, maximize key inter-governmental relations, and enhance an exchange of ideas and resources for the greater good of all of Oregon's citizens."

discussion. The following subsections describe significant elements of each alternative future, including the markers of success for each path and the considerations or tradeoffs relative to other paths.

Consistent with the intent of HB 4080 Section 4 of the Roadmap further defines the path that includes offshore wind energy development and explores the necessary elements along that path. A pathway is also included for a future wherein Oregon does not pursue offshore wind energy for itself but participates in the industry through supply chain development.

Figure 2.2 Alternative Futures



2.5.1 Path 1a: Oregon hosts an offshore wind industry, with major port development

Under this future, one or more offshore wind array, each array with multiple turbines, would exist off the coast of Oregon. The overall scale of how much offshore wind could be located off the coast of Oregon has not been set in policy, but HB 3375 did establish a planning goal of up to 3 GW of offshore wind. It is important to note that the state goal to plan for OSW development is not a deployment target and does not mandate or incentivize the procurement of OSW by Oregon utilities, nor does it represent either a “floor” or “ceiling” to potential OSW development off Oregon’s coast during the near or long-term. Path 1a and 1b explore three different development scenarios:

1 GW: Assuming a standard size of 15 MW per turbine, this “start smaller” scenario would be comparable an array of approximately 67 turbines at approximately 1 nautical mile spacing⁶¹. This amount could be broken up into more than one array and, based on the existing capabilities of coastal grid infrastructure, would require the least amount of transmission system upgrades. Based on conversations with offshore wind industry representatives, 1 GW represents the smallest total amount that would attract development from a cost-risk standpoint and create a large enough pipeline of work to spur supply chain economic development. Some members of fishing communities have also

⁶¹ <https://docs.nrel.gov/docs/fy22osti/80908.pdf>, slide 12

suggested that a smaller total amount of development may be more acceptable, if carefully sited, because it could provide relative certainty that the total effects from space loss would be limited.

2.6 GW: This capacity amount is based on a PNNL study that found this is the maximum amount the existing Oregon coastal grid could absorb without substantial transmission upgrades. This scenario would assume offshore wind arrays are distributed coastwide to access existing transmission substations without running longer export cables from the south coast. This amount of capacity equates to approximately 173 turbines.

Greater than 3 GW: This capacity amount would “start bigger” with offshore wind energy development and assumes that the limitations on development will not be based on an arbitrary amount of power produced but would instead be based on the limits of environmental, social, economic, cultural, space-use conflict, and other standards and policies of the state. This alternative would be expected to require substantial infrastructure needs both onshore and offshore.

Depending on the size and spatial distribution of the project or projects, upgrades would be required to the local coastal grid infrastructure as well as potentially the transmission lines between the coast and the rest of the state.

Path 1a would also include port upgrades to accommodate a turbine integration facility and other support facilities, invite supply chain and manufacturing opportunities, and support transmission upgrades as needed. As described in Section 1.4, previous studies assessed the port capabilities within Oregon and found that the deep draft development port in Coos Bay is the only location potentially suitable to host a large-scale Staging & Integration facility that could assemble turbines and foundations. It is also assumed that this facility would provide ongoing maintenance support if turbines needed to be towed to shore for repair or maintenance during the project operational years. According to a 2022 Port Infrastructure Study, development of a marine terminal facility in Coos Bay would cost approximately \$475 million.

The aspects of this development are described in the three studies mentioned in Section 1.4 and include:

- Modification of the existing Federal Navigation Channel to be wider and deeper to support transport of offshore wind floating foundations. The scale of modification needed is similar to that proposed for the Port of Coos Bay Intermodal Port proposed shipping container terminal project; however, depending on the development of turbine foundation options, the needed modification could surpass the PCIP proposed modifications. Modification of the navigation channel would require an exception to Statewide Planning Goal 16 and be subject to state federal consistency review relative to its potential effects on the ecosystem of the Coos Bay Estuary and other relevant policies related to wildlife, archaeological resource protection, and local planning requirements.
- Dredging of “wet storage areas” for the temporary placement of completed turbine foundations within the estuary.
- Addressing identified effects to the Coos Bay Regional Airport, including potential hazards to air navigation represented by turbines and shoreside integration cranes that previous studies found are likely to pose significant challenges to development.

Other ports in Oregon may also support offshore wind through manufacturing support, material laydown space, and mooring of crew transfer vessels or potentially larger vessels during installation of moorings, cables, or other components.

Depending on the size and spatial distribution of the project or projects, upgrades would be required to the local coastal grid infrastructure as well as potentially the transmission lines between the coast and the rest of the state.

Markers of Success (Benefits):

- An investment in clean energy helps increase local jobs.
- Workforce development and education create generational benefits.
- Addition of a substantial electricity generation source west of the Coast Range, and the associated upgrades to transmission grid infrastructure, would benefit coastal energy resiliency.
- Ports may be expanded, updated, and electrified, representing new economic opportunities.
- The offshore wind industry achieves coexistence with conservation, fisheries, and other uses.
- Development is limited to an amount that does not result in significant adverse effects to the California Current Large Marine Ecosystem and coastal communities based on state and federal law and policy.
- Because responsibilities and expectations are clearly defined through the permitting process, decommissioning leaves no trace.
 - [Note: this standard is subject to some debate among RT members]
- Scientific monitoring for offshore wind projects leads to a co-benefit of a better understanding of the ocean system.
- Oregon addresses its responsibilities to clean energy and climate change mitigation by contributing to decarbonization of the future energy mix.
- Impacts to the ocean and shoreline environmental are understood and fully mitigated.
- Existing ocean users are not impacted or are fully mitigated for impacts.
- Cultural resources are protected and affected Tribal communities are engaged and empowered with decisions.
- Benefits balance with or exceed costs, with full accounting;

Considerations/Consequences/Tradeoffs:

- Potential for detrimental effects to state coastal resources and uses that may be revealed over time.
- Coastal communities may not be able to support the rapid growth required to support a new workforce (housing, water, social services, etc.)
- State public investments may be required to attract and support an offshore wind industry.
- Cost of power to Oregon ratepayers may rise if such costs are determined to be prudent by Oregon energy regulators

2.5.2 Path 1b: Oregon hosts an offshore wind industry with no major port development

Under this scenario, offshore wind arrays are permitted offshore Oregon in federal waters, but no Staging & Integration capability is developed in Coos Bay. Support activities would be limited to those that can be achieved without Federal Navigation Channel modification or disruption of the regional airport, such as manufacturing and fabrication, material staging for installation of cables, mooring lines, anchors, or large vessel moorage.

It is uncertain whether the lack of a local Staging and Integration (S&I) port facility would make offshore wind development in Oregon technically or economically infeasible. In California, the Port of Long Beach S&I development project is planned to support the integration and installation for the Morro Bay lease area, which would require towing floating turbines more than 200 miles around Point Conception. The prior south coast Wind Energy Areas in Oregon are within approximately 100 miles of the planned Humboldt heavy-lift port project, and Oregon offshore areas may be able to be supported by either the Humboldt port or the industrial ports in Tacoma or Seattle. However, the recent federal action to rescind USDOT funding for the Humboldt port project may make this scenario less feasible or introduce delays in availability of the Humboldt port to also serve Oregon.

According to industry experts consulted in the development of the Roadmap, a rule of thumb is that each turbine is assumed to require replacement or servicing of its major components at least once during its operational life. Experience from the Kincardine floating OSW project in Scotland suggests that these activities would require towing the turbine away from its installed location back to a port where this maintenance and replacement can be performed safely. Long towing distances would add significant operational cost to the project and increase the wear on some components. Additionally, weather conditions are a significant consideration for at sea operations, with a need for calm weather windows for transporting turbines, and there would likely be seasons of the year when a long journey is not feasible.

Markers of Success (Benefits):

- Potential effects to coastal communities and estuaries from major port development are avoided.

Considerations/Consequences/Tradeoffs:

- Potential for detrimental effects to state coastal resources and uses that may be revealed over time.
- Coastal communities may not be able to support the rapid growth required to support a new workforce (housing, water, social services, etc.)
- Technical and economic feasibility of offshore wind arrays would likely be adversely affected by the lack of a nearby port for staging & integration and operational repairs.
- The total amount of offshore wind-related jobs would be diminished compared to an alternative that includes major port upgrades. The 2025 Schatz workforce analysis estimated approximately

10 percent of jobs come from S&I facility operation, plus construction jobs for an S&I port, and an uncertain number of jobs lost during Operations and Maintenance activities for those maintenance actions that must be accomplished at a port facility).

- State public investments may be required to attract and support an offshore wind industry. Cost of power to Oregon ratepayers may rise if such costs are determined to be prudent by Oregon energy regulators.

2.5.3 Path 2: Oregon participates in activities related to offshore wind (e.g., supply chain; transmission upgrades) but does not host an offshore wind array

Under this future, Oregon invests in developing and investing in business opportunities and system upgrades ancillary to an offshore wind presence in Oregon but does not elect to pursue or support the presence of offshore wind arrays off Oregon's coast.

Markers of Success:

- Oregon benefits from economic growth while avoiding detrimental effects to state coastal resources or uses that may result from the presence of an offshore wind installation and associated support facilities on the Oregon coast.
- Oregon has upgraded transmission and grid infrastructure to improve energy resiliency and support potential future generation from OSW.
- If Oregon eventually decides to pursue or support offshore wind generation off the coast, investments in port and other facility upgrades now would mean less time will be required to finish building out the necessary OSW infrastructure and support facilities.

Considerations/Consequences/Tradeoffs:

- It is unclear whether sufficient opportunity exists from the California projects for Oregon supply chain businesses given CA and WA are already signaling investments in their own supply chain development.
- Absent an intent to locate wind turbines off the Oregon coast, the need and value of port upgrades is uncertain.
- State public investments may be required to attract and support an offshore wind supply chain opportunity.
- If supply chain development requires new onshore construction and/or port development, the associated potential impacts to onshore or estuarine habitat would need to be evaluated against state enforceable policies.

2.5.4 Path 3: Oregon pursues a pilot scale offshore wind project

Under this future, Oregon invests in one or more pilot offshore wind arrays. The purpose of a pilot would be to test new technologies or approaches, build experience working through the state review and permitting process, design monitoring and adaptive management strategies, and build familiarity with the presence and potential effects of turbines in Oregon before committing to a large-scale project.

Territorial Sea Plan Part Five includes a general policy for renewable energy facilities that directs agencies to, “Limit the potential for unanticipated adverse impacts by requiring, when resource inventory and effects information is insufficient, the use of pilot projects and phased development to collect data and study the effects of the development on the affected resources and uses.”

Examples of pilot-scale projects exist in Oregon’s coastal history and in other states in recent years. In December 2012 USDOE awarded funding for seven proposed OSW demonstration projects, including one offshore of Oregon. In May 2013 BOEM received an unsolicited request for a commercial wind lease from Principle Power, Inc. proposing a 30MW pilot-scale floating OSW project with 5 6MW turbines floating in 300-400 meters of water 15nm from shore and a subsea cable to connect the power to onshore infrastructure planned for the port of Coos Bay⁶². The developer received a grant from the USDOE to support its development⁶³ and obtained a finding from BOEM that there was no competitive interest in the proposed lease area. Ultimately, the developer did not obtain a power purchase agreement for the project due to two investor-owned utilities rejecting the above-market price of power⁶⁴, funding from USDOE ended, and BOEM stopped processing the project lease request in 2018. Because the project did not proceed to the permitting phase, it is not known whether it would have been found consistent with state policies, but the scoping comments for the project in July 2014 indicate that the project in its early phases received both support and scrutiny about potential effects to the environment and the fishing industry⁶⁵.

The PacWave wave energy testing facility operated by Oregon State University (OSU) is an example of a novel ocean energy project that is aligned with state policy preferences to use pilot-scale projects to collect information that may be relevant to determining project effects on a commercial scale. This open ocean wave energy test facility consists of two sites off Newport. PacWave North is designed to test smaller prototype wave energy converter (WEC) devices and successfully performed one such test in 2012.⁶⁶ Installation and operation of PacWave North includes limited exemptions under TSP Part Five, section E, although future developers seeking to test there must obtain any applicable authorizations. PacWave South is in deeper waters and is grid-connected, offering testing for up to 20 full-scale WECs in four berths with independent export cables and a maximum power output of

⁶²

<https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/OR/WindFloat-Pacific-Lease-Request.pdf>

⁶³ https://www.energy.gov/eere/wind/offshore-wind-advanced-technology-demonstration?nrg_redirect=462172

⁶⁴ <https://www.utilitydive.com/news/doe-backed-floating-wind-project-may-lose-funding-as-utilities-reject-power/401496/>

⁶⁵ <https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/OR/Consolidated-BOEM-Scoping-Comments-WindFloat-Pacific-Project-May-29-2014---July-28-2014.pdf>

⁶⁶ <https://pacwaveenergy.org/north-test-site/>; https://www.energy.gov/eere/water/pacwave-offshore-wave-energy-test-site?nrg_redirect=323711

20MW⁶⁷. OSU received a lease from BOEM in February 2021⁶⁸. Unlike OSW, the Federal Energy Regulatory Commission (FERC) is the lead federal agency for this marine hydrokinetic project and in March 2021, FERC issued OSU a license to build and operate the PacWave South test facility. This was the culmination of extensive collaborative workgroup discussion in a regulatory process that spanned nearly 10 years. Construction of PacWave South was completed by early 2025, and grid-connected testing of most wave energy converter (WEC) device types will be allowed (including point absorbers, attenuators, oscillating water column) for developers to inform and improve upon device readiness ahead of commercial scale operations. **Callout: Maine Offshore Wind Research Lease**

In 2021, BOEM received an application from the State of Maine for a renewable energy research lease to accommodate an array of floating offshore wind turbines (Research Array) on the OCS offshore the coast of Maine. The project would consist of 12 floating turbines generating up to 144 MW of energy. Also in 2021, Legislative Document 336⁶⁹ directed the Maine Public Utilities Commission to enter into contract negotiations for a power purchase agreement for energy generated from the Research Array should the state's application be successful. The state's intent is to position itself as a hub for floating offshore wind development in the region, while advancing a set of informed best practices and standards for commercial-scale floating offshore wind projects in the Gulf of Maine for use in planning, permitting, and constructing commercial-scale projects in a fashion that optimizes coexistence with traditional marine users and the ecosystem.^{70,71} BOEM granted the Research Lease in August 2024. The State of Maine designated Pine Tree Offshore Wind, LLC as the operator for the research lease.

As a research lease, the state's designated operator would propose and conduct research regarding environmental and engineering aspects of the proposed project. This information will be made public and used to inform future planning, permitting, and construction of commercial-scale floating offshore wind projects in the region. In April 2025, the developer of the project announced that the project has been paused and negotiations around the long-term power purchase contract were suspended, citing, "recent shifts in the energy landscape that have in particular caused uncertainty in the offshore wind industry." The state commented publicly that, "Offshore wind, including the research array, is an important part of Maine's long-term energy future, and [the state] will continue to work on responsible offshore wind research and development to advance economic and environmental benefits for Maine."⁷²

Markers of Success:

- May attract federal research funding under future administrations
- The Territorial Sea Plan states a preference for pilot scale or phased development projects in cases where there is a lack of data available about the effect of the project on marine uses and resources. A pilot would allow direct measurement of effects
- Visual resource effects could be directly measured, and Oregonians would have an opportunity to experience the visual effect on a smaller scale before considering a larger project.

⁶⁷ <https://pacwaveenergy.org/south-test-site/>

⁶⁸ <https://www.boem.gov/renewable-energy/state-activities/oregon-activities>

⁶⁹ <https://www.mainelegislature.org/legis/bills/getPDF.asp?paper=SP0142&item=3&snum=130>

⁷⁰ <https://www.federalregister.gov/documents/2022/08/19/2022-17922/research-lease-on-the-outer-continental-shelf-ocs-in-the-gulf-of-maine-request-for-competitive>

⁷¹ <https://www.maine.gov/energy/initiatives/offshorewind/researcharray>

⁷² <https://www.wbur.org/news/2025/04/02/pine-tree-offshore-wind-offshore-wind-pause-trump-markets>

- A pilot project could potentially navigate the state and federal permitting process with greater ease and provide an example for future full-scale projects.

Considerations/Consequences/Tradeoffs:

- California’s development would likely already serve the same research and experiential function as a pilot array.
- A small collection of turbines would not necessarily answer effect questions related to a larger array.
- The industry has stated that they are not interested in investing in a project of less than 1GW in capacity due to the large costs and risks. The state may need to be an investor to reduce project risk.
- Assuming the research array sells what power it produces in addition to supporting research, the cost of power from a smaller array would be expected to be higher than a large array. Power procurement may not be consistent with state ratepayer protection policies absent legislative direction.

2.5.5 Path 4: Oregon does not participate in offshore wind in any way

Under this future, Oregon makes the decision not to attract offshore wind industry elements on the ocean or on the land.

Markers of Success:

- Oregon sustains existing coastal economic sectors while avoiding potential detrimental effects to state coastal resources or uses that may result from the presence of an offshore wind installation and associated support facilities on the Oregon coast
- Oregon has found other sources of renewable energy to meet its climate goals
- Oregon continues to collaborate with California and Washington on regional energy supply and demand issues, and monitoring changes to the California Current Ecosystem

Considerations/Consequences/Tradeoffs:

- The economic development and jobs from offshore wind are located elsewhere
- The state must rely more heavily on alternative sources of non-greenhouse gas-emitting electricity sources to achieve its energy and climate goals
- Alternative energy sources to meet state demands may be less likely to be located on the coast due to land use or other constraints, in which case the incentive to invest in grid upgrades that provide additional energy reliability and resiliency for the coast could be less.
- If other renewable energy generation alternatives are not readily available, Oregon may have less control over the types of energy sources it accesses to meet its climate goals and future energy needs

3 POLICY ASSESSMENT: ADDRESSING EFFECTS AND SEIZING OPPORTUNITIES

As part of fulfilling the requirements of HB 4080, DLCD conducted an assessment of the state enforceable policies that may be used in the federal consistency review of offshore wind energy leasing decisions and any other actions related to offshore wind energy development off of the Oregon coast.

The purpose of the assessment is twofold:

1. To assist in the identification of relevant enforceable policies for future offshore wind project reviews. This information may be informative to prospective developers, project applicants, or federal agencies.
2. To identify gaps in existing policies or potential new policies that the state may wish to address through new rulemaking or legislative action prior to conducting a potential future offshore wind project review.

This section also contains a summary of a capacity assessment directed by HB 4080, which identifies staff capacity needs for state agencies, local governments, and affected Tribes to engage in offshore wind-related processes.

3.1 Key Effects to State Coastal Resources and Uses

The policy assessment was structured around a compilation of effects to coastal resources and uses that are either reasonably anticipated or uncertain but possible to be evaluated as part of a future review. The term “effect” can mean either an event or occurrence that should be avoided or a benefit that the state or a community may want to capture as a result of offshore wind development.

Callout: Coastal Effects in the context of state offshore wind energy review authority

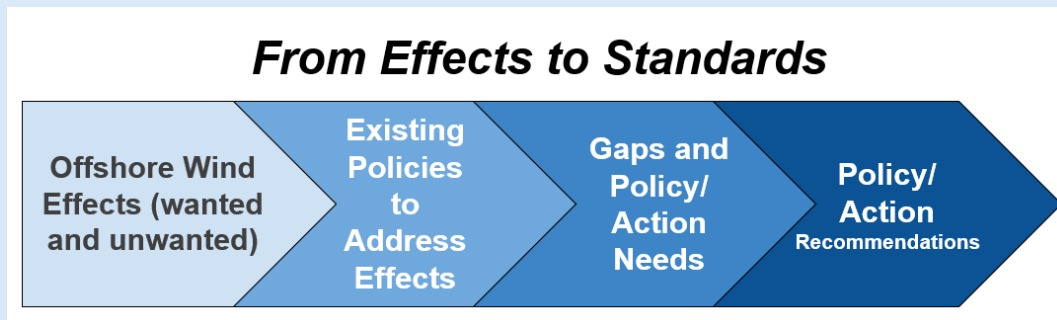
The term “coastal effects” has a specific meaning and significance under the state’s federal consistency review authority for offshore wind federal leasing and permitting actions. Under the federal consistency regulations⁷³, coastal effects include impacts in five major categories: natural resources, cultural resources, coastal economies, aesthetics, and recreation/public access. The review includes evaluation of direct and indirect impacts, including consideration of cumulative (impacts that add up) and secondary impacts (impacts that occur later in time or farther removed in distance) in or outside of the coastal zone that have '[reasonably foreseeable effects](#)' on coastal resources or uses.

Federal consistency review outcomes must be based on the “enforceable policies” of the state that have been approved by the NOAA Office for Coastal Management.⁷⁴ A state may not object to a project that has unacceptable coastal effects if there is not a corresponding enforceable policy that addresses the effect. An important step in the enforceable policy assessment in this Roadmap was to identify all reasonably foreseeable effects of interest so they could be compared to existing

⁷³ [eCFR :: 15 CFR Part 930 -- Federal Consistency with Approved Coastal Management Programs](#)

⁷⁴ <https://www.oregon.gov/lcd/ocmp/pages/enforceable-policies.aspx>

enforceable policies of the state. Effects not covered by an existing enforceable policy represent “gaps” that the state should consider addressing through formal policy amendments. Additionally, one of the key factors in the decision by NOAA to approve a state policy as an enforceable policy that may be used in federal consistency reviews depends on whether the policy in question relates to an effect on state coastal resources or uses.



The list of effects was developed from the following sources:

- Effects identified during the PacWave permit scoping process (with amendments to be applicable to offshore wind instead of wave energy devices)
- Effects identified in public and agency comments during the BOEM leasing federal consistency review in 2024
- Section 3 of the Offshore Wind Roadmap Considerations document (2023)
- Responses to the Roadmap Roundtable online survey conducted in December 2024
- Individual staff conversations and research into potential offshore wind effects, in support of future federal consistency reviews.
- Interviews with local government planning staff and state agencies

The list of effects was reviewed and refined over the course of one year through conversations with the Offshore Wind Roadmap Roundtable, a core team of state agencies, Oregon’s Ocean Policy Advisory Council working group, local government planning staff⁷⁵, attendees of three public meetings along the Oregon coast , engagement efforts with fishing industry representatives], consultation with the Nine Federally Recognized Tribes of Oregon, and other community focus group engagement conversations . In addition, DLCD consulted the Environmental Law Institute to review the list and identify key policy gaps and provide feedback. [Note for Reviewers: Some of the engagement activities described above are still underway. This paragraph was written from the perspective that these activities will be completed before the Roadmap is released for formal public comment.]

DLCD staff compared these effects against existing enforceable policies of the Oregon Coastal Management Program and identified areas where policy gaps may exist to address those gaps in future offshore wind permit reviews. DLCD shared the results of this analysis with the Roundtable for initial

⁷⁵ Between November 2024 and May 2025, DLCD staff met with coastal communities that included 7 counties and 22 cities.

feedback and engaged the services of the Environmental Law Institute to review the list and identify key policy gaps.

The full Enforceable Policy Assessment may be found in **Appendix X** of the Roadmap [under development]. The identified gaps and opportunities are summarized in Section 3.4.

Below are summaries of effects that should be addressed and benefits that should be captured along a responsible path to offshore wind energy for Oregon.

3.1.1 Achieving State Energy and Climate Goals

As described in Section 1, Oregon is one of seven states in the Western US that has committed to achieve 100 percent clean electricity by 2040, on top of which recent demand forecasts predict that Oregon will need to double its current total energy generation by 2050 to meet rising demand. With increasing power loads and the need to electrify vehicles and buildings, as part of a clean energy transition, the region, and particularly Oregon, needs new renewable resources to supplement land-based wind, solar, hydroelectric, and geothermal resources. OSW energy is one available pathway to new renewable energy generation.

Following the 2024 BOEM Final Sale Notice for the Oregon Wind Energy Areas, four of the five eligible bidders signaled that they were no longer interested in participating in a lease sale process. Insufficient bidder interest was a leading contributor to BOEM’s decision to postpone the lease sale for Oregon⁷⁶. During development of this Roadmap, representatives of the OSW industry expressed that several aspects of the situation in Oregon posed a risk for investing in development as outlined below. As described in the ODOE Floating Offshore Wind Study, and through discussions supporting this Roadmap, a number of specific benefits and challenges will need to be addressed through policies, investments, and actions in order to create an environment that can attract offshore wind energy investment in the future.

Access to Regional Markets

Currently, the market for buying and selling power in the Pacific Northwest is divided among 38 “balancing authorities” that face regulatory and economic barriers preventing open buying and selling of electricity across the region. One former representative of the offshore wind industry likened the situation of trying to sell large amounts of power from an offshore wind facility in Oregon to “selling a paper route,” with multiple smaller customers who have individual needs rather than a larger buyer that can provide relative cost and demand stability and reduce investment risk. The fragmented market also presents challenges for intermittent resources like wind and solar that can lead to smaller grid areas having too much or not enough power at a given time and lead to imbalances in supply and demand that prevent renewables from producing at their full potential or selling power at reliable rates. Renewable energy policy advocates have envisioned the creation of a regional energy market that is

⁷⁶ <https://www.boem.gov/newsroom/press-releases/boem-postpones-oregon-offshore-wind-energy-auction>

“bigger than the weather” and that allow power to be sold across the region from the places that produce it to the places that need it – and can afford it.

Access to transmission grid capacity was also identified as a major barrier, with most of the transmission along the coast and between states owned by the Bonneville Power Administration, which is already facing challenges to connect new electricity sources.⁷⁷

During Roadmap development conversations, the topic of out of state power purchasers came up frequently. Because Oregon has traditionally benefited from relatively lower electricity costs through the Pacific Northwest hydropower system, concerns were expressed about the potential for offshore wind to result in higher ratepayer costs if included in the mix offered by Oregon utilities. If offshore wind energy cannot be affordably sold in Oregon, a future scenario might entail that power being purchased by ratepayers in other states under a regional market system. Under this scenario, the actual energy produced would be consumed at its nearest connection point, assumed to be the Oregon coastal grid, though the cost would appear on power bills elsewhere. Discussion around this scenario revealed a number of perspectives and considerations:

- A potential benefit would be that Oregon could receive improved energy resiliency/reliability to the coastal grid and economic opportunities from an offshore wind support industry that otherwise might not be possible without an in-state power purchaser being required to make an offshore wind project economically feasible to operate. However, without a policy to require offshore wind produced off the Oregon coast land first in Oregon, it is possible that an offshore subsea cable could route to a grid connection in another state. There is currently no guarantee that the coastal grid would receive any direct resiliency or reliability benefits.
- If offshore renewable energy is sold to another state, it is unclear whether this generation would count toward Oregon’s non-greenhouse gas-emitting electricity goals under HB 2021, or whether Oregon would still need to dedicate other space and resources to producing additional renewable energy for its own needs.
- Coastal communities may derive some economic benefit from “wheeling” charges or franchise fees paid for the use of local grid infrastructure and rights-of-way to transmit power outside the state; however, representatives from local utilities expressed concern that these benefits may be relatively minor compared to potential losses in other existing coastal economic sectors.
- Some participants in the Roadmap process expressed a value that Oregon’s coastal resources, uses, and community well-being should not bear adverse effects for the sake of meeting the energy demands of other states.

Offshore Wind Industry Needs and Perspectives

At a February 2025 conference renewable energy advocates and offshore wind industry representatives expressed the following priority needs for Oregon to reduce the risks to new generation projects:

- **A state energy procurement strategy that includes:**

⁷⁷ <https://www.opb.org/article/2025/05/12/oregon-washington-green-energy-bonneville/>

Clear Signals from the State that emerging renewable technologies such as Offshore Wind Energy areas Desired

- A regional power market that addresses the fragmented procurement “paper route”
 - Amend policies to facilitate longer-range rate case planning than the 2-year horizon currently used in PUC review of utility resource plans
 - Procurement mandates from the state, similar to the California mandate for 25 GW of offshore wind energy by 2040
 - Consider combining procurement and supply chain investment pledges
 - Identification and facilitation of stable purchasers of power, such as large industries, data centers, or other large power consumers
- **Community acceptance for offshore wind, characterized as**
 - Support for offshore wind for its own sake - clean, reliable, resilient - without requiring that it solve other problems (but also not create other problems)
 - A willingness to build trust and invite renewable energy developers to the table;
 - Clear communication of the significant workforce, supply chain, and economic development that can accrue to Oregon and coastal communities beyond negotiated community benefit agreements.
 - **Regulatory Stability**, including clear, stable standards and clearly communicated information needs for state and local permitting processes.
 - **Transmission Capabilities** to deliver offshore wind energy to the coastal grid and across the coast range to access additional markets in the state and region.
 - Responsibility for permitting, investing in, and constructing transmission infrastructure is typically beyond the scope of individual project developers and requires coordinated action involving utilities, communities, and state and federal entities.
 - Further study is needed to identify the transmission expansion necessary to deliver quantifiable energy resiliency and reliability benefits.
 - Regional collaboration to proactively plan and design offshore transmission configurations and onshore transmission expansion is also necessary to accommodate future energy needs of Oregon and other western states, including coordination with NorthernGrid, BPA, PacifiCorp, and interregional coordination with California and potentially other transmission planning regions.

3.1.2 Protecting the Environment

Oregon’s offshore waters host incredibly rich marine ecosystems that are part of the California Current Large Marine Ecosystem (CCLME)—one of the planet’s four “eastern boundary upwelling systems” that comprise just 4 percent of the Earth’s oceans but account for 20 percent of its productivity. Birds, fish, and wildlife are drawn across the Pacific to forage in Oregon’s productive waters as they transit the length of the CCLME. Some species of high concern include leatherback sea turtles, short tailed albatross, green sturgeon, Southern Resident killer whales, and humpback whales.⁷⁸

⁷⁸ https://oregonconsensus.org/wp-content/uploads/2024/04/Considerations_Oregon-OSW-Roadmap-with-Exit-Ramps_04262024_final.pdf

Floating offshore wind represents a relatively new human use of the ocean that is still evolving, and the effects are uncertain. Efforts are underway globally to study offshore wind installations – including the handful of floating arrays already in existence – to better understand their effects to (on?) the environment. While some effects of potential concern are becoming better understood, many remain unclear. It is also true that not all scientific findings associated with these studies are relevant to the rare upwelling environment of the CCLME and the specific species and habitats of this region.

Responsible development of offshore wind energy for Oregon should account for and protect the resources in the ocean and coastal environment and the people who rely on them for their many economic, cultural, spiritual, aesthetic values. Protecting the environment means conserving wildlife (e.g., birds, fish, invertebrates, marine mammals, etc.), their habitats (e.g., sand, reefs, corals, essential fish habitats, etc.), and the ocean processes that are fundamental to food webs. Conservation means following a precautionary approach⁷⁹ and the mitigation hierarchy⁸⁰, starting with its foremost principle of avoiding harm and then being well prepared to avoid, minimize, rectify, reduce or eliminate, and compensate for remaining unavoidable impacts over time.

The ocean is currently facing a number of stressors that threaten its ecological future as well as existing industries that rely upon it (i.e., seafood). Many of these stressors are driven by climate change and its root causes and include ocean acidification, hypoxia, and marine heat waves. There is also substantial uncertainty involved with developing the size and scale of proposed OSW energy in areas of the ocean that have not had permanent structures of this size and complexity before or at the depths considered off Oregon. There needs to be holistic planning, and consideration of cumulative impacts, not just within a single proposed Wind Energy Area but encompassing all potential wind energy developments within the CCLME. Because the impacts of commercial scale OSW energy might not be fully understood until the infrastructure is installed and the impacts occur, a precautionary approach is needed.

Shoreside Portions of Offshore Wind Facility Development

Based on the example of offshore wind Construction and Operations Plans (COP) approved on the east coast, the onshore components of a project reviewed by BOEM typically include a cable landing under the shore, an onshore transmission cable, and an onshore interconnection cable to connect to an existing electrical substation. The Sunrise Wind project, for example, included 17.5 miles of onshore transmission cable (6-inch diameter) buried to a depth of 6 feet. Similar components for a project in Oregon would need to obtain all necessary state and local permits and authorizations prior to approval of a COP.

Any other onshore support facilities or infrastructure necessary to support an offshore wind installation (e.g., port staging and integration facilities, navigation channel modifications, manufacturing or fabrication facilities, or operations and maintenance facilities) would not be subject to review alongside the offshore wind energy proposal. These other components, if developed in Oregon, would undergo separate state and/or local permitting and review and may or may not trigger federal consistency review depending on whether a federal permit is also required. These additional related components of an offshore wind presence may also occur years apart from a decision whether to build an OSW array,

⁷⁹ [Precautionary Approach | National Oceanic and Atmospheric Administration](#)

⁸⁰ <https://www.govinfo.gov/content/pkg/CFR-2002-title40-vol28/pdf/CFR-2002-title40-vol28-sec1508-20.pdf>

either because a supply chain and support industry is developed to serve projects elsewhere, shoreside facility support would need to be already in place to speed construction, or the overall timing and logistics of lengthy permitting processes.

There is an interest in integrating the reviews of offshore generation facilities and onshore related support facilities as a single “decision package” for the state to consider. The purpose of this would be to account for all related system effects of offshore wind together, to consolidate community agreements, or to avoid taking actions with potentially significant environmental effects (such as estuary modification) before it is known if the purpose and need is fully realized. The practical and regulatory complications described above may hinder the ability to integrate these separate actions in a formal manner.

3.1.3 Protecting Tribal Cultural Resources and Other Interests of Tribes

The ocean is a source of life and subsistence for Tribes, and the ocean represents creation for many Tribal people. DLCD recognizes and respects that Oregon tribal nations are each separate and sovereign nations with deep cultural and historical connections to the Oregon Coast. The development of offshore wind has the potential to affect the interests of Tribes in myriad ways, and HB 4080 specifically directs this Roadmap to define standards for offshore wind that would accomplish, “Protection of tribal cultural and archaeological resources, culturally significant viewsheds and other interests of Indian tribes.”

In discussions with representatives of the Nine Federally Recognized Tribes of Oregon, several interests were raised related to the potential for offshore wind energy development in Oregon. These issues apply to both the offshore and onshore aspects of development and are summarized below.

- Protection of Culturally Significant Viewsheds
 - Tribes have expressed an interest in preserving culturally significant coastal viewsheds from significant effects resulting from the presence of offshore wind turbines.
- Protection of Natural Resources as Cultural Resources
 - The State of Oregon respects that Tribes have a deep ongoing cultural and historical connection to the natural resources that have been an integral part of lifeways since time immemorial and are still important and relevant for Tribes today. Natural resources should be protected for their cultural value as well as their intrinsic and economic value. Natural resources may include species, habitats, or other environments of natural value, including natural resources of cultural significance that are not harvested for human use by Oregon Tribes (e.g., whales).
- Protection of Archaeological Resources, including Underwater Villages
 - The State of Oregon considers archaeological sites and their contents to be irreplaceable, finite, and non-renewable resources that are part of Oregon’s heritage. Native American archaeological and burial sites are not simply pieces of the tribe’s cultural past - they are considered sacred and represent a continuing connection with their ancestors. The people of Oregon, and state agencies acting on their behalf, are stewards with a public trust responsibility towards these sites and their contents.
- Protection of Areas Used for Cultural Practices

- Cultural resources are distinct from archaeological resources under Oregon laws and policies. Archaeological resource sites may be generally defined as those areas in the state that yield historical artifacts, whereas cultural resources may be broadly defined as places where Tribes engage or historically engaged in traditional activities such as food gathering but which may not leave behind a physical signature such as artifacts.
- Protection of Tribal Subsistence and Commercial Fishing
 - Tribes expressed concern about potential effects to commercial, subsistence, or ceremonial fishing practices that may result from offshore wind development. Effects of concern included area exclusion, concentration of fishing pressure, and effects to species from loss of habitat or effects to anadromous species like salmon or lamprey.
- Use Indigenous and Traditional Knowledge in State Decision-Making
 - Tribes have knowledge of the Oregon coastal and ocean environment that dates back to time immemorial. This knowledge can be an asset to the state in combination with new scientific research to better understand and value the potential effects of offshore wind development and the species and habitats that may be affected.
- Tribal Engagement Expectations in Future Offshore Wind Processes and Inclusion in Offshore Wind Decision-Making
 - Tribes expressed an interest in both engagement in offshore wind development and inclusion throughout the entire process of siting, exploring, permitting, operating, and decommissioning an offshore wind energy project. They emphasized that BOEM has a federal responsibility for government-to-government communication with Tribes as part of its tribal trust responsibilities, and this responsibility should not be delegated to private lessees.
- Tribal Benefit Agreements
 - Tribes have expressed an interest in negotiated benefit agreements to address potential effects to Tribal community well-being or access to usual and accustomed places or resources of cultural significance. Tribal benefits are separate from other community benefits, and developers must engage with Tribes independently and separately from other communities. However, there may be opportunities to combine efforts while considering the unique interests of Tribes. A challenge was recognized that it is difficult to discuss Tribal Benefits when impacts are not yet understood or disclosed at the leasing stage.
- Opportunities for Co-Stewardship and Business Partnership
 - Governor Kotek expressed in a March 2025 letter to Tribes an interest in strengthening the state's efforts to provide support for Tribal enterprises, including emerging industries such as renewable energy, sustainable tourism, and advanced manufacturing to support long-term economic resilience of Tribes. Tribes have expressed interest in being included in business partnership opportunities related to the many types of manufacturing, environmental, scientific, and other work that may arrive alongside any future offshore wind development. Opportunities for co-stewardship of resources and habitats are also of interest.
- Data Collection, Monitoring, and Access

- There is strong interest from Tribes and members of the public to have access to the data and information supporting offshore wind permitting decisions, both to safeguard against bias in information collection and to allow independent assessment of potential effects from a proposed project. There was also interest expressed in Tribes having data sovereignty regarding information that is shared (i.e., that Tribes have the ability to host data themselves and privately evaluate it relative to their own sensitive historical or cultural information). A perspective was shared that when data has been collected on Tribal resources, Tribes should have independent access to that information for their own purposes. The state shares an interest in transparent decision-making and providing access to data and information whenever possible. At the same time, we acknowledge that some information may be proprietary in nature and not accessible due to existing legal protections for such information.
- State Role in Sovereign Communications between Tribes and Federal Government
 - Tribes, the State of Oregon, and the Federal Government all have varying sovereign interests in the uses and resources of the coastal zone. While the offshore wind leasing and permitting process is federally-led, there are phases and aspects of the process for which a “three sovereigns” approach to coordination and communication would support the respective interests.
- Tri-Party Communication with Tribes, State, and Developers
 - Based on conversations with Oregon Federally-Recognized Tribes as part of developing this Roadmap, there is an interest in greater alignment with both the state and offshore wind developers regarding expectations for project design, survey activities, and project effects. This direct coordination should occur in the multi-year long period after the leasing stage before a Construction and Operations Plan has been submitted for BOEM review, as well as during the state’s federal consistency review of the COP.
- Tribal Capacity Needs to Support Offshore Wind Engagement
 - In order to participate fully in an ongoing engagement process for offshore wind planning and development, there is a recognized need for increased Tribal staff capacity at multiple phases of an offshore wind development lifecycle.

3.1.4 Supporting Coastal Communities

Offshore wind energy in Oregon presents both opportunities for coastal community benefit and concerns about potential unwanted effects from development. Offshore wind energy development should create opportunities and benefits that build on the existing strengths of coastal communities. Supporting communities means taking the time to understand existing socioeconomic context and to find solutions that do not overtax local resources and that do not tear apart the community culture and economy. It means not pre-supposing that what is good for other communities or state goals is also a benefit for Oregon’s small coastal towns. It means communicating forthrightly about potential impacts as well as benefits and ensuring that coastal communities have the opportunity for autonomy and input on decisions that shape their future. It means recognizing the need to communicate in ways that coastal

communities can have meaningful input and be partners in shaping if and how OSW energy will be incorporated into the existing community fabric.

Through the involvement of the Roadmap Roundtable, focus group conversations with community groups, and comments received during public meetings, several topics were raised. A non-exhaustive list is summarized below.

- Travel Oregon reported that nearly \$950 million in earnings per year come to the Oregon Coast via tourism, with \$200 million per year coming to the south coast. On an average day, the overnight visitor population increases the coastal population by 22 percent more than the number of residents in the area (68 percent of overnight visitors stay in hotels, motels, or short-term rentals)⁸¹. The tourism economy supports 26,500 jobs on the coast, with 8,000 of those jobs coming in the last 20 years. The majority of those jobs are in the accommodation and food service sectors, but tourism also supports arts/entertainment, recreation, retail spaces like groceries and gasoline, and others. The reported revenue represents only the direct dollars from tourism, but there are secondary effects throughout a coastal community's economy tied to tourism.
- Travel Oregon reported that 96 percent of people surveyed who travel to the coast were motivated by the natural beauty of coastal environments, and 97 percent responded that they were highly satisfied with their experience of coastal scenery. This represents the largest attraction for coastal tourism. Concerns were expressed around the potential effects to natural beauty and tourism if turbines were visible or if a turbine experienced failure and had parts wash up on shore.
- The lack of housing availability was raised consistently in communities up and down the coast. For example, the typical housing vacancy in Coos Bay is only 1-3 percent currently, and the pace of new housing development is already lagging far behind the projected need. Housing in turn affects the job market on the coast. For example, multiple communities expressed that they have a difficult time keeping teachers and other essential positions filled because the people in those positions can't find affordable housing. Many people raised concerns not only about what effect an influx of new workers might have on existing residents, but also several related issues that might result, such as:
 - If hotels or other temporary rentals are converted to long-term lodging for workers, those rooms are no longer available to support the tourism industry, which could have ripple effects through the tourism economy.
 - Converted long-term accommodations are not subject to lodging taxes, which can lead to deficits in local government services that rely on the lodging tax base. For example, Coos Bay retains 61 percent of lodging taxes for local community general funds. Lodging taxes are also used to support marketing for tourism, and if this support were to decrease or disappear, a community might suffer a compounded decline in tourism for years to come. Additionally, hotels would incur costs from needing to renovate their facilities after people had lived in them for sustained periods of time.

⁸¹ https://industry.traveloregon.com/wp-content/uploads/2025/05/Oregon_2024_2025-05-01.pdf

- Communities lack the critical infrastructure to support significant housing expansion, including water availability, water and wastewater infrastructure, electricity and grid infrastructure, and available land.
- If new housing is built to accommodate an increased workforce, it is important that it be quality construction that can be used by the community for years to come. Community members expressed concern about the creation of “man camps” like has occurred historically in other boom towns.
- Clear enforceable accountability measures need to be in place in the event that mishaps or unexpected harms result from offshore wind installation activities or from failures of turbines during the full operational life of a project. Community members cited a recent blade failure during installation of a project on the east coast that led to fiberglass and foam blade fragments washing up on local beaches as an example of a situation where a developer should have a firm responsibility to communicate early, clean up messes, and compensate local businesses that might be affected by lost access and economic opportunity that results.
- Some community members expressed interest in the positive community effects that could come from jobs and economic development related to offshore wind, as well as the added resilience from a reliable energy source that does not have to cross the Coast Range on limited transmission lines subject to disruption from events like winter storms or wildfires. Community members expressed concern that offshore wind may not be cost-competitive and could lead to higher local power bills. Several community members also stated that if offshore wind is located off Oregon, the power should land within the state and benefit the coastal grid rather than be routed offshore directly to other states like California where the cost of power is higher and offshore wind may be more competitive.
- In 2024, Coos and Curry counties each passed ballot measures advising county officials that voters want them to oppose offshore wind turbine projects in their areas. The measures were approved by 60 percent and 80 percent, respectively. While local ballot measures can’t be used in state review processes as a basis to object to a project, they signal that community acceptance of offshore wind among voters is low. What is not clear from the results is whether they constitute permanent local opposition and whether community acceptance might change in the future as a result of better information, more inclusive engagement at the community level, or enforceable conditions or agreements that could safeguard community interests and secure benefits from development.
- Community members expressed value toward the continued ecological health of their estuaries, species, habitats, and other natural places in their local vicinity and do not want offshore wind development to irreparably harm these natural environments.
- Ports and fishing represent the heart of many coastal communities and contribute to local economies, culture, and tourism. Adverse effects to the various fishing communities from offshore wind development would have wide-ranging effects on community well-being.
- Community members and organizations in the Coos Bay area reflected that the local history has seen multiple new industries try to come in, including offshore wind, promising economic uplift but failing to communicate and collaborate early to understand the needs, infrastructure constraints, and questions of the community. These past experiences have eroded trust in private industries and government and led to broken relationships within the community whose

effects lasted after the new industry eventually gave up and withdrawn. Community members expressed a desire for thoughtful development, especially concerning housing needs and effects to existing economic drivers, and a meaningful engagement process that brings good information and resources well before it is time to make decisions about leasing or permitting for projects.

3.1.5 Protecting and Maintaining Oregon’s Fisheries Uses

Recreational and commercial fishermen, subsistence fishermen, seafood processors, portside services, and other seafood industry businesses form the heart of many coastal communities. Oregon fisheries also contribute to food security in Oregon and beyond by providing sustainable seafood proteins. The development of offshore wind in Oregon would need to sustain the economy, culture, and character of the Oregon coastal fishing communities, as well as the long-term sustainability of Oregon fisheries.

Fishing and seafood industry jobs are intergenerational jobs that require niche skill sets, with career opportunities that are distinct from energy related jobs. The fishing sector is supported by a number of secondary industries, including wholesalers, processors, markets, refrigerated warehouses, shipbuilding and boat repair establishments, heavy construction industries, and marine transportation services.

Total Oregon marine commercial fishing and seafood processing sales were \$730 million in 2020 supporting 11,651 jobs (excluding Tribal fishing). Total Oregon marine recreational fishing sales were \$59 million in 2020 supporting 569 jobs.⁸²

Fishery -- an activity leading to harvesting of fish; typically a unit defined in terms of people involved, species or type of fish, area, fishing method, gear, class of boats, and/or purpose (NOAA 2005).

Commercial fishing refers to the whole process of catching and marketing fish and shellfish for sale (NOAA 2005).

Recreational fisheries refers to non-commercial activities of fishermen who fish for sport or pleasure, as set out in the MSA definition of recreational fishing, whether retaining (e.g., consuming, sharing) or releasing their catches, as well as the businesses and industries (e.g., the for-hire fleets, bait and tackle businesses, tournaments) which support them (NOAA 2015).

Subsistence fishing – A fishery where the fish caught are shared and consumed directly by the families and kin of the fishers rather than being sold at the next larger market (NOAA 2005).

Figure 12. Fishery Types (source: NMFS, 2024. *Socioeconomic Characterization of West Coast Fisheries in Relation to Offshore Wind Energy Development*)

The West Coast commercial fishery landings in 2021 were 144,000 metric tons, representing \$205 million in revenue. The top three ports—in terms of both commercial landed weight and revenue in 2021—on the West Coast were Westport in Washington, and Astoria and Newport in Oregon (NMFS 2022b).

Additionally, there were an estimated 1.2 million marine recreational anglers on the West Coast in 2018 (the most recent year for which data are available), and nearly two-thirds (71 percent) were coastal residents (NMFS 2023b) (Figures 15 and 16). Approximately 240,000 recreational fishing trips were

⁸² National Marine Fisheries Service. (2023). Fisheries Economics of the United States 2020: Economics and Sociocultural Status and Trends Series. NOAA Technical Memorandum NMFS-F/SPO-236. pp. 52- 53. Accessed at <https://www.fisheries.noaa.gov/resource/document/fisheries-economics-united-states2020-report>; Knoder, E. (April 7, 2023). Oregon’s Commercial Fishing in 2022. Oregon Employment Department. Accessed at <https://www.qualityinfo.org/-/oregon-s-commercial-fishing-in-2022>

recorded off Oregon in 2021. Recreational anglers on the west coast spent at least \$762 million in 2019 on fuel, bait, ice, charter or guide fees, and other spending.

3.1.5.1 Fishing Community Concerns around Offshore Wind Development

Conversations with fishing community members during the development of this Roadmap revealed a number of concerns related to potential future offshore wind projects. One participant summarized:

One of the primary concerns is whether the tradeoff between ocean users who produce sustainable proteins to Oregon and beyond is worth risking ocean health and an as-yet unproven industrial development that could disrupt ocean systems for years to come . . . The state needs to carefully consider the tradeoffs of healthy, sustainable protein (and the state programs it benefits) and renewable energy that can be replaced with other forms of energy. It must be considered holistically.

Other specific concerns include:

- Uncertainty about how the extraction of wind energy from the California Current Large Marine Ecosystem might affect natural upwelling processes and the corresponding primary productivity that supports the marine food web off the Pacific coast
- Direct exclusion of certain types of fishing vessels from wind farm areas. While BOEM has stated that they would not explicitly restrict vessel movement within offshore wind arrays, it is not clear whether the Coast Guard would establish navigational exclusion areas for safety or national security purposes. Fishing community members also expressed concern about the presence of mooring lines and intra-array electrical cables in the water column interfering with mid-water and bottom trawling operations. Others also expressed concern that vessel insurance companies may restrict navigation through offshore wind arrays due to increased risk and liability.
- If offshore wind arrays act as “fish attraction devices” that draw more fish species from unrestricted areas into an array footprint, there is concern about a compound effect on catch efficiency that “hits twice”.
- As offshore areas become restricted for fishing uses, the remaining unrestricted areas may experience a “squeeze” of vessels that could increase conflict and reduce catch efficiency.
- Concern about interference with vessel radar around offshore wind arrays affecting safety at sea and rescue operations.
- Placement of offshore wind arrays within historical stock assessment sampling locations may affect the scientific accuracy of annual quotas for species catch.
- Gear loss or vessel damage from entanglement in offshore wind equipment
- Port space competition with offshore wind installation or maintenance vessels in Oregon ports. This competition could affect both Oregon vessels and transient moorage for visiting fishing fleets.
- Effects to catch efficiency and safety at sea related to the need to transit around offshore wind areas.
- Potential for changes to whale migratory patterns, moving further inshore where an increased potential for interactions with fishing vessels might occur.

- Electromagnetic effects on certain crustacean species at different life stages
- Area exclusion from lower-risk bycatch areas may increase risk of bycatch for certain fisheries that have to move into higher bycatch risk areas.
- Compound effects of offshore wind development and changing ocean conditions (e.g., fish migration, acidification, hypoxia, marine heat waves) on available catch.
- Secondary effects to processing and support economies resulting from reduced catch efficiency or relocation of fishing effort away from restricted areas.
- Several fishing community members emphasized that the BOEM-led spatial planning process that identified the Oregon WEAs did not account for all areas important to fishing, such as spawning grounds for certain species.
- Uncertainty whether impacts to protected species from offshore wind operations would affect or restrict the allowable take for fishing uses (e.g., would it result in a “splitting” of allowable take between industries for species such as the short-tailed albatross under the Endangered Species Act).
- Cumulative or multi-generational effects related to the loss of livelihoods, effects on national food security provided by fisheries, generational effects on the fisheries, etc.

Fishing community members routinely expressed that they did not feel the Bureau of Ocean Energy Management had heeded their recommendations to avoid certain areas important to fisheries uses or the species they rely on (e.g., spawning grounds for Dover Sole within the Coos Bay WEA). They also emphasized that the fishing effort datasets used by BOEM in the siting process did not adequately account for certain types of fishery uses, most notably the recreational fishing fleet.

Furthermore, the lack of a cumulative impact assessment during the leasing phase meant that uncertainties regarding the cumulative effects of species location changes, fishing area squeeze, and regional industry effects were not adequately considered.

In 2025, the Government Accountability Office (GAO) corroborated these findings in its report titled “Offshore Wind Energy: Actions Needed to Address Gaps in Interior’s Oversight of Department”⁸³ The GAO noted gaps in the federal oversight process by BOEM and BSEE, particularly regarding meaningful Tribal consultation, engagement with the fishing industry, community outreach, and regional capacity. Fisheries representatives specifically reported vague incorporation of their input during leasing stages. The GAO recommended that BOEM take steps to ensure that it adequately demonstrates and publicly reports its consideration of fishing industry input.

3.1.6 Create Economic Opportunity and Sustain Existing Economies

Under most alternative future scenarios in the Roadmap, Oregonians would have the opportunity to benefit from the economic opportunities associated with OSW development and generation, including opportunities from manufacturing components and vessels, providing maintenance and operations offshore, portside services, and supporting power and utility operations onshore. To capitalize on these

⁸³ <https://www.gao.gov/products/gao-25-106998>

opportunities responsibly, Oregon should thoughtfully plan for the additional investments in infrastructure, housing, and social services that will be required in Oregon’s coastal communities to support a new OSW energy industry.

[Note for Reviewers: A supply chain focus group is scheduled for October 2025 with the intent to seek additional perspectives on the challenges and benefits of offshore wind economic opportunities. A future revision of the Roadmap will contain more information in this section.]

3.1.7 Develop Oregon’s Offshore Wind Energy Workforce

Achieving Oregon’s clean energy mandates requires a skilled and trained statewide workforce, ready to meet the full spectrum of needs in this rapidly growing sector. This is particularly true in the OSW energy industry, where Oregon workers will potentially be involved in everything from the manufacturing, fabrication, and installation of platforms, turbines, transmission lines, and other components, as well as their repair, maintenance, decommissioning, and replacement.

Along with achieving Oregon’s climate goals, the State has a responsibility to set standards for these historic public investments and ensure the economic benefits are broadly shared across Oregon. This requires a comprehensive plan for developing and supporting the clean energy workforce, including the infrastructure, housing, and social services in Oregon’s coastal communities that this future workforce will require. This step is critical to ensure that the transition to clean energy creates good jobs and lasting community benefits, particularly for Oregon’s most impacted communities.

- An offshore wind workforce would need to be properly trained with apprenticeship opportunities to sustain an ongoing level of opportunity and expertise. This workforce preparation requires years of planning and coordination with local communities, training programs through local and regional education institutions, and a reliable pipeline of work post-training.
- The growth of an offshore wind workforce would require community and social services such as housing, healthcare, childcare, transportation, public safety, and other essential services
- An offshore wind workforce would need to be supported by enforceable project labor agreements that uphold a living wage, equitable hiring practices, and good benefits

3.2 Existing Key State Policies to Address Effects and Capture Benefits

The State of Oregon recognizes the need to address and protect coastal values of land and water, through the Oregon Coastal Management Program. The Program is made up of 41 partners at the county and city level and 11 state agency partners. Each local entity has documents governing how they operate and guiding how they administer land use in their community. Each state agency has chapters of statutes guiding operations and helping them administer state law. These documents include comprehensive plans and land use regulations, state statutes, and statewide planning goals. The following identifies key existing enforceable policies as they relate to offshore wind energy development. Other existing state policies may also be relevant to aspects of offshore wind development, such as energy or labor policy and are referenced here where appropriate.

What are Enforceable Policies?

The Oregon Coastal Management Program (Program) is made up of 40 partners at the county and city level and 11 state agency partners. Each entity has documents governing how they operate and guiding how they administer their authorities. These documents include comprehensive plans and land use regulations, state statutes, and statewide planning goals.

Within the various statutes, goals, plans, and ordinances only certain elements meet the criteria to be used for federal consistency review. These special policies are called enforceable policies. A [legal definition of enforceable policies](#) is available in the federal regulations. Enforceable policies are the parts of the Program that are legally binding and can be enforced. Enforceable policies are used during the federal consistency review process. The federal activity (e.g., offshore lease or federal permit) is compared to the enforceable policies that apply to it. This review determines whether a project is consistent with the enforceable policies of the management program.

Criteria for Crafting Enforceable Policies (15 C.F.R §923.84(b))

- ✓ Must be enforceable under state law.
- ✓ Must include mandatory language.
- ✓ Must contain a clear standard.
- X Cannot discriminate against a particular coastal user or federal agency.
- X Cannot be preempted by federal law.
- X Cannot regulate federal agencies, lands, or waters.
- X Cannot hinder the national interest objectives of the Coastal Zone Management Act.

3.2.1 Meaningful Engagement in State Permitting and Review Processes

Statewide Planning Goals

The foundation of the statewide program for land use planning in Oregon is the 19 Statewide Land Use Planning Goals. The goals express the state's policies on land use and related topics.

Goal 1: Citizen involvement. Citizen involvement is a required part of land use planning in Oregon. This requirement is one of the things that make Oregon's land use planning program unique. The requirement for public participation is written in the first goal of nineteen in the statewide land use planning system. Goal 1 calls for "the opportunity for citizens to be involved in all phases of the planning process." It requires each city and county to have a citizen involvement program that addresses:

1. Opportunities for widespread public involvement
2. Effective two-way communication with the public
3. The ability for the public to be involved in all phases of the planning process
4. Making technical information easy to understand

5. Feedback mechanisms for policymakers to respond to public input, and
6. Adequate financial support for public involvement efforts

There have been changes in population and diversity as well as substantial shifts in public engagement since its 1988 adoption. Goal 1 is not always effectively implemented in fostering meaningful public engagement. Establishing relevant engagement standards that reflect the needs of the citizens of Oregon and the Nine Federally Recognized Tribes of Oregon is important.

Territorial Sea Plan, Parts Four and Five

In both Part Four and Part Five of the Territorial Sea Plan, the Joint Agency Review Team (JART), is in place to facilitate coordination and communication between state agencies and representatives of other affected jurisdictions throughout the pre-application and application process. Oregon Department of State Lands is the convenor of the JART and if a project is associated with a renewable energy facility, such as offshore wind, the JART convened under TSP Part Five shall also serve as the JART for purposes of Part Four coordination. In addition, DSL may convene the JART as necessary for follow-up meetings. Notwithstanding the existing JART process, the components and procedures of the JART could use a review to improve, expand, and clarify aspects of the process. This includes consideration of expanding the JART composition to include all Nine Federally Recognized Tribes in Oregon.

Federal Consistency Regulations and Procedures

The federal regulations governing federal consistency review by states under the Coastal Zone Management Act⁸⁴ require timely public notice of a proposed federal action for areas of the coastal zone likely to be affected by the proposed activity. At the discretion of the State agency, public participation may include one or more public hearings. States are advised to restrict the period of public notice, receipt of comments, hearing proceedings and final decision-making to the minimum time necessary to reasonably inform the public, obtain sufficient comment, and develop a decision on the matter. Beyond these requirements, states have discretion regarding additional public participation measures they undertake before, during, and after a federal consistency review.

3.2.2 Oregon Statewide Planning Goals

The foundation of statewide program for land use planning in Oregon is a set of 19 Statewide Land Use Planning Goals⁸⁵. The goals express the state's policies on land use and related topics, like citizen involvement, housing, and natural resources. Most goals are accompanied by guidelines, which are suggestions about how a goal may be applied. Oregon's statewide goals are achieved through local comprehensive planning. State law requires each city and county to adopt a comprehensive plan and the zoning and land-division ordinances needed to put the plan into effect. Local government jurisdiction is limited to those areas landward of the coastal shore, so Statewide Planning Goal 19: Ocean Resources is implemented under the jurisdiction of the state.

⁸⁴ See 15 CFR 930.42 and 930.61.

⁸⁵ <https://www.oregon.gov/lcd/op/pages/goals.aspx>

Multiple Statewide Planning Goals and their local implementations may play a significant role in the review of offshore wind energy facilities and related shoreside development. The Goals are summarized below. Selected Goals are discussed in further detail where especially relevant to one of the key objective areas of the Roadmap in following subsections.

Goal 2: Land Use Planning. Goal 2 requires each local government in Oregon to have and follow a comprehensive land use plan and implementing regulations. Cities and counties must build their comprehensive plans on a factual base and follow their plan when making decisions on appropriate zoning. City and county plans must be consistent with one another.

Goal 3: Agricultural Lands. Goal 3 protects farmland for continued production of food and fiber.

Goal 4: Forest Lands. Goal 4 protects working forest land around the state, preserving it for commercial forestry while recognizing its value for fish and wildlife habitat, recreation, and protection of air and water quality.

Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces. Goal 5 is a broad statewide planning goal that covers more than a dozen resources. The resources range from wildlife habitat to historic places, and gravel mines. To protect and plan for them, local governments are asked to create a number of inventories.

Goal 6: Air, Water and Land Resources Quality. Goal 6 instructs local governments to consider protection of air, water and land resources from pollution and pollutants when developing comprehensive plans. The pollutants addressed in Goal 6 include solid waste, water waste, noise and thermal pollution, air pollution, and industry-related contaminants.

Goal 7: Areas Subject to Natural Hazards. Goal 7 requires local comprehensive plans to address Oregon's natural hazards. Protecting people and property from natural hazards requires knowledge, planning, coordination, and education. Goal 7 is primarily a process-based goal supported by guidance rather than rules.

Goal 8: Recreational Needs. Goal 8 requires local governments to plan for the recreation needs of their residents and visitors. The goal places priority on non-motorized forms of recreation, and recreation areas that serve high-density populations with limited transportation options and limited financial resources. It also places priority on recreation areas that are free or available at a low cost to the public.

Goal 9: Economic Development. The purpose of Goal 9 planning is to make sure cities and counties have enough land available to realize economic growth and development opportunities.

Goal 10: Housing. Goal 10 planning, at a local level, asks that cities inventory their "buildable lands", this refers to land inside an urban growth boundary that is suitable and available for residential use.

Goal 11: Public Facilities and Services. Goal 11 addresses planning for basic public facilities including water and sewer services, police and fire protection, health services, recreation facilities, energy and communication services, and services provided by the local government like building permitting or public works.

Goal 12: Transportation. Goal 12 requires cities, counties and the state to create a transportation system plan that considers all relevant modes of transportation including mass transit, air, water, rail, highway, bicycle and pedestrian.

Goal 13: Energy Conservation. Goal 13 encourages communities to look within existing urban neighborhoods for areas of potential redevelopment before looking to expand, to "recycle and re-use vacant land." The goal also directs cities and counties to have systems and incentives in place for recycling programs. Goal 13 was not written to govern or direct the production of energy, but rather its conservation.

Goal 16: Estuarine Resources. Goal 16 provides the principal guidance for the planning and management of Oregon's estuaries. The overall objective of Goal 16 is to "to recognize and protect the unique environmental, economic and social values of each estuary and associated wetlands; and to protect, maintain, where appropriate develop, and where appropriate restore the long term environmental, economic and social values, diversity and benefits of Oregon's estuaries".

Goal 17: Coastal Shorelands. Goal 17 outlines planning and management requirements for the lands bordering estuaries as well lands bordering the ocean shore and coastal lakes. In general, the requirements of Goal 17 apply in combination with other planning goals to direct the appropriate use of shoreland areas with a focus on the protection and management of resources unique to shoreland areas.

Goal 18: Beaches and Dunes. Goal 18 focuses on conserving and protecting Oregon's beach and dune resources, and on recognizing and reducing exposure to hazards in this dynamic, sometime quickly changing environment.

Goal 19: Ocean Resources. The Pacific Ocean offers both commercial and recreational opportunity and has a profound impact on Oregon's identity. Goal 19 addresses matters related to open ocean resources and aims "to conserve the long-term values, benefits, and natural resources of the nearshore ocean and the continental shelf."

Geographic Location Description

Because the state obtained a "Geographic Location Description"⁸⁶ in 2015 applicable to offshore renewable energy projects in federal waters, the state may review any federal actions or permits related to offshore wind out to a depth of 500 fathoms. When conducting this federal consistency review under its Coastal Zone Management Act authority, the state is able to apply its enforceable policies to that action, even in federal waters.

Local Regulations

Applicable Statewide Planning Goals are implemented through acknowledged comprehensive plans and land use regulations of local jurisdictions. Elements of these plans and regulations are recognized as state enforceable policies. Any comments or concerns raised by local jurisdictions have been noted and

⁸⁶ <https://www.oregon.gov/lcd/ocmp/pages/where-fc-applies.aspx>

are identified in the gaps and opportunities table in this section or in the full Enforceable Policy Assessment found in the appendices.

3.2.3 State Energy and Climate Objectives

Regulation of Energy Facilities (related or supporting facilities) - ORS 469; OAR 345

The Energy Facility Siting Council reviews applications for large energy facilities by using a set of standards designed to protect natural resources and ensure public health and safety. The siting standards for energy facilities do not apply in the Territorial Sea, including subsea cables associated with the facility, but they would apply to any transmission line on land greater than 230kV longer than ten miles. ORS Chapter 469 focuses on energy conservation programs and energy facilities. It establishes policies to promote the efficient use of energy resources and develop sustainable energy options. The Oregon Coastal Management Program relies on the 1987 edition of ORS chapter 469 and includes policies that have since been replaced or codified.

OAR 345, Energy Facility Siting Standards, outlines the standards for siting energy facilities in Oregon, including requirements for compliance with state statutes and administrative rules. No provisions of OAR chapter 345 are included in the OCMP, but it is identified as a policy gap.

HB 2021 - Oregon 100 Percent Clean Electricity Law

An existing state energy law and program under the Oregon Public Utility Commission's (OPUC) authority that could relate to OSW is Oregon's "100 percent Clean Electricity Law." Oregon HB 2021(2021) established a clean energy program overseen by OPUC and in part by Oregon DEQ. This law requires Oregon's largest investor-owned utilities (Portland General Electric and PacifiCorp), and power suppliers for some large energy users to reduce greenhouse gas emissions associated with the generation of electricity sold in Oregon. Greenhouse gas emissions must be reduced, relative to baseline emissions levels established by ODEQ, by 80 percent by 2030, 90 percent by 2035, and 100 percent by 2040.

The law requires PGE and PacifiCorp to develop Clean Energy Plans, which OPUC must review and acknowledge. These plans are included in their Integrated Resource Plans and contain the following:

- Include annual goals/actions that make progress towards the clean energy targets,
- Examine costs and opportunities of offsetting energy generated from fossil fuels with community-based renewable energy,
- Include an examination of resiliency opportunities based on industry resiliency standards and guidelines established by the OPUC, and
- Result in an affordable, reliable and clean electric system.

3.2.4 Protection of the Environment and Species

The State of Oregon has several strong policies to protect species and habitats offshore, onshore, and within rivers and estuaries. The following policies give the state a broad ability to object to or place

conditions on a project if it has reasonably foreseeable effects to natural and ecological resources inconsistent with the policies. This includes effects to anadromous species like salmon and lamprey, resident and migratory whales, and others, plus effects to their critical habitats offshore and within estuaries.

Goal 16: Estuarine Resources

Goal 16 provides the principal guidance for the planning and management of Oregon's estuaries. To implement this Goal, local governments develop Estuary Management Plans that establish areas designated for development, conservation, or natural uses (i.e., zoning in the water), as well as development restrictions or requirements appropriate to these designations. While not likely to be as significant to the review of an offshore wind facility's Construction and Operation Plan or Army Corps permit, Goal 16 and its local embodiments would likely be instrumental in the review of separate port developments or estuary alterations (e.g., dredging and material placement) associated with offshore wind industry support facilities onshore. For example, modification of the navigation channel would require an exception to Goal 16 that meets the criteria in Statewide Planning Goal 2 and other local estuary plan requirements.

Goal 19: Ocean Resources

Goal 19 is a key enforceable policy for the review of offshore renewable energy activities within the Territorial Sea and in federal waters out to a depth of 500 fathoms consistent with the state's federally-approved Geographic Location Description. Goal 19 addresses matters related to open ocean resources and aims "to conserve the long-term values, benefits, and natural resources of the nearshore ocean and the continental shelf." Key excerpts include:

State and federal agencies shall carry out actions that are reasonably likely to affect ocean resources and uses of the Oregon territorial sea in such a manner as to:

- a. maintain and, where appropriate, restore the long-term benefits derived from renewable marine resources;*
- b. protect:*
 - 1. renewable marine resources— i.e., living marine organisms from adverse effects of development of non-renewable resources, uses of the ocean floor, or other actions;*
 - 2. the biological diversity of marine life and the functional integrity of the marine ecosystem;*
 - 3. important marine habitat, including estuarine habitat [see policy for full list];*
 - 4. areas important to fisheries [see policy for full list]*

Territorial Sea Plan, Parts Four and Five

Regarding undersea cables, TSP Parts Four has the following policy:

An applicant for a project or development action within or affecting the Oregon Territorial Sea shall:

Design and site projects and infrastructure responsibly such that proposed seafloor development actions will maintain and protect to the maximum extent practicable, natural resources,

ecosystem integrity, marine habitat, and areas important to fisheries, navigation, recreation, and aesthetic enjoyment from adverse effects that may be caused by said development actions. For purposes of this section, 'Maintain and protect' requires mitigation, in order of priority [Avoid, Minimize, Rectify, Reduce or eliminate over time, Compensate].

TSP Part Five has numerous policies for renewable energy facilities including the “Special Resources and Use Review Standards” found under Policy B.4.g, which states,

The state shall protect living marine organisms, the biological diversity of marine life, the functional integrity of the marine ecosystem, important marine habitat and associated biological communities by using the following ecological resource protection standards to evaluate marine renewable energy project proposals.

In addition, potential renewable energy facilities, “shall have no significant adverse effect on ecological resources of concern.” The definition of “significant adverse effects” can be derived from the Adverse Effect for Ecological Resource Protection Standards, which means,

degradation in ecosystem function and integrity (including but not limited to direct habitat damage, burial of habitat, habitat erosion, reduction in biological diversity) or degradation of living marine organisms (including but not limited to abundance, individual growth, density, species diversity, species behavior)

Part Five also addresses cumulative effects of potential renewable energy project, analyzing biological, ecological, physical, and socioeconomic effects when evaluating “the shoreland component, in conjunction with effects of any prior phases of the project, past projects, other current projects, and probable future projects.”

Wildlife Policy, ORS 496.012

Oregon Revised Statutes (ORS) 496.012, known as the Wildlife Policy, states, “Wildlife shall be managed to prevent serious depletion of any indigenous species and to provide the optimum recreational and aesthetic benefits for present and future generations of the citizens of this state.”

Fish and Wildlife Habitat Mitigation Policy, OAR 635-415

Oregon Administrative Rule, OAR 635-415, addresses habitat mitigation, including the following provision.

It is the fish and wildlife habitat mitigation policy of the Oregon Department of Fish and Wildlife to require or recommend, depending upon the habitat protection and mitigation opportunities provided by specific statutes, mitigation for losses of fish and wildlife habitat resulting from development actions. Priority for mitigation actions shall be given to habitat for native fish and wildlife species. Mitigation actions for nonnative fish and wildlife species may not adversely affect habitat for native fish and wildlife.

Removal-Fill Policy, ORS 196

Oregon’s removal-fill law, found in ORS 196, protects wetlands and waters by requiring a permit for most projects that add, remove, or move more than 50 cubic yards of material (the threshold is zero for

renewable energy facilities within the Territorial Sea). Some protected areas require permits for activities that add or remove any amount of material. Wetlands and waters provide numerous benefits to people, fish, and wildlife. Impacting these resources affects their health and reduces the benefits they provide.

States Lands, OAR 141

The following policies, found in OAR 141 are used for reviewing effects of a project.

- Rules for granting easements for fiber optic and other cables on state-owned submerged and submersible land within the Territorial Sea, OAR 141-083
- Administrative rules governing the issuance and enforcement of removal-fill authorizations within waters of Oregon, including wetlands, OAR 141-085
- Oregon essential indigenous anadromous salmonid habitat, OAR 141-102
- Authorizing special uses on state-owned land, OAR 141-125
- Rules governing the placement of ocean energy conversion devices on, in or over state-owned land within the Territorial Sea, OAR 141-140

Water Quality, ORS 468b and OAR 340

Policies related to water quality, ORS 468b and OAR 340, can be used for reviewing effects of a project but it also depends on the geographic location of the project work (disturbance and development), such as in the territorial sea, waters of the state, or federal waters and the type of federal permitting nexus (e.g., CWA 404 or other). Applicable policies are the following:

- Prevention of pollution, ORS 468b.020
- Entry of oil into waters of state, ORS 468b.305
- Oil spill contingency plan, ORS 468b.345
- Turbidity, OAR 340-041-0036
- Oil Spills, OAR 340-141
- Ballast Water Management, OAR 340-143

3.2.4.1 Information Requirements and Uncertainty Management

In addition to the protection standards, state policies include comprehensive information requirements to answer key questions and ensure that the effects of a project are reasonably well understood and uncertainties are responsibly managed. Goal 19: Ocean Resources requires an information and effects assessment that, “shall assess the reasonably foreseeable adverse effects of the action as required in the Oregon Territorial Sea Plan. The effects assessment shall also address reasonably foreseeable adverse effects on Oregon’s estuaries and shorelands as required by Statewide Planning Goal 16, Estuarine Resources; Goal 17, Coastal Shorelands; and Goal 18, Beaches and Dunes.”

The Territorial Sea Plan further specifies numerous information requirements, including:

1. Information regarding the development, placement, operation, maintenance, and decommissioning of the project:

2. Location and description of all affected areas
3. Physical and chemical conditions
4. Bathymetry (bottom topography) and Shoreline Topography
5. Geologic structure
6. Biological features, including habitats and species stocks
7. Cultural, economic, and social uses affected by the renewable energy facility
8. Significant historical, cultural or archeological resources.
9. Other data that the regulating agencies determine to be necessary and appropriate to evaluate the effects of the proposed project

In addition to the inventory information listed above, a permit for an offshore wind facility would need to provide a written evaluation of, “all the reasonably foreseeable adverse effects associated with the development, placement, operation, and decommissioning of the proposed renewable energy facility.” This includes effects to:

- 1.) Biological and Ecological Effects:
- 2.) Current Uses
- 3.) Natural and Other Hazards
- 4.) Cumulative Effects, including other past, current, or potential future projects; confounding effects from other existing and future human activities; and regional effects of climate change.

The Territorial Sea Plan further requires the development of an **Adaptive Management Plan** and requires the project developer to use adaptive management and monitoring to evaluate the project at each subsequent phase. The intent of such evaluation is to inform the design, installation and operation of successive phases. The Territorial Sea Plan also requires a **Contingency Plan, Inspection Plan, Monitoring Plan, Decommissioning Plan, and Financial Assurance Plan.**

3.2.4.2 State Ability to Require Sufficient Information

Under the state’s Federal Consistency authority, the state may object to a federal authorization or permit that does not demonstrate consistency with the above information requirements. The state expects that the above requirements in Part Five of the Territorial Sea Plan take effect after site characterization surveys are complete when data are used to develop an energy project proposal (i.e., after a lease area is assessed and before finalization of a COP). Because the state of Oregon has an approved “Geographic Location Description” with the NOAA Office for Coastal Management for marine renewable energy projects, the state’s enforceable policies may be applied to an offshore wind facility permit or lease action out to an ocean depth of 500 fathoms⁸⁷.

Federal Consistency reviews at the permit review stage (approximately 5 years after leasing) may be extended indefinitely until sufficient information to establish consistency is obtained, or the state may object based on insufficient information to establish coastal effects and/or consistency with a policy standard that relies on the information.

The Federal Consistency regulations in 15 CFR 930.58 state:

⁸⁷ <https://www.oregon.gov/lcd/ocmp/pages/where-fc-applies.aspx>

(c) A State agency objection may be based upon a determination that the applicant has failed, following a written State agency request, to supply the information required pursuant to § 930.58 or other information necessary for the State agency to determine consistency. If the State agency objects on the grounds of insufficient information, the objection shall describe the nature of the information requested and the necessity of having such information to determine the consistency of the activity with the management program.

A notable recent example of a state federal consistency objection based on insufficient information was the proposed Jordan Cove Liquid Natural Gas Export facility in Coos Bay. The state's objection was appealed to the US Secretary of Commerce, who upheld the state's objection on the basis that the applicant had failed to provide sufficient information to establish coastal effects relative to the state enforceable policies or the national interest.

The Federal Consistency provisions are a powerful tool to obtain the necessary information to make responsible decisions, either prior to a permit decision or after a decision through monitoring and adaptive management. The most efficient way to protect state interests and meet information needs without project delays is for developers to learn about Oregon inventory and policy requirements before conducting surveys and site assessment activities. In the 2024 BOEM leasing federal consistency review, the state was able to secure multiple conditions to include state agency staff early in the information collection process, to enhance developers' understanding of the information needs the state will have during its federal consistency review of a Construction and Operations Plan, years after a lease is issued.

One area of concern has been the question of how much information must be known before leasing may proceed. In the state's 2024 federal consistency decision for offshore wind leasing, it was reasoned that the issuance and exploration of a lease is an action that may be taken wholly at the risk of the project developer, with no guarantee that a lease will result in approval of a project application in a later review. It is at BOEM's discretion whether to offer an exclusive right, via a lease, to conduct survey activities for site characterization and site assessment, as it is within the voluntary discretion of project developers to bid on lease offerings at the risk that a project may never materialize or may ultimately be found inconsistent with state enforceable policies. Therefore, the state found that the scope of the effects of a full offshore wind project is not "locked in" by the issuance of a lease.

The state does not view the issuance of Outer Continental Shelf leases to initiate an irreversible use of ocean resources because the state will have a future opportunity to conduct federal consistency review of a project proposal within the lease areas, and OCS leases may be canceled in the event they fail to progress (e.g., Wind Float Pacific, discussed previously). While development of an offshore wind project may be a foreseeable outcome of the leasing decision, it is also a reasonably likely outcome that a development will not be completed, and the leases issued as a result of this action would be cancelled. Because either outcome is foreseeable and would depend on the result of a future review decision by the state, the state decided that allowing leases to proceed at the developer's risk, absent full knowledge of an offshore wind project at the time of leasing, was consistent with enforceable policies.

While the state may determine that the unresolved uncertainties at the leasing stage may be deferred until permitting, and concur it is consistent with enforceable policies for leasing to proceed at risk to developers, Section 5 of the Roadmap process has identified some potential options for action that may

be taken during the coming years, while leasing is not expected to occur based on recent federal policy shifts, that may address the desire to have greater knowledge prior to leasing. These actions may include: 1) creation of a **Research Agenda** specific to Oregon; 2) the convening of a **State/Regional Science Collaborative** that brings together different perspectives, including Tribes, to review and attempt to obtain consensus around the state of knowledge around offshore wind; and pursuit of a **cumulative assessment**, separate from a formal Programmatic Environmental Impact Statement under the National Environmental Policy Act, that would focus on identifying potential systemic effects from offshore wind development and identify a “carrying capacity” for the upper limit of development. Key questions remain as to how these efforts would be funded and resourced if recommended in the Roadmap.

3.2.5 Protection of Archaeological and Cultural Resources and Other Interests of Tribes

The excavation, destruction, or alteration of any known archaeological site or collection of archaeological objects located on public or private land without the issuance of a state archaeological permit is prohibited (ORS 358.920 and ORS 390.235). Destruction or damage to any human burial site, human remains, or Native American sacred or special objects associated with those burial sites is also prohibited (ORS 97.745). Note that there may be criminal penalties for violating these laws.

Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces.

Regarding the protection of culturally significant areas, Goal 5 requires the inventorying of “cultural areas”, and the rules in OAR 660 Division 23 (Procedures and Requirements for Complying with Goal 5) require local governments to cities and counties to follow procedural steps and standards prescribed in rule when develop programs to protect Goal 5 resource categories. A rule specific to cultural areas is expected to be added to Division 23 in 2026. When filed, the rules in OAR 660 Division 23 (Procedures and Requirements for Complying with Goal 5) require local governments to provide notice to Tribes for ground disturbing and other applications and require cities and counties to follow procedural steps and standards prescribed in rule when asked to add a culturally specific landscape features to a local Goal 5 inventory. Under this new rule, Cultural Areas are defined as, “*archaeological sites, landscape features of cultural interest, and sites where both are present. Also referred to as “cultural resource site.”*” A “Potentially Significant Cultural Landscape Feature is defined as, “*a landscape feature that is: integral to a tribe’s history, legends, traditions, and stories; traditionally used for wayfinding; traditionally used for gathering first foods and materials; integral to ongoing tribal cultural practices; traditional trails; . . .*” These definitions and the associated rules would provide a means to consider and adopt protection measures for landscape areas of cultural significance.

Local Regulations

Statewide Planning Goal 5 is implemented through acknowledged comprehensive plans and other land use regulations in local coastal communities. Some deficiencies or opportunities for improvement have been identified in the gaps and opportunities table in this section or the full Enforceable Policy Assessment found in the appendices.

Policy 18 within the Coos County Estuary Management Plan is an example of an enforceable policy that is used to protect cultural resources. Policy 18 requires that, “Local government shall provide protection to historical, cultural and archaeological sites and shall continue to refrain from widespread dissemination of site-specific information about identified archaeological sites.” This policy is accomplished by reviewing all development proposals involving a cultural, archaeological, or historical site to determine whether the project, as proposed, would protect the cultural, archaeological, and historical values of the site. Tribes have the right to submit a written statement to the local government within 30 days of receipt of a notification about a project in a cultural site, “stating whether the project as proposed would protect the cultural, historical, and archaeological values of the site or, if not, whether the project could be modified by appropriate measures to protect those values.”

Indian Graves and Protected Objects, ORS 97

The State of Oregon protects archaeological resources within state jurisdiction via ORS 97, which includes the following:

- Recognition of duties relating to the disturbance of Native American cairns or burials
- Complement to the Native American Graves Protection and Repatriation Act (NAGPRA) by increasing visibility regarding requirements on state and private lands
- Documentation of process for notification of Tribes, State Historic Preservation Officer, Commission on Indian Services, and Oregon State Police in the event of discovery of human remains

Public Records Conditionally Exempt from Disclosure, ORS 192.345

- Establishing responsibilities of applicants regarding the disposition of potentially sensitive information.

Archaeological Objects and Sites, ORS 358

- Documents the state of Oregon’s policy and responsibilities in the protection of cultural and archaeological resources
- Provides further detail on the applicability and intent of ORS 390.235
- Establishes procedures for notification following discovery of sacred objects
- Documents requirement to coordinate with Tribes as condition of archaeological permit

Archaeological Permits, OAR 736-051

- Provides administrative basis for permits required under ORS 390.235
- Clarifies requirements and thresholds for archaeological permits on private versus public lands

In the context of offshore wind, the state would apply archaeological protection policies for both offshore turbines, cables, and any onshore support facilities or port development projects that may be subject to separate review.

3.2.5.1 Protection of Tribal Subsistence and Commercial Fishing

To protect the interests and optimal use of the ocean for food fish harvest, the state has a combination of protection policies and coordination agreements. Section 3.2.7 has more information on these policies.

3.2.5.2 Effects on Culturally Significant Views

The state Territorial Sea Plan identifies high value visual resources and includes strong protection policies that would be applicable to offshore wind; however, these policies do not explicitly mention culturally significant views to Tribes or establish separate criteria that would guide decisions affecting these views. While specific viewing locations of cultural significance to Tribes are not explicitly included in the Territorial Sea Plan, it is expected that many of the viewpoints inventoried by the state in the highest quality (Class 1) would be similar to or overlap with some if not all of sites of historical or cultural importance to Tribes.

The viewshed classes designated in state policies were mapped using an approximate device height based on wave energy devices, which are significantly shorter than floating offshore wind infrastructure (9 ft high vs. ~500 ft high at a turbine hub). BOEM provided visual simulations of hypothetical wind arrays for the Coos Bay Wind Energy Area (WEA) 32 miles offshore and Brookings WEA 18 miles offshore⁸⁸, which indicated that turbines would be visible at certain times of day in clear conditions. The simulations also showed that the aircraft lighting from turbine hubs may be visible at night. Additionally, a DLCD staff GIS exercise conducted in support of the Roadmap effort estimated that if the viewshed classification areas were to be expanded consistent with taller offshore wind structures, the viable areas in federal waters off Oregon for offshore wind could be prohibitively impactful to the viewsheds and not consistent with the state visual resource policies. As a result, under this premise, offshore wind energy would not be allowed purely for visual purposes only. It is not clear whether that was the intent of the existing visual resource policies.

⁸⁸ link to timelapse videos of large-scale offshore wind development in the two Oregon WEAs:
<https://www.boem.gov/renewable-energy/state-activities/oregon-offshore-wind-visual-simulation>

- i. Class I: The objective of this class is to preserve the existing character of the seascape. This class provides for natural ecological changes; however, it does not preclude very limited development activity. The level of change to the characteristic seascape must be very low and may not attract attention.
- ii. Class II: The objective of this class is to retain the existing character of the seascape. The level of change to the characteristic seascape must be low. Development activities may be seen, and may attract minimal attention, but may not dominate the view of the casual observer.
- iii. Class III: The objective of this class is to partially retain the existing character of the seascape. The level of change to the characteristic seascape may be moderate. Development activities may be seen, and may attract attention but may not dominate the view of the casual observer.
- iv. Class IV: The objective of this class is to provide for development activities which require major modifications of the existing character of the seascape. The level of change to the characteristic seascape can be high. These development activities may dominate the view and be the major focus of viewer attention. However, every attempt shall be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Figure 13. Visual Resource Protection Standards in Territorial Sea Plan Part Five

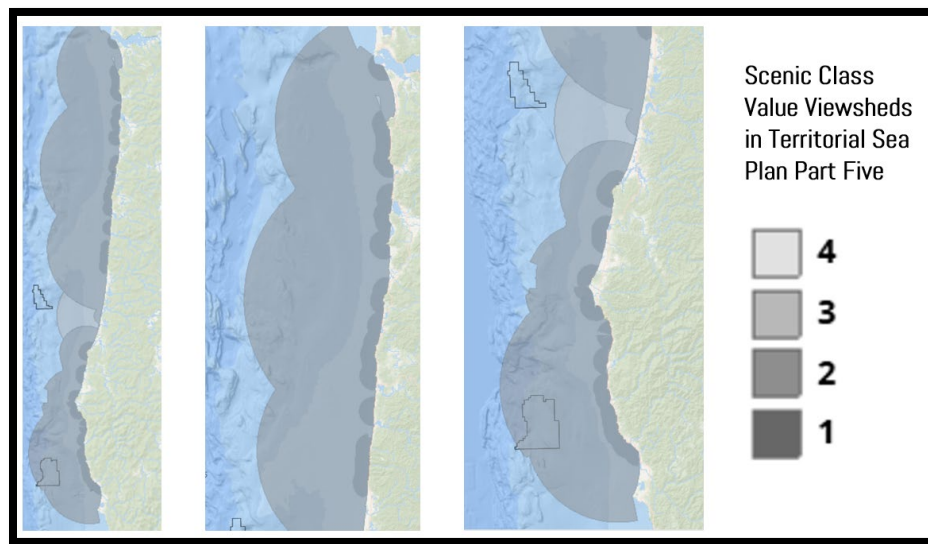


Figure 14. Current Designated Viewshed Classes in TSP Part Five (based on an assumed wave energy device 3 meters tall)

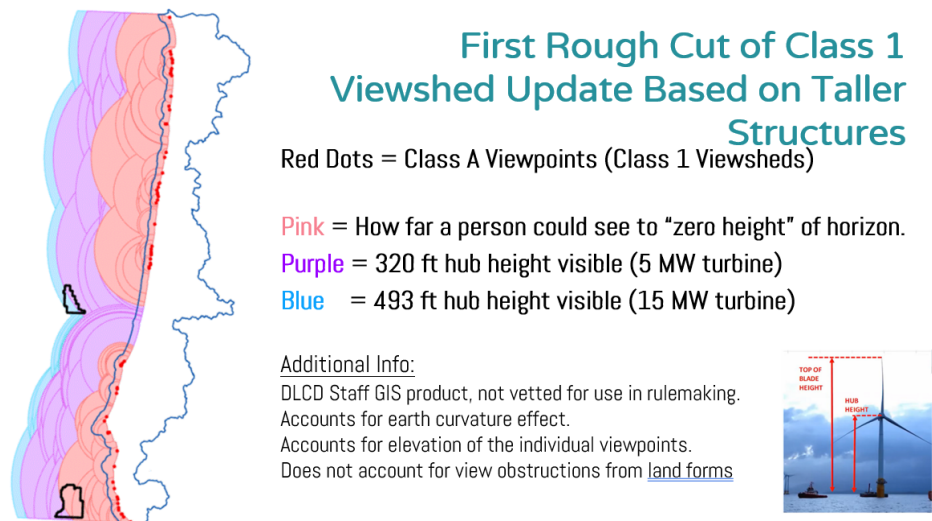


Figure 15. DLCD Staff Estimate of Projected Viewshed Classes Considering Offshore Wind Height

Contrast Criteria

(To be considered by the Joint Agency Review Team during project review to determine level of visual impact)

- Distance from viewpoint
- Angle of observation
- Length of time project is in view
- Relative size or scale
- Season of use
- Light conditions
- Spatial Relationships
- Atmospheric conditions
- Motion, lights, and color
- Associated shore-based facilities

Figure 16. Contrast Criteria in the TSP to determine whether visual impact meets the standards for viewshed classes.

3.2.5.3 Protection of Natural Resources as Cultural Resources

The State of Oregon recognizes the need to protect natural resources for their many values, including intrinsic, economic, recreational, aesthetic, spiritual, and cultural values. The state also recognizes that natural resources are cultural resources to Tribes. Natural resources may include species, habitats, or other environments of natural value, including natural resources of cultural significance that are not harvested for human uses by Oregon Tribes (e.g., whales).

The state already has several strong policies to protect species and habitats offshore, onshore, and within rivers and estuaries. See Section 3.2.4 for a more detailed discussion.

3.2.6 Support Coastal and Regional Communities

Local Regulations Implementing the Statewide Planning Goals

The Oregon Coastal Management Program consists of a network of partners with authority in the coastal zone. There are 7 oceanfront counties and 33 cities in the Coastal Zone, and all are coastal program partners. The applicable Statewide Planning Goals are implemented through acknowledged comprehensive plans, estuary plans, and other land use regulations of these jurisdictions and are elements of the coastal program recognized by NOAA as state enforceable policies. Local jurisdiction does not apply in the ocean and would only be applicable to land-side aspects of OSW development such as shoreside support facilities, cable landing sites, and onshore transmission. Policies related to offshore visual resource standards are within state jurisdiction under Goal 19 and the Oregon Territorial Sea Plan, but local jurisdictions may include policies addressing the visual standards for landside development or activities.

Many of the local regulations, too many to identify here, are enforceable policies. Some deficiencies have been noted and are identified in the gaps and opportunities table in this section or in the full Enforceable Policy Assessment found in the appendices.

Ocean Shores, ORS 390

Oregon Revised Statutes 390.235, under the authority of Oregon Parks and Recreation Department, is a policy protecting archaeological sites that restricts excavation or alteration of an archaeological site on public lands without first obtaining a state-issued permit by OPRD.

3.2.7 State Fisheries Protection Standards and Policies

To protect the interests and optimal use of the ocean for food fish harvest, the state has a combination of protection policies and coordination agreements. Any OSW development needs to be consistent with Oregon policies for protecting areas important to commercial, cultural, and recreational fisheries and for food fish species management goals. Any potential impacts to fishing should also consider impacts to secondary and support industries, such as seafood processing and commercial fishing suppliers.

Territorial Sea Plan Part Five contains Fisheries Use Protection Policies in its implementation of Statewide Planning Goal 19: Ocean Resources. These fishery protection policies include a general fisheries use protection standard and additional standards specific to geographically identified areas within the state's territorial sea boundary. The area-specific standards would not be applicable in federal waters as currently written. Generally speaking, the state would expect to apply the General Fisheries Use Protection Standard for an offshore wind project in federal waters.

Fisheries Use Protection Standards The regulating agencies shall protect areas important to fisheries using the following use protection standards to evaluate the impact an individual renewable energy facility would have on fisheries use

(b) General Fisheries Use Protection Standard

The following standards must be considered in determining the possible adverse effects a renewable energy facility might have on fisheries use, and are applicable to applications in all resource and use areas unless otherwise designated by the plan:

- i. Minimize the displacement of fishers from traditional fishing areas, and the related impact on the travel distance and routing required to fish in alternative areas;

- ii. Minimize the compaction of fishing effort caused by the reduction in the areas normally accessible to fishers;
- iii. Minimize the economic impact resulting from the reduction in area available for commercial and recreational fishing for the effected sectors and ports.
- iv. Mitigate possible hazards to navigation and provide practicable opportunities for vessel transit, at the project location.
- v. Limit the number and size of projects that are located in an area to minimize the impact on a particular port or sector of the fishing industry. Consider the distribution of projects and their cumulative effects based on the criteria listed in (i) through (iv).

The geographically specific “Area Designation Fisheries Use Protection Standards” apply within state waters in certain locations and place additional requirements on projects. Most notably, projects in conservation areas are presumptively excluded unless, *“To overcome the presumptive exclusion, an applicant must demonstrate and the regulating agency must concur that the project will have no reasonably foreseeable adverse effect on areas important to fisheries and there is no practicable alternative site.”*

In addition to the Territorial Sea Plan and Goal 19, the state may also use **ORS 506.109: Food Fish Management Policy**, during the review of offshore wind projects. This policy is broad in scope and establishes that, “food fish shall be managed to provide the optimum economic, commercial, recreational and aesthetic benefits for present and future generations of the citizens of this state.” The policy includes additional specific management goals such as:

- (1) To maintain all species of food fish at optimum levels in all suitable waters of the state and prevent the extinction of any indigenous species.
- (2) To develop and manage the lands and waters of this state in a manner that will optimize the production, utilization and public enjoyment of food fish.
- (3) To permit an optimum and equitable utilization of available food fish.
- (4) To develop and maintain access to the lands and waters of the state and the food fish resources thereon.
- (5) To regulate food fish populations and the utilization and public enjoyment of food fish in a manner that is compatible with other uses of the lands and waters of the state and provides optimum commercial and public recreational benefits.
- (6) To preserve the economic contribution of the sports and commercial fishing industries in a manner consistent with sound food fish management practices.
- (7) To develop and implement a program for optimizing the return of Oregon food fish for Oregon’s recreational and commercial fisheries.

3.2.7.1 Conditions on State Concurrence

Through its Federal Consistency review authority, the state has the ability to require a federal agency to place conditions on the issuance of an authorization or permit as a way to bring a proposed project that would otherwise be inconsistent with a state enforceable policy into consistency, such that the state would not formally object to the project. This “yes if” outcome of the state’s review provides the opportunity to work with developers and federal agencies on behalf of affected users of coastal

resources, such as the fishing community, to avoid, reduce, or mitigate potential adverse effects from the project.

In the case of fishing interests, potential conditions for the state to explore may include the following, in coordination with fishing communities, depending on the specific details of any future offshore wind project proposals.

- Establishing transit corridors through offshore wind arrays to support safety at sea and catch effort efficiency;
- Setting maximum areal size or configuration for any given offshore wind array to minimize effects to species, habitats, or at-sea vessel operations;
- Establish and maintain 24-hr hotlines or other communication methods for fishing vessels to report problems or lost gear;
- Other measures identified by fishing communities or other ocean users during project review.
- Requiring independent monitors of species take from offshore wind at-sea operations, gear entanglement detection and reporting, and other data transparency and reporting measures.

3.2.7.2 Use of Fisheries Agreements

The Territorial Sea Plan Part Five includes a section focused on agreements with traditional ocean users. The requirement states:

Agreements: Applicants shall communicate with traditional ocean users and stakeholders with an interest in the area of the proposed project to address issues of concern. Applicants are encouraged to memorialize agreements with those ocean users and stakeholders on specific actions, including conducting the adaptive management and monitoring plan, that the applicant is required to perform.

Policies of the Department of State Lands similarly require coordination with ocean users for actions taking place on state submerged lands:

The Department of State Lands rule on Pre-Application Requirements, OAR 141-140-0040, provides: "Before submitting an application to the Department, a person wanting to install, construct, operate, maintain or remove ocean energy monitoring equipment or an ocean energy conversion facility for a research project, demonstration project or commercial operation shall meet with: "(a) Department staff to discuss the proposed project; and "(b) Affected ocean users and other government agencies having jurisdiction in the Territorial Sea to discuss possible use conflicts, impacts on habitat, and other issues related to the proposed use of an authorized area for the installation, construction, operation, maintenance or removal of ocean energy monitoring equipment or an ocean energy facility."

These policies do not allow the state to strictly require the existence of an agreement between affected ocean users and developers, but absent an agreement the state may be in a position to find that there is not sufficient evidence to determine whether the fisheries protection policies in the Territorial Sea Plan and Goal 19 have been satisfied.

One recent example of a fisheries agreement comes from the PacWave wave energy testing facility operated by Oregon State University. The University negotiated an agreement with representatives of the local fishing industry to address lost gear or other damages that may result from interactions with the project. This agreement was submitted to the state as evidence of coordination and resolution of key potential conflicts. Oregon also has a long history of agreements between cable operators and the fishing industry through the Oregon Fisherman Cable Committee. Although limited to cables, these agreements have a long successful history since 1998 and satisfy the DSL requirements. The state would highly encourage developers to seek similar agreements with multiple fishing communities as part of any future project review.

3.2.7.3 Fisheries Compensatory Agreements

As has been the case in east coast states that consented to offshore wind projects, as well as the 7C Fisheries Working Group currently underway in California⁸⁹, it is expected that the state of Oregon may use its Goal 19/TSP fisheries protection policies as a legal basis to require compensatory agreements (i.e., financial compensation or other mitigation measures) between affected fisheries users and developers, as “evidence” that the project would not result in unmitigated effects to the fishing users that would be inconsistent with fisheries protection policies. Oregon has never had occasion to require compensatory agreements of this nature but is learning from examples in other states and would expect to follow best practices in the negotiation and evaluation of such agreements.

Fishing communities have clearly expressed that they are not interested in being “bought out” of a multi-generational way of life. Effects to secondary industries such as seafood processing are also likely not suitable for compensation because of the millions of dollars invested over many years to establish the infrastructure, improvements, and markets of their current business structure. It is also important to incorporate the concept that projects with generational impact should have generational oversight and benefit.

Economic Opportunity and Sustainment

Enforceable policies related to creation of new economic opportunities and sustainment of existing economies include local embodiments of the Statewide Planning Goals and policies within the Oregon Territorial Sea Plan related to protection of fisheries uses, recreation, visual resources, and agreements with existing ocean users. The labor provisions in HB 4080 also relate to creation of new economic opportunities by establishing standards for a future workforce serving the offshore wind industry and related construction activities. No other relevant policies have been identified.

3.2.8 Offshore Wind Workforce

The labor provisions in HB 4080 relate to creation of new economic opportunities by establishing standards for a future workforce serving the offshore wind industry and related construction activities. No other relevant policies have been identified. While these standards are not currently enforceable

⁸⁹ <https://www.californiafishermensresiliencyassociation.com/7c-fishermen-s-working-group>

policies of the state coastal program, the gaps and recommendations table and recommended actions in Section 5 provide further detail on methods to implement the HB 4080 provisions in the state.

[Note for Reviewers: Work on options to strengthen the enforceability of the HB 4080 provisions is still underway.]

3.3 Identified Policy Gaps and Opportunities

The policy assessment was structured around a compilation of effects to coastal resources and uses, reasonably anticipated or uncertain, but possible to evaluate as part of a future offshore energy project and related onshore components. Local and state regulations and policies were considered during the assessment. The organization of the assessment, effects and gaps, are based on the key topical areas identified in HB 4080.

Through evaluation of the potential effects of offshore wind development to coastal uses and resources, strengths and opportunities were recognized. This assessment identified many strengths in Oregon’s suite of enforceable policies, which are discussed in the previous section. However, through the process, gaps and opportunities for improvement were identified. Once the potential effects to coastal uses and resources were understood, the assessment looked at corresponding enforceable policies or potential enforceable policies, the strongest or most applicable excerpt of that policy, and gaps and opportunities (included together are gaps, needs, wish list policies, and areas to strengthen). There are many policies at the state and local level that were discussed, but DLCD asked local planning staff to take a broad view of what it would mean to their community. From these discussions, a variety of angles were considered, not all being tied to an enforceable policy but could be captured another way (e.g., community benefit agreement). Some of these concerns and comments have been grouped under the most closely related effect, gap or opportunity.

The full Enforceable Policy Assessment may be found in [Appendix X](#) of the Roadmap [\[under development\]](#). A summary of the potential policy gaps is found in the following table, which also identifies related policies or notes associated with that gap. Several effects and their gaps overlap key topical areas, which is also indicated in this table).

Table: Potential Policy Gaps

Potential Gap	Related Policies and Notes	Roadmap Objective Area
Consider ways to reflect the needs of the citizens of Oregon and the Nine Federally Recognized Tribes of Oregon that could provide more meaningful standards of engagement.	Statewide Planning Goal 1	Meaningful Engagement Tribal Interests
To ensure the incorporation of tribal communication, consider enhancing the Joint Agency Review Team (JART) composition to include all Nine Federally Recognized Tribes in Oregon. In addition, the JART components and procedures found in Territorial Sea Plan Parts Four and Five should be improved, expanded, and clarified (e.g., timing, number of meetings, etc.).	Territorial Sea Plan Parts Four and Five	Meaningful Engagement Tribal Interests
Consider establishing policies around Community Benefit Agreement or similar agreements. This may include developing a definition of "Community Benefit" and providing an overarching state policy with standards to be used in a collaboratively developed community-specific agreement. Other considerations may include establishing a standard set of agreements to incorporate in a community-specific contract; standards that ensure that net benefits outweigh costs to affected communities; non-monetary values and benefits are included; and voluntary or with cost and time values included. These policies, if successful, may provide the legal basis for an enforceable community benefit agreement being a requirement for federal consistency review of an offshore wind project Construction and Operations Plan or potentially a shoreside port infrastructure improvement.	House Bills 2021 and 4080 Local plans and codes Others TBD OAR 660-023 ⁹⁰ , Oregon's new solar siting rules found in OAR 660-023 contain requirements for community benefits and could be a model on which to establish a similar net community benefit policy for offshore renewable energy.	Support Communities Economic Opportunity Workforce Energy
Statewide Goal 7, Hazards, requires certain actions; it is primarily a process-based goal supported by guidance rather than rules. Carefully constructed rules could improve Goal 7 implementation, offshore, at the shore, and on land.	Statewide Planning Goal 7 Local plans and codes	Support Communities
Viewshed protections touch all coastal communities. Local jurisdictions have authority to establish visual effect policies for shoreside development, while visual effect policies for development in the ocean are within the jurisdiction of the state. Territorial Sea Plan Part Five identifies high value visual resources and includes strong protection policies that would be applicable to offshore wind; however, these policies were originally designed around lower height wave energy facilities. The policies also do not explicitly mention culturally significant views to Tribes or establish separate criteria that would guide decisions affecting these views. Part of this review may look at establishing locations where visual impacts are minimized; identify design standards that minimize visual impacts on scenic resources; or establish a total viewscape impact	Statewide Planning Goals 5 and 19 Territorial Sea Plan Part Five Local plans and codes	Support Communities Tribal Interests

⁹⁰ https://www.oregon.gov/lcd/LAR/Documents/20250213_660-023.pdf

Potential Gap	Related Policies and Notes	Roadmap Objective Area
limit. Lastly, engage local government to identify regional viewsheds of the ocean valued by coastal communities.		
Add ODAV regulations that address hazards to aviation standards to the enforceable policies of the coastal management program for use in federal consistency review. Also add HB 2375 (2025), regarding offshore wind component lighting requirements.	Refer to programs implemented in New Jersey and Texas	Support Communities
Consider amending the recreational resource protection standards in Territorial Sea Plan Part Five to make them more generally applicable in an offshore wind scenario located in federal waters. The inventory of recreational uses in Part Five is based on a map of the Territorial Sea. Ensure the standards cover effects to state recreational uses in federal waters or onshore resulting from an offshore wind project.	Statewide Planning Goal 19 Territorial Sea Plan Part Five	Support Communities
Applicability of the fisheries use standards in the Territorial Sea Plan Part Five to offshore wind development in federal waters should be considered. This may include amending the area-specific fishery use protection standards to make them broadly applicable to types of environments rather than specific geographical areas. This includes the standard of presumptive exclusion unless the project proponent can demonstrate no significant adverse effect on areas important to fisheries and that there be no practicable alternative site.	Territorial Sea Plan Part Five ORS 506	Support Communities
Establish guidance to ensure fishing (commercial and recreational) and benthic environment impacts are avoided or minimized. This may include the following: locations where fishing impacts are minimized; reduced size of project footprint; designs to maximize existing access to fisheries or improve habitat; schedules for when installation and maintenance can occur; suggested changes to transit due to closed areas; changes in fishing effort/distribution due to space use and species distribution; deployment limits in popular fishing areas; fishing exclusion zones around equipment to minimize gear entanglement; or minimize interactions of moorings and equipment such as biofouling, perching, and haul-out.	Statewide Planning Goal 19 Territorial Sea Plan Parts Four and Five ORS 196, 273, 274, 496 and 506 OAR 141 Refer to programs implemented in New Jersey and Texas	Support Communities Environment

Potential Gap	Related Policies and Notes	Roadmap Objective Area
Explore establishing protective standards for facilities (harbor/port) serving the commercial fishing and recreational boating industries. Generally, assess the distribution of different fishing efforts (commercial and recreational) to evaluate needed changes to transit due to closed areas, potential moorage space conflicts with offshore wind vessels, and changes in fishing effort/ distribution due to space use and species distribution.	Local plans and codes Refer to California Coastal Act Section 39234	Support Communities
Explore ways in which the Food Fish Policy (ORS 506.109) may be strengthened to have clearer enforceable language for use as an enforceable policy for protection of fisheries uses.	ORS 506 Refer to programs implemented in Rhode Island (see 650-RICR-20-05-11.10.1(C))	Support Communities Economic Opportunity
Assess the use of existing state fisheries protection policies for tribal community impacts and amend as necessary to explicitly consider Tribal fishing uses in addition to commercial and recreational fishing.		Tribal Interests Support Communities Environment
Explore establishing through legislation a cap on the total capacity of offshore wind development (expressed in GW of nameplate generation capacity) as an early development step. The proposed cap on development would give the seafood sector some measure of confidence and certainty that they will be able to fish specific areas of the ocean for a decade or more. A legislative cap could be accompanied by clear criteria for further expansion based on information obtained from a pilot array and the development experience of California.		Support Communities
For a long time, the intention has been to update the state's suite of enforceable policies for federal consistency to include current energy facility regulations found in ORS 469 and add energy facility siting standards found in OAR 345. Since these regulations could be used with onshore components (e.g., transmission upgrades), this should be prioritized. ORS 757 is another consideration to add to the suite of enforceable policies, which require utilities to develop wildfire protection plans. The following are some sections from OAR 345 for consideration: * Threatened and Endangered Species, 345-022-0070 * Scenic Resources, 345-022-0080 * Historic, Cultural and Archaeological Resource, 345-022-0090 * Recreation, 345-022-0100 * Waste Minimization, 345-022-0120 * Wildfire Prevention and Risk Mitigation, 345-022-0116 * Need Standard for Non-generating Facilities, 345-023-0005 * Least-Cost Plan Rule, 345-023-0020	ORS 469 and 757 OAR 345	Support Communities Economic Opportunity Workforce Tribal Interests Environment

Potential Gap	Related Policies and Notes	Roadmap Objective Area
In Territorial Sea Plan Part Five, explore the potential of making memorialized agreements with affected ocean users a requirement rather than an encouraged action.	Territorial Sea Plan Part Five	Support Communities
Strengthen the enforceability of the labor standards in HB 4080 for use in federal consistency review or other enforceable state review mechanisms.	House Bill 4080 DLCD working with third-party legal consultants and labor member legal experts on recommendations.	Economic Opportunity Workforce
Through intentional Tribal consultation with the Nine Federally Recognized Tribes of Oregon, consider amending existing policy (e.g., Goal 19 and TSP Part Five Policies B.4.g.2-5) with a clear definition of "cultural resources" and include protection or avoidance guidelines. Also consider protection of cultural practices and culturally significant sites (e.g., harvesting sites) that may not be protected, in addition to defining "sensitive ecological resources" or similar terminology that is interpreted clearly through and reflective of Tribal worldviews (the concept of natural resources as cultural resources). Consider establishing a probability map or site inventory of local Tribal cultural resources as part of a spatial planning process, which could inform planning decisions about places to avoid in future leasing. Alternatively, the Territorial Sea Plan and the state rules for Goal 5 should be revised to require (or direct local governments to require in the case of Goal 5) marine energy development proponents to commission a cultural resource inventory as part of the required information for land use decisions or seafloor leasing.	Statewide Planning Goal 19 Territorial Sea Plan Part Five	Tribal Interests
Add recent rulemaking in OAR 660-023-210, Cultural Areas, to the coastal program's suite of enforceable policies and any local embodiments. The new rules also include OAR 660-023-0195(6), which may be adaptable for onshore components of an offshore energy project.	Statewide Planning Goal 5 OAR 660 Local plans and codes	Tribal Interests Support Communities
Current state laws do not protect cultural resources from disclosure in the same manner that archaeological resources are protected under ORS 192.345. Seek legislative action to amend state statutes and rules to exclude cultural resource areas from public disclosure when necessary.	ORS 192	Tribal Interests
Amend the information requirements in Territorial Sea Plan to specifically require applicants to seek traditional ecological knowledge via consultation and include traditional ecological knowledge for areas potentially affected by an offshore wind project.	Territorial Sea Plan Parts Four and Five	Tribal Interests

Potential Gap	Related Policies and Notes	Roadmap Objective Area
In the Territorial Sea Plan, the Ecological Resources Protection Standards contain vague fish, wildlife and habitat references that may need clarification. These references include, but are not limited to, the following: * Specific inclusion of seabirds and migratory species * Seasonal/migratory timing considerations * Specific benthic habitats (e.g. coral habitat, methane seep sites) to avoid * Acoustic impact considerations * Other adverse ecological impacts on marine resources	Statewide Planning Goal 19 Territorial Sea Plan Parts Three, Four and Five ORS 496 and 506 OAR 141 and 635 Refer to programs implemented in New Jersey, Texas and North Carolina	Environment Support Communities
Consider establishing protective standards for biofouling that would require projects to avoid, minimize, or mitigate marine pollution effects of antifouling coatings or species composition effects of invasive organisms related to project structures and service vessels.	Statewide Planning Goal 19 Territorial Sea Plan Part5 ORS 496 and 506	Environment
The scope of Territorial Sea Plan Part Two or Part Five should be expanded to include survey activities that occur in preparation for an energy project application between the leasing and permitting stage. Standards should address survey plan requirements, equipment used for surveying, geotechnical exploration, and meteorological information during surveying processes, abandonment of buoy anchors (e.g., railroad wheels and other buoy anchors), and other standards necessary to avoid or minimize adverse effects from survey activities.	Territorial Sea Plan Part Five ORS 496 and 506 Refer to programs implemented in New Jersey	Environment
In the Territorial Sea Plan, consideration should be given to establishing protection standards for the ongoing survey activities where information obtained is essential to fisheries management and natural resources protection. These survey activities are existing and ongoing activities, not specifically related to offshore energy development but could be impacted by such development.	Territorial Sea Plan Parts Two, Four and Five	Environment Support Communities
To provide additional protective measures to sensitive areas and species, consider adopting ODFW Rules for Marine Reserves and Protected Areas (OAR 635-012) and OPRD Rules for Marine Reserves and Marine Protected Areas (OAR 736-029) as enforceable policies. In addition, Oregon's Sensitive Species Rule (OAR 635-100-0040) and Oregon's Threatened and Endangered Species List (OAR 635-100-0125) should be considered for adoption as enforceable policies, which would help guard against gaps created by any future actions of federal wildlife/fisheries agencies and Congress to weaken federal species protections.	Territorial Sea Plan Parts Three, Four and Five ORS 496 and 506 OAR 635 and 736	Environment
Establish guidance to ensure impacts to terrestrial wildlife and botanical resources are avoided or minimized during project construction, operation, and upgrades to land-based project structures (e.g., power monitoring and control building, support facilities, transmission, energy storage facilities) that may be required from the cable landing location to high-power transmission lines. This may include establishing location-based measures that would require avoiding migratory routes or important/sensitive habitats;	Statewide Planning Goals 17 and 18 ORS 390, 469 and 496 OAR 345 and 736 Local plans and codes	Environment

Potential Gap	Related Policies and Notes	Roadmap Objective Area
scheduling installation and maintenance to avoid sensitive periods; or recommendations to minimize lighting.	Refer to programs implemented in New Jersey and Texas	
Consider expanding ODFW rules to prohibit introduction of invasive species in waters of the state that include the territorial sea and estuaries. ODFW implements rules to prohibit introduction of invasive species in freshwater systems, but the risk of invasive species being introduced at sea and estuaries appear to be lacking. This includes risks offshore from vessel operations and structural components and onshore from construction/ disturbance in terrestrial, riparian, wetland, freshwater systems.	Territorial Sea Plan Part Five OAR 635	Environment
Under the Territorial Sea Plan, improve the geographic reach of the area-specific ecological protection policies. Currently they are described based on spatial zones delineated within the Territorial Sea. If made more general or based on resource types found in the area, the criteria may be more broadly applicable in federal waters. If the meaning of “shoreland facility” is interpreted narrowly, that leaves a gap in Part Five’s coverage regarding related onshore infrastructure and activities.	Territorial Sea Plan Parts Four and Five	Environment
Consider addressing vessel operation impacts (e.g., collisions, strikes, noise) and seasonal considerations (e.g., in water work periods in ocean considering species presence or fisheries uses) as it relates to offshore energy development. This may include looking at traffic corridors, speed limits, vessel size, and mammal avoidance procedures.	Territorial Sea Plan Parts Four and Five ORS 830	Environment Support Communities
To ensure water quality, consider expanding and including related requirements throughout various existing enforceable policies. Include requirements in the Territorial Sea Plan that specify water quality effects beyond ecological effects. This can also be expanded in Goal 19 to specifically reference water quality. Consider updating existing or adding new policies where they may be applicable to water quality and are identified as such including ORS 465, Hazardous Waste, and ORS 783, Ballast Water. In addition, include OAR 340-143, Ballast Water, as an enforceable policy.	Statewide Planning Goal 19 Territorial Sea Plan Parts Two, Four and Five ORS 465 and 783 OAR 340	Environment
Establish a stand-alone state-based water quality standards and permit that would evaluate whole project compliance with water quality standards and laws in a manner similar to Clean Water Act Section 401. This would be applicable regardless of any Federal permit A conservative review of this strategy will be necessary based on the potential location of an offshore energy project in the ocean.	ORS 468b OAR 340 Refer to programs implemented in Texas and New Mexico	Environment

Potential Gap	Related Policies and Notes	Roadmap Objective Area
Consider clarifying water quality standard ambiguity found in DEQ rules (e.g., OAR 340-141) for oil spill response in order to account for small facilities. The rules have a 10k gallon limit to be a "facility" and may not consider multiple smaller turbines as a facility (see also ORS 468b). This amendment may include updates to existing or addition of new but related enforceable policies.	ORS 468b OAR 340	Environment
Submerged cable standards could be more geographically comprehensive and detailed. Currently there is no policy that includes a minimum width/separation established (see OAR 141-083). In addition, easements for cables have a broad range of widths with 15 feet being the standard minimum width for land-based easements. DSL will need to make it clear and include a minimum width for the cables in the Territorial Sea in the planned rulemaking of OAR 141-083, which will begin in Fall 2025. Amending the Territorial Sea Plan Part Four with clearer limitations and more detailed guidance for transmission cables, including separation and protection/shielding, could complement rulemaking of OAR 141-083.	Territorial Sea Plan Part Four OAR 141 Refer to programs implemented in California	Environment
Consider establishing and prioritizing location of cable landings, including creating criteria on how to choose those landing spots, and whether there should be separation or collocation with cables. This may involve exploring existing or needed protections in Goals 17 and 18 regarding onshore and cable transmission. Engage local government regarding their concerns and issues involving cable landings, since some local plans do not have provisions for cable landings or are concerned with compatibility and location (e.g., near residential and park developments).	Statewide Planning Goals 17 and 18 ORS 390 OAR 736 Local plans and codes Refer to programs implemented in California	Environment
The Territorial Sea Plan should include further details regarding the necessary elements of a decommissioning plan. As part of this, the state should consider establishing a policy around decommissioning and major repair of equipment during project operation, to provide reasonable assurance that the project is using (feasible) equipment that can be successfully removed and decommissioned (reuse, recycle or disposal), during project operation. Please note that the decommissioning requirements in Territorial Sea Plan Part Five and OAR 141- 141 imply a preference for natural and native habitats to artificial habitats.	Territorial Sea Plan Parts Three, Four and Five	Environment Support Communities
Establish an Emergency Response Plan requirement that would cover both man-made (e.g., failure) and natural hazards and their response actions in case of an emergency. Plan requirements should include notification and coordination procedures, mitigation, removal of equipment (e.g., turbine, anchor and mooring system, cables, and substation), and remediation/restoration.	Territorial Sea Plan Parts Four and Five ORS 274	Environment Support Communities

Potential Gap	Related Policies and Notes	Roadmap Objective Area
Consider developing siting standards for projects in geologically unstable areas, whether onshore or offshore, which may include requirements for a project to avoid geologically unstable areas or otherwise mitigate for effects of instability unless it would have an adverse ecological effect. Work with local communities to determine whether geological standards would be necessary for land-based components to avoid geologically unstable areas.	Statewide Planning Goal 7 Territorial Sea Plan Part Five Local plans and codes Refer to programs implemented in North Carolina	Environment Support Communities
Within the ecological resource protection standards in Part Five of the Territorial Sea Plan, define the role of mitigation and adaptive management in the definition of “Significant Adverse Effect for Ecological Resource Protection” and whether mitigation/adaptive management measures may be used to achieve the protection standard.	Territorial Sea Plan Part Five	Environment
Adaptive management considerations touch numerous environmental effects of interest including the coastal and marine environment and associated species. The state should consider amending the Adaptive Management Plan requirements to provide further details and standards regarding the expectations for ongoing collaboration and mitigation measures through the lifecycle of the project. This could include a framework that addresses decision rules, mitigation/compensation triggers, operational change triggers, cooperative frameworks for reviewing incoming information, implementation plan and resources for long-term state oversight, and similar. In addition to ongoing monitoring requirements and a regular reporting and collaboration framework, the state should require clear response and accountability measures in the Adaptive Management Plans required under Part Five of the Territorial Sea Plan. The state should also explore the additional step of instituting Adaptive Management Plans as contractual agreements directly with developers to provide necessary evidence that the project can achieve state policy standards.	Territorial Sea Plan Part Five Refer to programs implemented in New Jersey, New York, Rhode Island, Massachusetts and Connecticut	Environment Support Communities
Consider applying standards found in ORS 543A, Reauthorizing and Decommissioning Hydroelectric Projects standards to offshore energy by amending existing water quality policies. This would allow agencies such as DEQ to look, not only at water quality, but other water related requirements of state law, which consequently expands ODFW authority to evaluate how water is used to support fish use and require a fish passage authorization.	Territorial Sea Plan Parts Four and Five ORS 468b and 543A OAR 340	Environment

Potential Gap	Related Policies and Notes	Roadmap Objective Area
<i>Oregon's offshore wind governance: Policy analysis, process evaluations, and the future of offshore wind development in Oregon</i> found, "The absence of enforceable mechanisms in the TSP [Part Five] for lifecycle project evaluation significantly impairs the effectiveness of informed, adaptive management planning. The gap of enforceable mechanisms in the TSP is likely to result in insufficient data on environmental and community impacts throughout project's lifespan within the federal consistency review window, weakening the foundation for a robust environmental monitoring plan. To [remedy] this, new environmental and community impact data may be required." The information requirements in the TSP should include lifecycle analysis of proposed offshore wind projects, which can be utilized to support informed long-term environmental monitoring requirements and clearly defined adaptive management thresholds. " (Baldinger, et. al., 2025)	Territorial Sea Plan Part Five	Environment Support Communities
Territorial Sea Plan Part Five Policy B.4.g, Special Resources and Uses Review Standards, needs detail regarding what "minimization" means. Although defined as "to reduce and avoid the effect to the extent practicable", generally, it would benefit from more details or useful examples of what minimizing means (except for visual effects and fisheries standards).	Territorial Sea Plan Part Five Refer to programs implemented in Texas	Environment
Revisit policies within Part Five that were not approved for use in federal consistency reviews by the NOAA Office for Coastal Management, to determine whether modifications to policy language may render them more likely to be approved for use.	Territorial Sea Plan Part Five	Environment
Encourage energy grid reliability and resilience through existing policies such as Statewide Planning Goal 13 and Part Five of the Territorial Sea Plan. Goal 13 was not written to govern or direct the production of energy, but rather its conservation. Explore amending Goal 13 or its local embodiments to address development of alternative energy sources and adding energy grid reliability/resilience with the recommendation to local governments to develop an energy resilience plan (see HB 3630 (2023)). In addition, together with the resource and use inventory and special resource and use standards found in the Territorial Sea Plan Part Five, include a requirement to address energy grid reliability/resilience (e.g., Policy B.4.d and B.4.g.2-5).	Statewide Planning Goal 13 Territorial Sea Plan Part Five House Bills 2021 and 3630 Local plans and codes	Energy Support Communities
Explore and consider the potential - both in terms of existing policy and the data required to compare what is gained and lost - for the state to have a power procurement authority. This would provide greater investment certainty for development and allow the state to place additional expectations alongside power purchase (e.g., research funding, community agreements, etc.). Part of this consideration is looking at existing Public Utility Commission (PUC) standards that are only applicable to in-state procurement by Investor-Owned Utilities and other Oregon energy policies to encourage greater investment in long lead-time resources, including offshore wind.	ORS 757 OAR 860 House Bill 2021 Refer to programs implemented in Maine, California and Rhode Island	Energy Economic Opportunity Workforce

Potential Gap	Related Policies and Notes	Roadmap Objective Area
Clarify and amend how energy storage facilities (or battery energy storage systems) can occur in farm/forest resources lands and other applicable areas. For farm/forest zones, the ORS/OAR does not clearly define this use, and previously explored options include 1) folding it into definition of utility facility ORS 215.275, 2) Add specific criteria under utility facility, and 3) modify OAR 660-033-0130 regarding power generation facilities.	ORS 215 OAR 660 Local plans and codes	Energy Support Communities
Consider establishing a policy requiring offshore marine renewable energy projects to directly benefit Oregon coastal grid reliability/resiliency. This policy could functionally result in a requirement that offshore wind projects off the coast of Oregon connect to the coastal grid first rather than be routed offshore to interconnect in other states where the grid benefits to coastal communities would be diminished or nonexistent.		Energy Support Communities

3.4 Capacity Assessment

Oregon House Bill 4080 (2024) directed DLCD/OCMP to create an assessment of enforceable policies that, “must focus on the adequacy of existing enforceable policies and agency capacity to address reasonably foreseeable effects to state coastal uses and resources that would result from offshore wind energy development”. The capacity assessment was developed in consultation with local, state, and tribal partners to understand their needs if offshore wind energy projects were to be developed off the coast of Oregon. State partners were surveyed to forecast staffing needs and expertise required for effective program operation, with 11 agencies participating. Local partners from seven coastal counties and 23 cities identified capacity needs such as increased staff, funding, and various other resources. As of September 2025, Tribal partners' capacity needs are still in development.

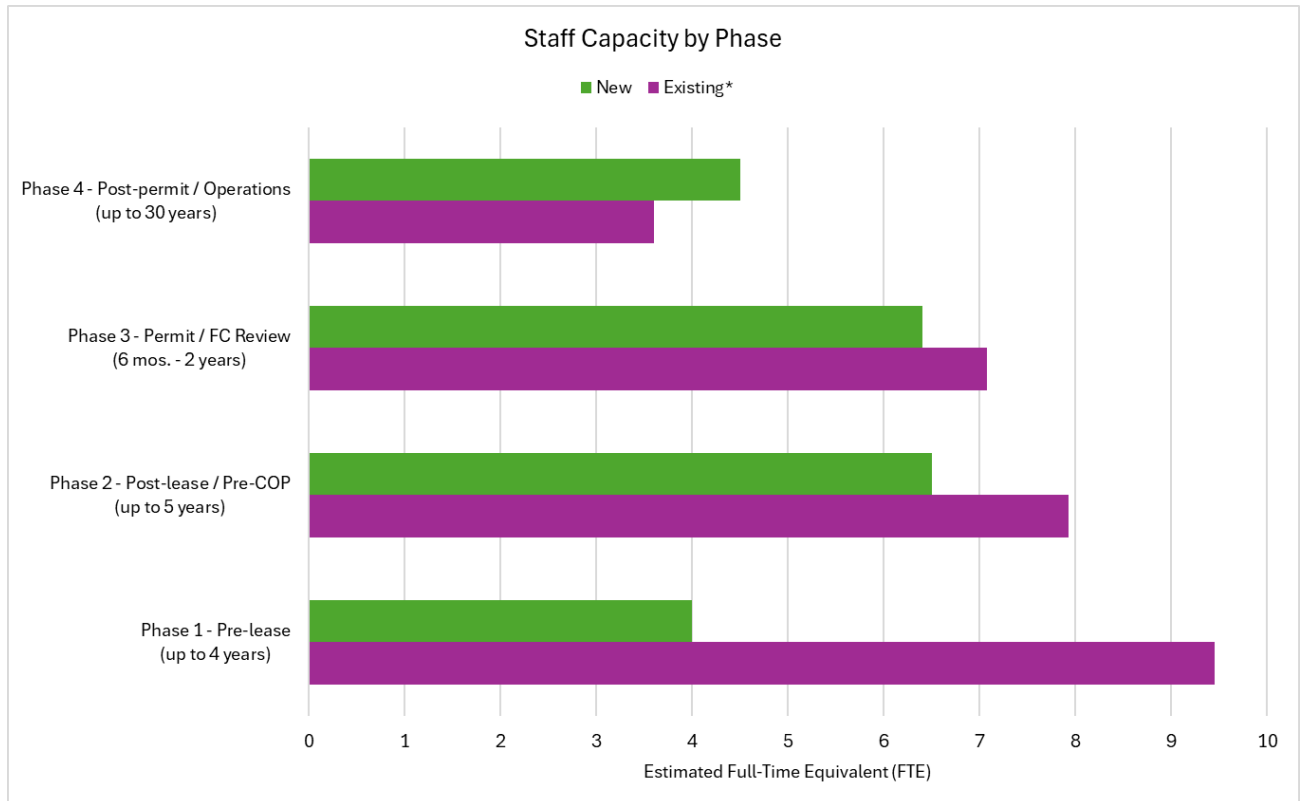
Since HB 4080 did not provide specificity regarding “capacity”, DLCD took a holistic approach. DLCD asked state, local, and tribal partners to consider the entire lifecycle of offshore wind energy development, separated into distinct phases and related projects, and all aspects of their capacity, including staff, expertise, and other resources. The process involved surveying each partner group separately, through email and partner meetings.

Regarding the state agency assessment, which yielded the most data for this assessment, partner agencies were asked to strive for a model of stability and forecast staffing levels that offered a team with sufficient expertise and a program that ran smoothly. Additionally, the level of agency involvement and phase of development determined the capacity requirements. The cumulative estimates from the 11 agencies that responded all propose using at least 35 existing staff positions of varying qualifications depending on the phase of the project or number of subject matter experts needed for review. Although three of those 11 agencies indicated they would utilize existing staff, there was not sufficient data to include in most analysis here. Two agencies proposed reallocating or revising the duties of five existing staff in order to perform necessary duties in the review of the development. Four agencies proposed new staff. Lastly, one agency considered dual options for four positions, either hire new or use existing staff, if necessary.

The agency assessment looked at capacity needs for different phases of one offshore wind project and two concurrent projects. The phasing scenario includes array, cables, and onshore components of a project, but excluded shoreside manufacturing and support port facilities. Phase one (up to four years) includes pre-leasing activities such as rulemaking, additional marine spatial planning, participation in a regional science collaborative, or participation in future BOEM siting processes were all considered. Phase two (up to five years) is after leasing has occurred but prior to an application for the Construction and Operations Plan (COP), is the phase where activities may include coordination of survey plans, early coordination with applicants and coastal partners about permit needs, research and building expertise in what will be needed during review. Phase three (six months to two years) occurs upon the submittal of a formal application of any permit under agency authority and federal consistency but prior to a federal consistency decision. Phase four (up to 30 years) occurs after federal consistency decisions and relevant permits have been issued and may include effective oversight of active offshore wind development operations, monitoring, and future decommissioning. The figure below identifies the

estimated capacity needs for one offshore wind project by phase. This figure does not show the staff needs for other associated activities such as supporting engagement and outreach activities, reviewing related projects (e.g., shoreside support facilities), and other special considerations and challenges. In addition, the existing staff data includes those agencies willing to revise or reallocate duties of existing staff to address those needs.

Figure 17. State Agency Staff Capacity Needs by Phase



Note: *Existing staff data includes using existing staff capacity together with existing staff whose duties are revised or reallocated to address the needs of the project.

When it comes to local government, coastal counties and cities are experiencing capacity issues, whether it is lack of staff, funding or other resources. If there is a proposed project, such as rulemaking or a large or fast-moving development, it would require staff to go beyond normal operational capacity, which then strains their existing systems. The suggestions provided by local government staff include: 1) increase in staff capacity whether as new staff, contract staff (e.g., planning consultants), or shared staff with specific knowledge or skill; 2) additional funding; 3) DLCD or other state agency support (this would vary depending on the task); 4) model codes or policy recommendations for rulemaking; and 5) resources that support engagement and outreach.

In summary, the capacity assessment process involved collaboration with various partners to understand and address the potential impacts and benefits of offshore wind energy development in Oregon. The information gathered from state, local, and tribal partners can inform decision-making processes, support future projects, and guide the allocation of resources to ensure the successful implementation of offshore wind energy projects in the state. Each partner group provided unique

insights and considerations based on their roles and responsibilities in the coastal zone, highlighting the importance of collaboration and proactive planning for sustainable energy development.

Refer to [Appendix X](#) for more information regarding capacity assessment data gathered from state, local, and tribal partners.

4 PATHWAYS TOWARD AN OREGON OFFSHORE WIND FUTURE

Along the pathway to any of the alternative futures described in Section 2 that include wind turbines off the Oregon coast (Paths 1 and 3), there will be phases of development, and at each phase there will be information needed, meaningful engagement with communities expected, and checkpoints where decisions to move forward or not are made. This section describes each of those phases of development and the likely accomplishments needed at each phase to inform a decision to A) move forward to the next phase, or B) iterate, pause, or exit movement forward until additional information is available.

The phases of offshore wind development

- (shown in blue): Suitable areas to explore offshore wind development are identified, relevant information is gathered, and Oregon is prepared for the potential of offshore wind development;
- Leasing (green): Energy developers select sites to explore, assess the feasibility of development, and Oregon decides whether offshore wind exploration in a particular site (separate from the decision to permit development) is consistent with its state policies; Leasing may occur through a formal federal siting process or via an unsolicited lease request.
- Permitting (yellow): Having explored selected sites, energy developers assemble a complete proposal for the construction and operation of an offshore wind array and its related cabling to shore, which they submit to federal, state, and local agencies depending on what portions of the project are under their authorities. Oregon reviews the entirety of the project, under its federal consistency authority, and decides whether the issuance of a federal permit to construct and operate the project in federal waters is consistent with state policies. Oregon separately decides whether to issue any needed easements or permits for portions of the project that occur within the state's sovereign territory onshore and out to 3 nautical miles offshore.
- Construction (purple): Federal and state agencies have issued relevant permits using developers' construction and operation plan and other information, and energy developers decide to begin construction;
- Operations (red): Turbines and associated cables, substation, and transmission infrastructure is operational, energy facilities are operating consistent with permit conditions and other agreements, and ongoing monitoring begins; and
- Lease ends (lime): The point at which a lease ends and decommissioning begins, or the process begins to renew a lease and update any infrastructure. Lease renewal would trigger a new federal consistency review by the state.

Ongoing streams of work through all phases of offshore wind development

There are three “streams” of ongoing work that are important throughout all of the phases of OSW development.



Stream 1: Meaningful Engagement

Good process that follows meaningful engagement principles is essential, and there also needs to be accountability built into decisions when they are made so parties can move forward with some certainty at the end of a process. See Section 5.1. for recommended actions to further support meaningful engagement.



Stream 2: Good Information

Different types of good information are required at different points along the path to understand the effects of offshore wind development, inform good decisions, and adaptively manage over time.

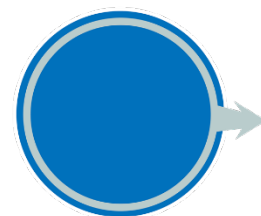


Stream 3: Regional Coordination

There is value in coordinating with neighboring states and federal agencies so regional opportunities can be realized and the potential effects of offshore wind are understood in a regional context, both onshore and offshore.

Checkpoints where Oregon can influence how and whether to move forward

During each phase, there is a checkpoint where energy developers, federal agencies, state agencies, Tribes, and others look at information, proposed plans, and permits, to decide whether to A) move forward, B) require additional information or adjustments to plans, or C) not move forward. This section further describes the information needed, process steps, and



expectations from the State of Oregon at each checkpoint. Currently, those checkpoints include:

- Siting information is complete enough for the State to ask BOEM to proceed with Leasing [Note: there is no formal checkpoint at this process based on current policies];
- The federal consistency review conducted prior to Leasing;
- The federal consistency review and required state permits prior to Permitting;
- Project design remains consistent with permit conditions during Construction;
- Project operations remain consistent with permit conditions during Operation; and
- The federal consistency review and required state permits prior to Lease End or Renewal stage.

Checkpoints vs. “Exit Ramps”

In 2023, a series of informal conversations between affected and interested parties around the topic of Oregon offshore wind was instrumental in the decision by the 2024 legislature to pass HB 4080. Those informal conversations culminated in the creation of a set of “Considerations” for an Oregon Offshore Wind Energy Roadmap that contains “exit ramps”⁹¹. An exit ramp refers to “information, conditions, or feedback that warrant a pause or reconsideration in the decision-making process for planning, investigating, constructing, and/or maintaining OSW turbines, cables, landing sites, substations, energy storage, and transmission systems.” The Considerations document included example issues that could warrant a pause or reconsideration of offshore wind development in Oregon.

It was envisioned that exit ramps should be accompanied by a clear state process for gathering additional information or input, requesting adequate time for Oregon agencies and the public to engage in federal processes, and/or delaying action, though it was recognized that the formal federal process may not have a mechanism to recognize or accommodate a state exit ramp.

During development of the Roadmap, the concept of exit ramps was discussed frequently in the context of the pathways described in this section and the state’s authority to implement an exit mechanism throughout the phases of an offshore wind project⁹². The concept of “checkpoints” emerged as a way to consolidate unresolved issues at key junctures of the offshore wind development lifecycle that best align with potential opportunities by the state to play a formal role in whether and how a project moves forward.

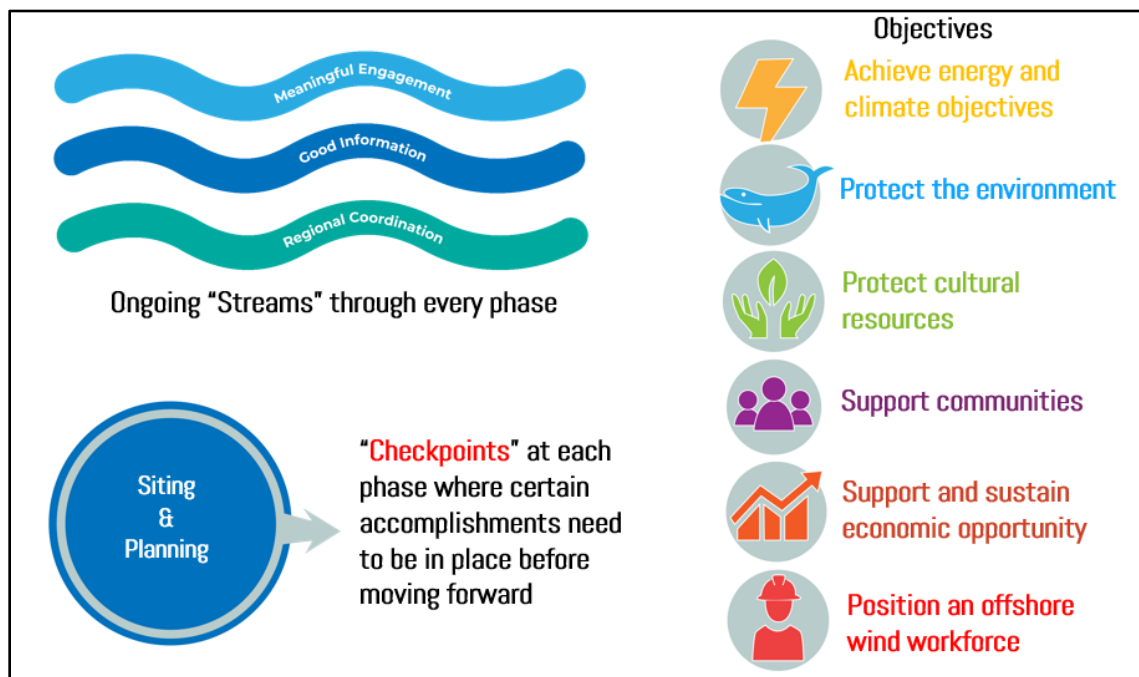
Objectives Oregon would like to achieve with offshore wind

Since time immemorial, the ocean ecosystem, fisheries, marine resources, and viewsheds have held the utmost significance to the cultural identity for many of the native people who live and travel along Oregon’s coast. For all communities, the environment, people, livelihoods, and human wellbeing are all interconnected. Those connections are important to understand and protect. Generally, it is important for any OSW development to occur with a good understanding of possible cumulative impacts, a

⁹¹ https://oregonconsensus.org/wp-content/uploads/2024/04/Considerations_Oregon-OSW-Roadmap-with-Exit-Ramps_04262024_final.pdf

⁹² https://www.oregon.gov/lcd/OCMP/Documents/OSW-Roundtable_April-MeetingMats.pdf (PDF page 33)

sensitivity to the spatial and temporal dynamics of cultures, ecosystems, and local economies, and a recognition that the ocean is dynamic, changing as climate changes, and potential impacts may not be fully understood for some time. As OSW is considered, there are also important opportunities to create good and lasting jobs for Oregon communities while sustaining existing coastal economies and community values. The Roadmap uses six co-equal objectives to define standards and strategic actions:



4.1 Offshore Wind Siting and Planning

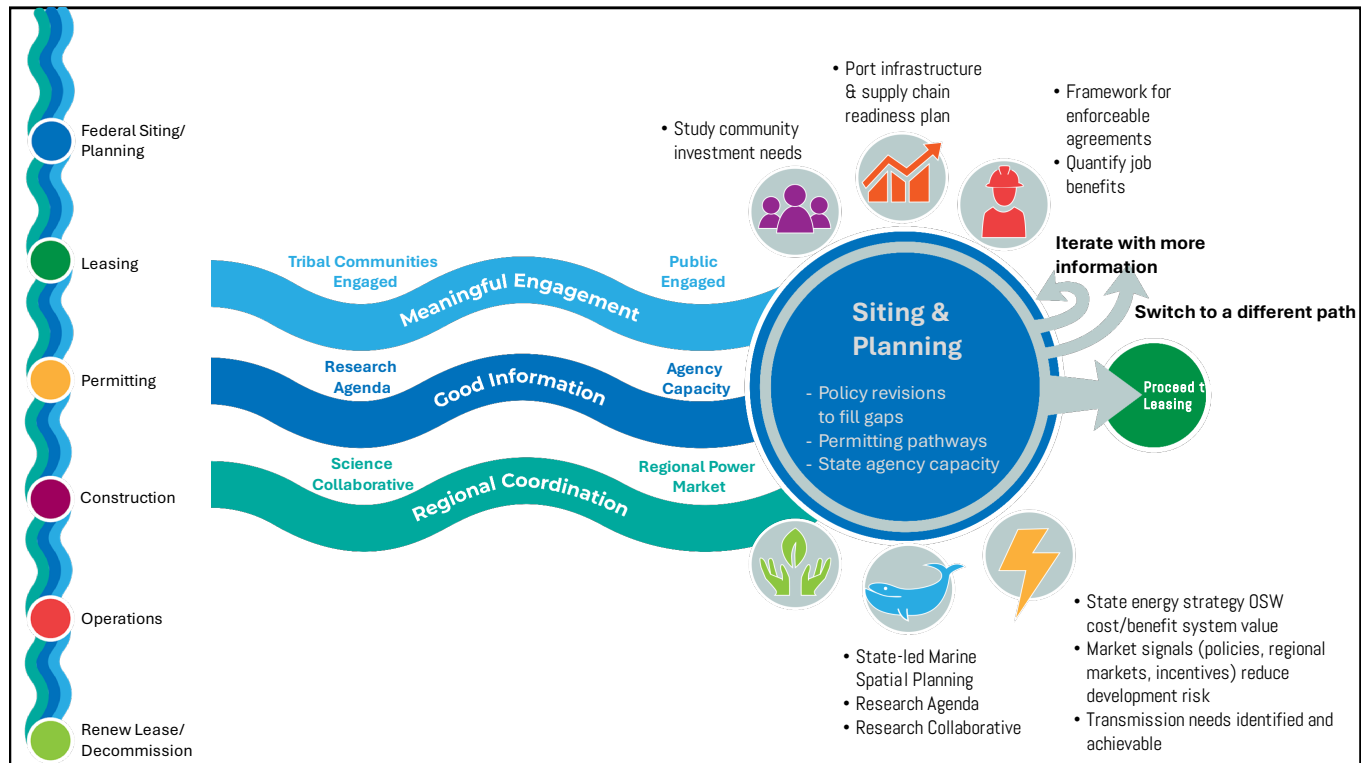


Figure 18. Offshore Wind Siting and Planning Phase

4.1.1 Description of the Siting and Permitting Phase

This entire phase is focused on “getting ready” prior to any ocean leasing process. This is the time to consider strategic planning for supply chain capacity, transmission, or barriers to purchasing any future power. It is also the time to invest in the research and planning to identify areas that are more or less suitable for offshore wind development, including the current and potential future needs of directly affected coastal communities. Finally, it is a time to affirm the policies the state will use to review a project and to design the frameworks for engagement and negotiation with potentially affected communities. There will be a balance at this phase between A) conducting research on potential effects and benefits of offshore wind and building the state agency capacity to permit and support offshore wind with B) not making these investments too early so that information is still relevant and aligning with the likely demand for offshore wind development. The Roadmap development process identified the following actions and information important to have in place at this phase (see Sections 3.1.2 and 3.1.3 below for more detail), including:

- An established science collaborative connected to neighboring states that is guided by a research agenda built in consultation with Tribes, developers, communities, state agencies, and others;
- Early investment in better understanding “baseline” conditions in the ocean and “potential effects” that could inform future cumulative effects analyses, enforceable community agreements, or other decisions;
- Marine spatial planning in federal and state waters that identifies more or less suitable parts of the ocean for offshore wind development based on critical habitat and species, critical ocean uses, critical cultural viewsheds, and shore cable landings;

- Updated enforceable policies and other state policies so Oregon can improve its permitting capacity and predictability for offshore wind development;
- A framework for enforceable agreements such as project labor agreements, community benefit agreements, etc. to ensure as many of the benefits of offshore wind development accrue to the communities most impacted by that development; and
- Clear signals from the State of Oregon for its level of interest in offshore wind development such as identifying the need for offshore wind or other marine energy in state energy strategies and policy, investments in Port or supply chain infrastructure, clear understanding of environmental and socioeconomic effects, and/or commitments to purchase energy developed offshore.

These are not simple actions. It may not be feasible to fully know what effects to fisheries and other ocean resources might be so early in the process. There is less federal investment in some of these in 2025 than there were in prior years.

Currently, there is no formal “checkpoint” that signals Oregon is ready to move from broader siting and planning to more site-specific leasing consideration.

4.1.2 Strategies and Actions for the Cross-Cutting Streams at this Phase



- Identify resource needs to support state-led ongoing engagement
- Build community engagement partnerships with other agencies, local government staff, and non-governmental organizations to combine resources and facilitate consistency in messages to communities
- Clarify community participation expectations in Joint Agency Review Teams and other regulatory processes at the state and local level, and document these opportunities in policy or guidance



- Develop Oregon OSW research agenda (OPAC-STAC)
 - Baseline research of “before” conditions and cumulative development capacity
 - Establish OR multi-party science collaborative
 - Engage Tribes to incorporate indigenous/TEK
-
- State-level coordination of supply chain opportunities across Pacific coast

4.1.3 Strategies and Actions for each Objective at this Phase



Achieve clean energy mandates

- Complete State Energy Strategy
- Coordinate with California to better understand potential demand for waters off Oregon
- Pursue grid investment that would complement future OSW development and coastal resilience
- Regional electricity sharing market to make “grid larger than the weather”
- Consider benefits and drawbacks of state procurement authority for long-lead time energy sources
- Marine/Coastal Zone spatial planning identifies sufficient sea space for offshore wind energy



Protect the environment

- Marine/Coastal Zone spatial inventory of sensitive habitats and other avoidance areas (and species?)
- Revise Part Five of Territorial Sea Plan to improve ecological protection standard
- Improve state agency capacity



Protect cultural resources

- Culturally significant viewscape standard included in Territorial Sea Plan.
- Establish Tribal expectations regarding engagement, science participation, and other



Support coastal communities and towns

- Update Oregon’s visual resource inventory and further study Tribal values surrounding visual resource effects
- Conduct socioeconomic studies to better articulate the potential of offshore wind development
- Evaluate areas and facilities important to maintaining the fishing industry as a critical support for coastal communities;

- Explore enforceable policy opportunities around cost/benefit to local community wellbeing and economic effects.
- Continued education and engagement across all phases
- State conduct studies on necessary complementary investments (infrastructure, housing, social services) to identify investment needs under different scenarios.



Create economic opportunities and sustain existing economies

- Identify state investment needs in local supply chain manufacturing capacity, focused first on California and international markets
- Conduct studies on necessary complementary investments (infrastructure, housing, social services)



Develop Oregon's offshore wind energy workforce

- Establish enforceable policies around workforce and labor provisions, agreements, and enforcement mechanisms
- State conduct studies on necessary complementary investments (infrastructure, housing, social services) to identify investment needs.

4.2 Federal Leasing of the Outer Continental Shelf for Offshore Wind Exploration

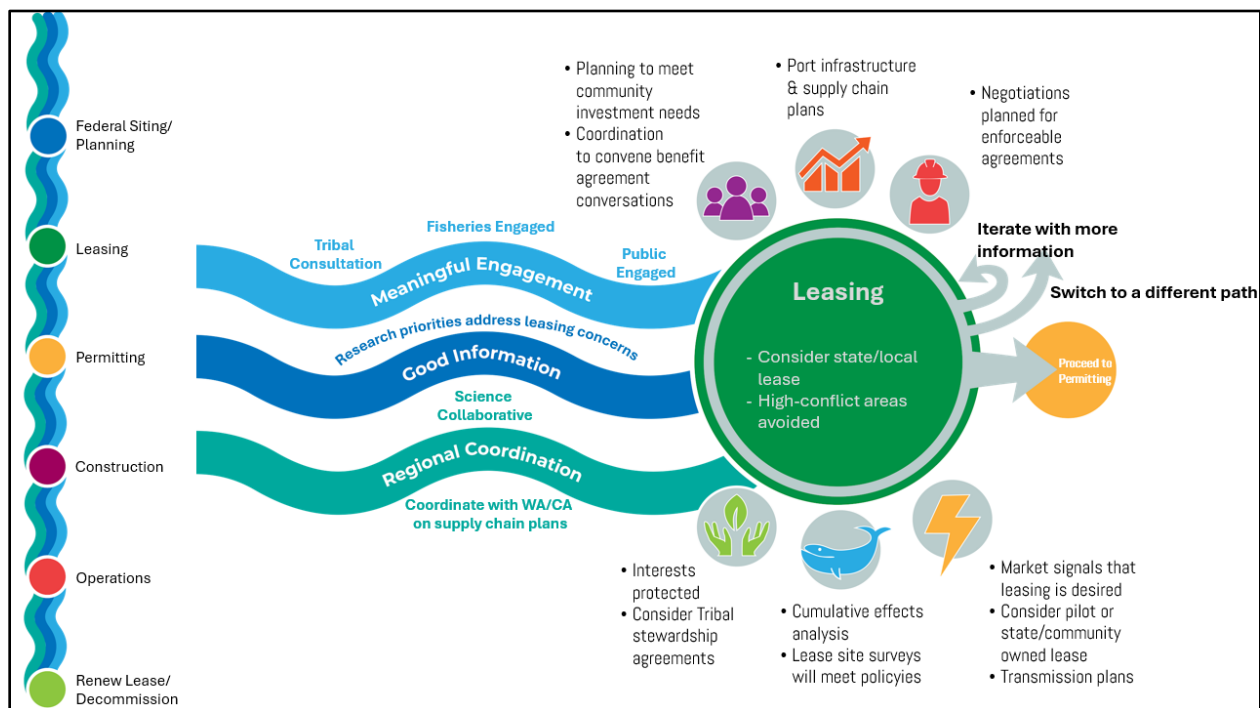


Figure 19. Offshore Wind Leasing Phase

4.2.1 Description of the Leasing Phase

Leasing is the phase where more specific information is gathered on the areas that have *potential* for OSW development. Leasing is a process led by BOEM that begins with conversation, identifies larger “call areas” based on wind energy potential and least conflict with existing ocean uses and environment, narrows to “wind energy areas”, and then ultimately a lease auction. The Roadmap development process identified the following actions and information important to have in place at this phase (see Sections 3.2.2 and 3.2.3 below for more detail), including:

- The science collaborative is addressing research priorities to address leasing opportunities and concerns;
- Oregon has started coordination with Washington and California on supply chain plans;
- Engagement frameworks are guiding critical conversations with Tribes, fisheries, and the public and the State of Oregon are actively shaping those engagements with BOEM and others;
- Community and environmental effect concerns have been identified;
- A cumulative effects analysis has been completed;
- Mechanisms for managing risks and uncertainties are clear (e.g., research, mitigation, and adaptive management);
- Community benefit conversations have convened, and negotiations are planned for enforceable agreements;
- Port infrastructure and supply chain plans are drafted;

- Clear request from the State of Oregon for leasing and working with BOEM during the leasing process.

This is the stage where coastal communities, Tribes, and others may want certainty around potential impacts and the configuration of future OSW development. However, some of that information may not be clear until developers and permitting agencies conduct surveys and complete reviews. It is unclear whether all of the support projects (e.g., onshore transmission upgrades or shoreside facilities) would be reviewed at the same time as the permit for an offshore wind array. There may not be a clear mechanism for considering the entire system as a single “decision package” as part of a cumulative effects analysis.

The State of Oregon has a formal checkpoint at the Leasing stage. It conducts a federal consistency review of any BOEM lease auction. Oregon can find a lease “inconsistent” with state enforceable policies, “consistent”, or “consistent with conditions”. The State’s consistency review may be limited to the auctions authorized by the lease (i.e., to survey and exploration actions, and not the full construction of OSW arrays and associated infrastructure).

Typically, a developer would need to be a key convener of negotiating community agreements, but until a lease is issued there is no developer to take on this role. While the state supports conversations between developers and communities early and often, it may be inefficient or confusing for multiple developers without leases to begin these conversations too early. At the leasing stage, early work can begin to identify potentially affected communities that need to be included in future conversations with lessees, once they have been identified.

4.2.2 Strategies and Actions for the Cross-Cutting Streams at this Phase



- Meaningful engagement is underway with Tribes, fisheries, coastal communities, and the public generally



- The Oregon OSW research agenda (OPAC-STAC) is funded and being implemented specific to priority information needs to support leasing.



- State-level coordination of supply chain opportunities across Pacific coast

4.2.3 Strategies and Actions for each Objective at this Phase



Achieve clean energy mandates

- Consider a pilot or state/community-owned lease
- State of Oregon proactively invites a lease
- Update transmission plans



Protect the environment

- Avoid leasing in high-value or high-effect areas;
- Complete a cumulative effects assessment inclusive of current ocean uses and lease areas;
- Secure ongoing state input on site characterization studies;
- Clarify mitigation measures to avoid and reduce harm from survey and other leasing activities;
- Implement the Oregon OSW research agenda.



Protect cultural resources

- Avoid leasing in high-value or high-effect areas;
- Complete a cumulative effects assessment inclusive of current ocean uses and lease areas;
- Secure ongoing state input on site characterization studies;
- Clarify mitigation measures to avoid and reduce harm from survey and other leasing activities;
- Establish Tribal engagement plans with lessees.



Support coastal communities and towns

- Avoid leasing in high-value or high-effect areas;
- Complete a cumulative effects assessment inclusive of current ocean uses and lease areas;
- Oregon's enforceable policies protect traditional ocean uses (TSP Part Five). Any OSW development needs to be consistent with Oregon policies for protecting commercial, cultural, and recreational fish species availability and abundance, and access to enough productive fishing grounds to remain viable as a fishing community and industry. Any potential impacts to fishing should also consider impacts to secondary and support industries, such as seafood processing and commercial fishing suppliers;
- Secure ongoing state input on site characterization studies;
- Clarify mitigation measures to avoid and reduce harm from survey and other leasing activities;

- Explore comprehensive planning and investments to meet infrastructure, housing, and social service needs;
- Begin community conversations are community benefits;
- Establish fisheries engagement plans with lessees.



Create economic opportunities and sustain existing economies

- Clarify port infrastructure needs and integrate with existing estuary and shoreland protection policies;



Develop Oregon's offshore wind energy workforce

- Begin convening community conversations around workforce and labor provisions, agreements, and enforcement mechanisms
- Explore incentives for complementary investments in workforce infrastructure needs (e.g., housing and services)
- State conduct studies on necessary complementary investments (infrastructure, housing, social services) to identify investment needs.

4.3 Permitting Phase of an Offshore Wind Project

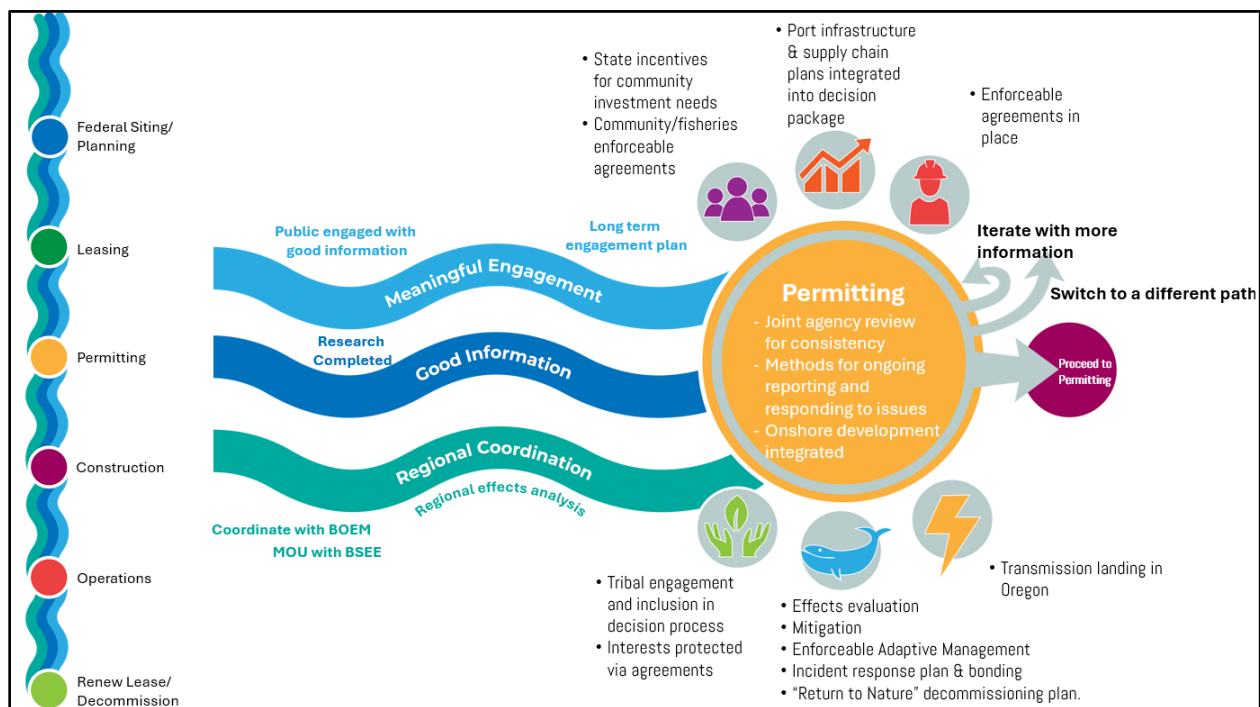


Figure 3. Offshore Wind Project Permitting Phase

4.3.1 Description of the Permitting Phase

- With a final lease approved, OSW energy developers are conducting the studies needed to develop a Construction and Operations Plan, which includes the required permit applications and technical analysis needed to approve construction. The Roadmap development process identified the following actions and information important to have in place at this phase (see Sections 3.3.2 and 3.3.3 below for more detail), including:
- The research needed to inform required environmental and community impact reviews is complete;
- Oregon has completed a regional effects analysis with Washington and California and regional coordination with BOEM and BSEE;
- Tribes, fisheries, and the public have been engaged with good information throughout, and a plan is in place for ongoing engagement;
- The interests of Tribes have been protected via agreements;
- The effects of planned construction have been evaluated, and mitigation requirements have been established;
- There is an enforceable mechanism in place for adaptive management, which includes an incident response and decommissioning plan that is funded and includes a “Return to Nature” vision for after the project;
- Landing of OSW energy in Oregon has been incentivized;
- There are enforceable community benefit, fisheries, and labor agreements in place;
- The state has incentivized community investment needs; and
- Port infrastructure and supply chain plans are integrated into the final decision and permit packages.
- This is the stage where coastal communities, Tribes, and others may want certainty around potential impacts and the configuration of future OSW development. However, some of that information may not be clear until wind developers and permitting agencies conduct surveys and complete reviews. It is unclear whether all of the support projects (e.g., onshore transmission upgrades or shoreside facilities) would be reviewed at the same time as the permit for an offshore wind array. There may not be a clear mechanism for considering the entire system as a single “decision package” as part of a cumulative effects analysis.
- The State of Oregon has a formal checkpoint at the Permitting stage. A DLCD conducts a federal consistency review of any BOEM lease auction in consultation with relevant state agencies, local governments, and Tribes. Oregon can find a lease “inconsistent” with state enforceable policies, “consistent”, or “consistent with conditions”.

4.3.2 Strategies and Actions for the Cross-Cutting Streams at this Phase



- Meaningful engagement with Tribes, fisheries, coastal communities, and the public generally continues, and there is a plan for ongoing engagement after permitting



- The Oregon OSW research agenda (OPAC-STAC) has been implemented enough to provide the information needed for permit reviews



- Pacific states have ensured a regional effects analysis has been completed
- There are regional agreements with BOEM, BSEE, and Pacific states for consistent implementation

4.3.3 Strategies and Actions for each Objective at this Phase



Achieve clean energy mandates

- Coordinate transmission permitting with OSW Construction and Operations plans
- Consider incentives to land power in Oregon to benefit coastal grid resiliency



Protect the environment

- Complete inventory of foreseeable effects to species, habitats, and ecosystems
- Responsibly manage residual risk and uncertainty by applying the mitigation hierarchy, developing an enforceable monitoring plan, and developing an enforceable Adaptive Management plan
- Account for shoreside support development in total-project decision
- State permit/federal consistency decisions must follow ecological protection standards



Protect cultural resources

- Complete inventory of foreseeable effects to communities, and seafood species and habitats;
- Responsibly manage residual risk and uncertainty by applying the mitigation hierarchy, developing an enforceable monitoring plan, and developing an enforceable Adaptive Management plan
- Account for shoreside support development in total-project decision
- State permit/federal consistency decisions must follow ecological protection standards

- Establish expectations for Tribal involvement in Adaptive Management Framework and associated ongoing stewardship



Support coastal communities and towns

- Complete inventory of foreseeable effects to communities, and seafood species and habitats;
- Responsibly manage residual risk and uncertainty by applying the mitigation hierarchy, developing an enforceable monitoring plan, and developing an enforceable Adaptive Management plan
- Account for shoreside support development in total-project decision
- State permit/federal consistency decisions must follow ecological protection standards
- Establish a method (e.g., hotline) for reporting issues
- Have enforceable benefit agreements in place for affected communities
- Ensure complementary investments in community needs (e.g., housing, infrastructure, social services)
- Continue meaningful community engagement in decision-making, built on best available information



Create economic opportunities and sustain existing economies

- The state invests and provides incentives to ensure supply chain certainty;



Develop Oregon's offshore wind energy workforce

- Have enforceable benefit agreements, including project labor agreements, in place
- Incentivize complementary investments in workforce needs (e.g., housing, infrastructure, social services)
- Begin workforce training, apprenticeships, and recruitment

4.4 Construction Phase of a Permitted Offshore Wind Project

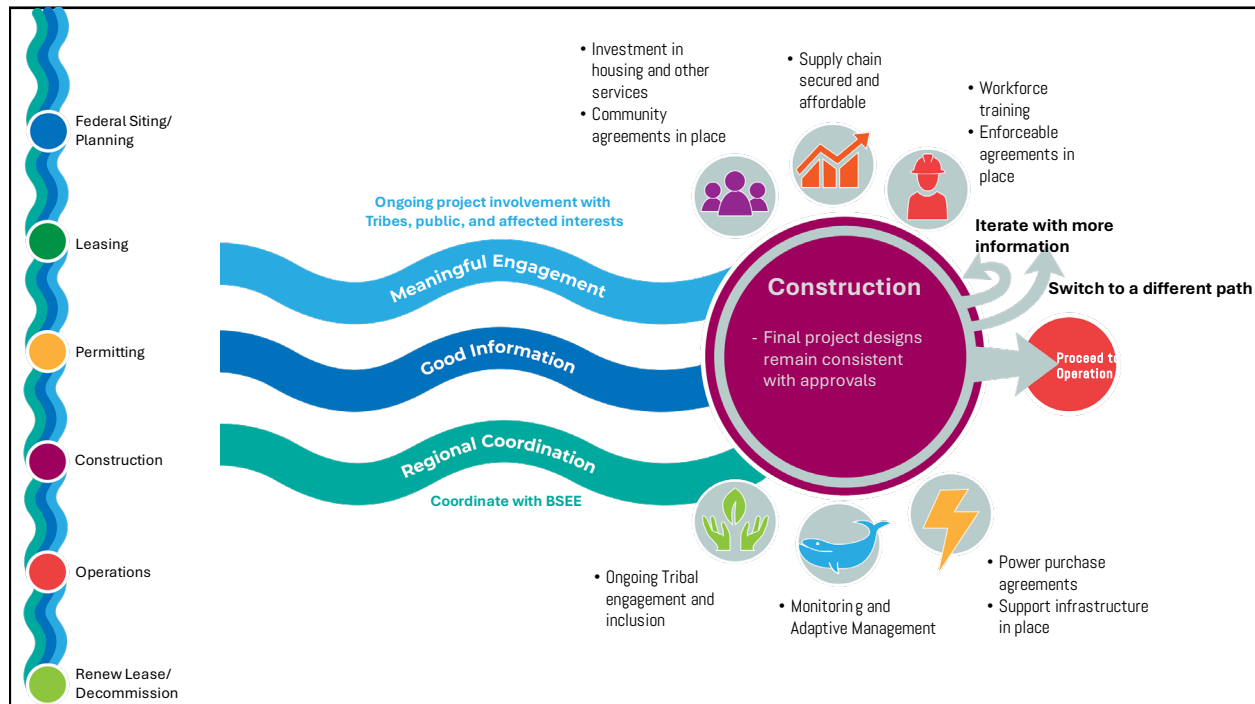


Figure 20. Permitted Offshore Wind Project Construction Phase

4.4.1 Description of the Construction Phase

- After years of planning and permitting, this is the phase between final BOEM and state approvals and projects actual construction. The OSW energy developer will be submitting its final design and installation plans, handing off reviews from BOEM to BSEE, and beginning the process of installation. The Roadmap development process identified the following actions and information important to have in place at this phase (see Sections 3.4.2 and 3.4.3 below for more detail), including:
- Ongoing project involvement with Tribes, public, and affected interests;
- Coordination with BSEE;
- Monitoring and adaptive management;
- Power purchase agreements;
- Supporting infrastructure for OSW is in place;
- Workforce training is underway;
- Contracting is occurring with local maritime and coastal businesses for services;
- Community and other enforceable agreements are in place;
- Investments are occurring in housing and other services; and
- The supply chain is secured and affordable.
- The State of Oregon does not have a formal checkpoint between the Permitting and Construction stage, unless those activities relate to a permit issued by the state for activities

occurring within the state’s jurisdictional coastal zone. There may be new ways the state could establish an ongoing role, including:

- Adaptive Management Plans that contain prescribed agreed-upon monitoring and other actions as conditions of state concurrence;
- Federal consistency condition that plan designs stay consistent with consistency reviews and federal permit applications; and/or
- A requirement for enforceable agreements, where those agreements may be required as evidence of consistency with a state enforceable policy (e.g., fisheries protection standards in Part Five of the Territorial Sea Plan, community benefit agreements, and labor agreements).

4.4.2 Strategies and Actions for the Cross-Cutting Streams at this Phase



- Meaningful engagement with Tribes, fisheries, coastal communities, and the public generally continues, and there is a plan for ongoing engagement after permitting



- The Oregon OSW research agenda (OPAC-STAC) has been implemented enough to provide the information needed for permit reviews



- Pacific states have ensured a regional effects analysis has been completed
- There are regional agreements with BOEM, BSEE, and Pacific states for consistent implementation

4.4.3 Strategies and Actions for each Objective at this Phase



Achieve clean energy mandates



Protect the environment

- Implement Adaptive Management Plan
- Conduct ongoing monitoring
- Define prescribed response actions to unanticipated effects
- Require mitigation of discovered harms



Protect cultural resources

- Implement Adaptive Management Plan for cultural resource effects
- Implement hotline for concerns
- Implement/enforce Tribal agreements
- Conduct ongoing monitoring
- Define prescribed response actions to unanticipated effects
- Require mitigation of discovered harms



Support coastal communities and towns

- Implement Adaptive Management Plan for fisheries effects
- Implement hotline for concerns
- Implement/enforce fishery agreements
- Conduct ongoing monitoring
- Define prescribed response actions to unanticipated effects
- Require mitigation of discovered harms



Create economic opportunities and sustain existing economies

- Implement Adaptive Management Plan



Develop Oregon's offshore wind energy workforce

- Implement and enforce workforce agreements

4.5 Operation Phase of an Offshore Wind Project

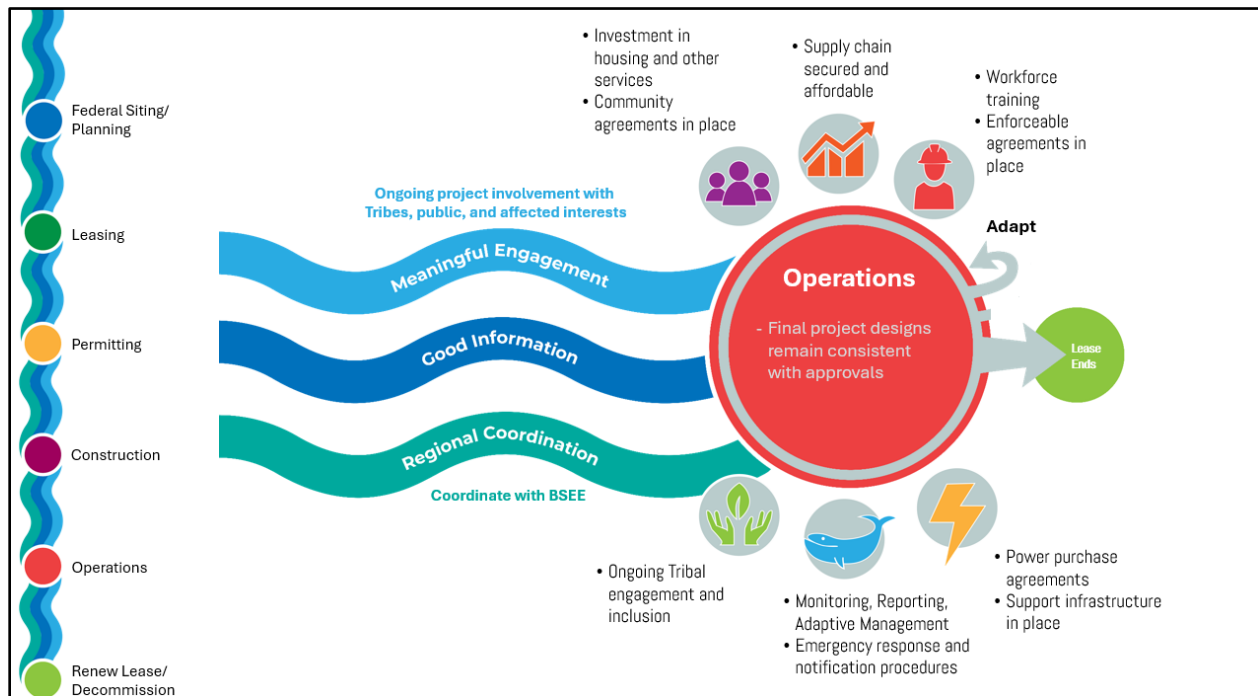


Figure 21. Operation Phase of an Offshore Wind Project

4.5.1 Description of the Operation Phase

- The OSW arrays, floating infrastructure, cables, and shoreside infrastructure have been built and the arrays are generating energy at this operations phase. The Roadmap development process identified the following actions and information important to have in place at this phase (see Sections 3.5.2 and 3.5.3 below for more detail), including:
- Ongoing project involvement with Tribes, public, and affected interests;
- Coordination with BSEE;
- Monitoring and adaptive management;
- Power purchase agreements;
- Supporting infrastructure for OSW is in place;
- Workforce training is underway;
- Contracting is occurring with local maritime and coastal businesses for services;
- Community and other enforceable agreements are in place;
- Investments are occurring in housing and other services; and
- The supply chain is secured and affordable.
- There needs to be transparency and accountability in event of an accident or other harm to the environment, cultural resources, community, or other protected ocean uses. Under the

federal regulations, the Bureau of Safety and Environmental Enforcement (BSEE) is the lead agency responsible for directing the response to unexpected project failures, harm, or emergency situations. The state should have clear lines of communication and procedures to coordinate with BSEE in the event that unexpected situations intersect with state areas or interests. BSEE and BOEM [cite] are also responsible for ensuring offshore wind projects have adequate financial assurance (e.g., bonds) to cover project decommissioning, disaster/liability events, and the risk of default.

- If designed based on best practices in the permitting phase, an Adaptive Management process provides a way for the state to maintain an ongoing role in learning from monitoring data, revising the understanding of effects of the project, and taking action when necessary to mitigate any unexpected outcomes. Essential to a successful process is a documented and agreed-upon framework for state participation alongside federal partners, clearly prescribed monitoring measures in the permitting phase, and prescribed response measures that provide options to adjust the project if needed. The adaptive management process and associated data must also be accessible to the public.
- It is unlikely that, once installed and operational, the discovery of new information during Adaptive Management would have the ability to result in removal of the project before the ~30-year lease period is complete. Adaptive management is more suited to gathering information that may be used to inform site management and implement achievable response actions as necessary or trigger other mitigation measures (e.g., habitat restoration elsewhere to offset an impact to species at the project site). At the end of the lease period, the state would have an opportunity to review any lease renewal decision against state enforceable policies, using its federal consistency authority. If the information collected during the operating years suggests that renewal of the project would be inconsistent with state policies, the state would have the opportunity to object to lease reissuance. It will be important for the state to consider during the permitting and adaptive management phases whether potential effects are likely to be reversible if the project is removed after a period of years.

4.5.2 Strategies and Actions for the Cross-Cutting Streams at this Phase



- Meaningful engagement with Tribes, fisheries, coastal communities, and the public generally continues, and there is a plan for ongoing engagement after permitting



- The Oregon OSW research agenda (OPAC-STAC) has been implemented enough to provide the information needed for permit reviews



- Pacific states have ensured a regional effects analysis has been completed
- There are regional agreements with BOEM, BSEE, and Pacific states for consistent implementation

4.5.3 Strategies and Actions for each Objective at this Phase



Protect the environment

- Implement Adaptive Management Plan
- Conduct ongoing monitoring
- Define prescribed response actions to unanticipated effects
- Require mitigation of discovered harms



Protect cultural resources

- Implement Adaptive Management Plan for cultural resource effects
- Implement hotline for concerns
- Implement/enforce Tribal agreements
- Conduct ongoing monitoring
- Define prescribed response actions to unanticipated effects
- Require mitigation of discovered harms



Support coastal communities and towns

- Implement Adaptive Management Plan for fisheries effects
- Implement hotline for concerns
- Implement/enforce fishery agreements

- Conduct ongoing monitoring
- Define prescribed response actions to unanticipated effects
- Require mitigation of discovered harms



Create economic opportunities and sustain existing economies

- Implement Adaptive Management Plan



Develop Oregon's offshore wind energy workforce

- Implement and enforce workforce agreements

4.6 Lease Renewal/Decommissioning Phase

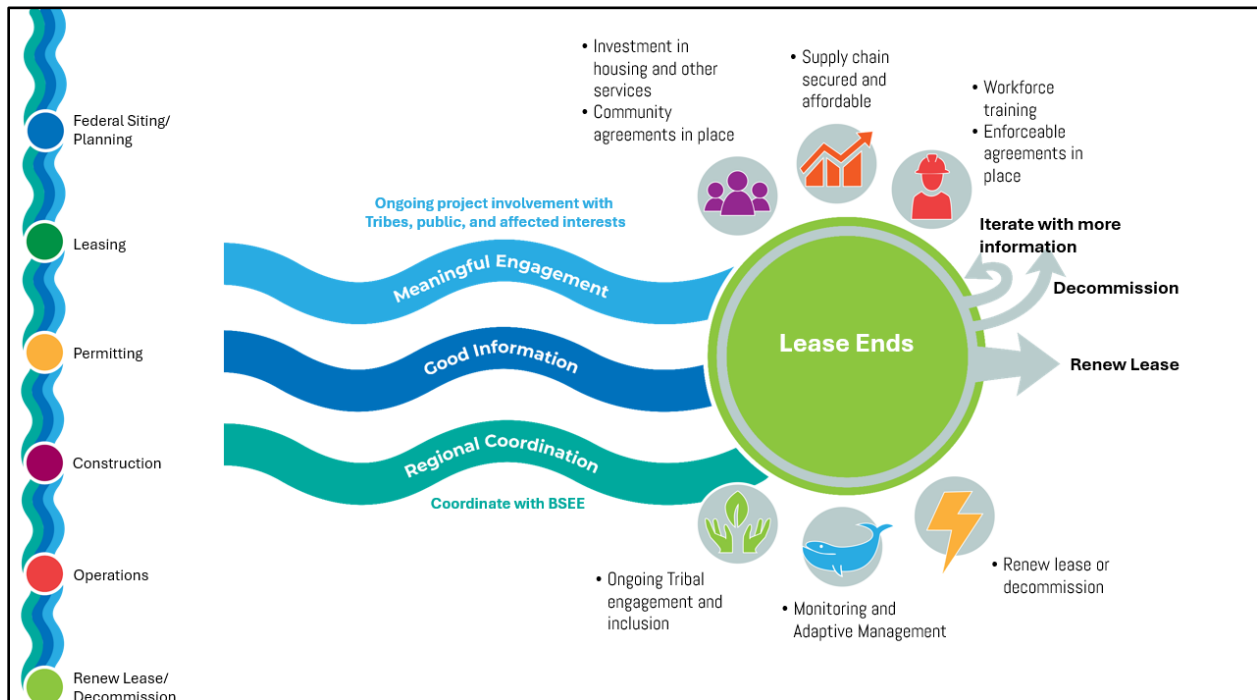


Figure 22. Lease Renewal/Decommissioning Phase of an Offshore Wind Project

4.6.1 Description of the Lease Renewal/Decommissioning Phase

The end of the 30-year lease is approaching at this phase, and the OSW developer will decide if it wants to renew its lease or not. If the lease will be renewed, BOEM and all the associated processes will begin again from the "Leasing" phase. There may be replacement of some infrastructure, or not. If the OSW

developer decides to decommission the OSW project, then the decommissioning steps come into play. The Roadmap development process identified the following actions and information important to have in place at this phase (see Sections 3.6.2 and 3.6.3 below for more detail), including:

- Ongoing project involvement with Tribes, public, and affected interests;
- Coordination with BSEE;
- Provide detailed review of monitoring and adaptive management information;
- Review lease or decommission; and
- If decommissioning, follow provisions to remove infrastructure and “return to nature” actions for restoration.

4.6.2 Strategies and Actions for the Cross-Cutting Streams at this Phase



- Meaningful engagement with Tribes, fisheries, coastal communities, and the public generally continues, and there is a plan for ongoing engagement after permitting



- The Oregon OSW research agenda (OPAC-STAC) has been implemented enough to provide the information needed for permit reviews



- Pacific states have ensured a regional effects analysis has been completed
- There are regional agreements with BOEM, BSEE, and Pacific states for consistent implementation

4.6.3 Strategies and Actions for each Objective at this Phase



Achieve clean energy mandates



Protect the environment

- Implement Adaptive Management Plan
- Conduct ongoing monitoring
- Define prescribed response actions to unanticipated effects
- Require mitigation of discovered harms



Protect cultural resources

- Implement Adaptive Management Plan for cultural resource effects
- Implement hotline for concerns
- Implement/enforce Tribal agreements
- Conduct ongoing monitoring
- Define prescribed response actions to unanticipated effects
- Require mitigation of discovered harms



Support coastal communities and towns

- Implement Adaptive Management Plan for fisheries effects
- Implement hotline for concerns
- Implement/enforce fishery agreements
- Conduct ongoing monitoring
- Define prescribed response actions to unanticipated effects
- Require mitigation of discovered harms



Create economic opportunities and sustain existing economies

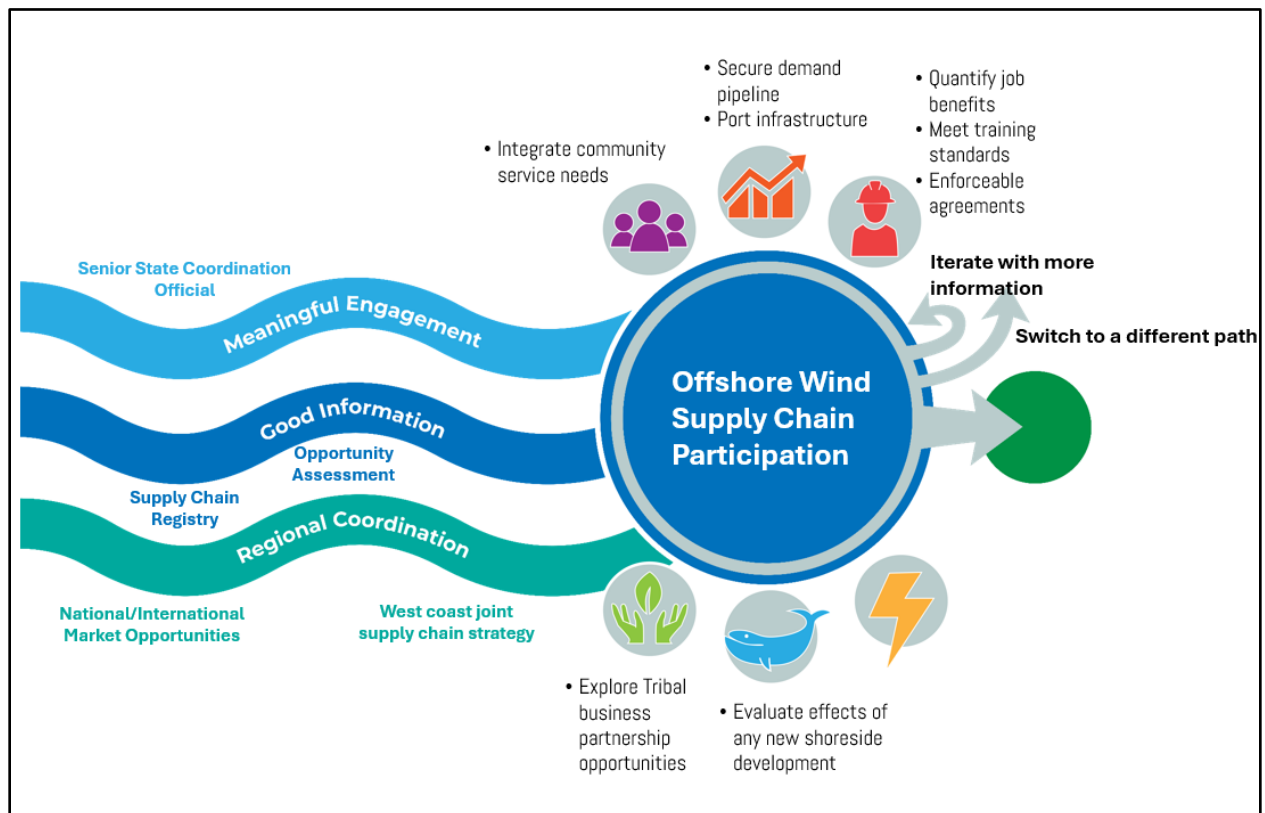
- Implement Adaptive Management Plan



Develop Oregon's offshore wind energy workforce

- Implement and enforce workforce agreements

4.7 Alternative Future: Pathway to a “Supply Chain Only” Outcome



4.7.1 Description of this Phase

Under this path, Oregon decides to not pursue full offshore wind energy development, but instead participates in the supply chain needs of development projects internationally or in other parts of the region. The supply chain is an acknowledged bottleneck to offshore wind expansion globally, and the state has the potential to dedicate effort toward developing the industrial capabilities to assist in meeting this demand. The Roadmap development process identified the following actions and information important to have in place to achieve this path, including:

- Understanding the market opportunities is well-suited to Oregon's marine and industrial strengths and expertise.
- Employing state leadership to coordinate across the region and internationally and foster market opportunities for Oregon;

- Coordinating and cataloging existing supply chain industry capabilities within the state and identifying state intervention needs;
- Establishing the necessary workforce development and enforceable agreements consistent with state standards;
- Explore opportunities for business partnership with Tribes and local communities to participate
- Identify port infrastructure needs and coordinate development consistent with state and local land use planning processes;
- Understanding and supporting community essential service needs to support supply chain industry growth.

5 OBJECTIVES, STRATEGIES AND ACTIONS

Within Oregon's current policies, there are important gaps that, if filled, could better protect the connections between people, the environment, and the economy (see Section 3).

This section describes the strategic actions, organized by the three cross-cutting streams and six objectives described in Section 3. Taken together, these actions can facilitate travelling a path to the future for offshore wind that makes the most of the opportunities available to Oregon at this moment while staying consistent with the policies, interests, and values of Oregon and our communities.

5.1 Actions to Improve Meaningful Engagement, Good Information, and Regional Coordination

5.1.1 Ongoing Stream: State-Led Tribal Consultation and Community Outreach and Engagement Across Multiple Phases of Offshore Wind Development

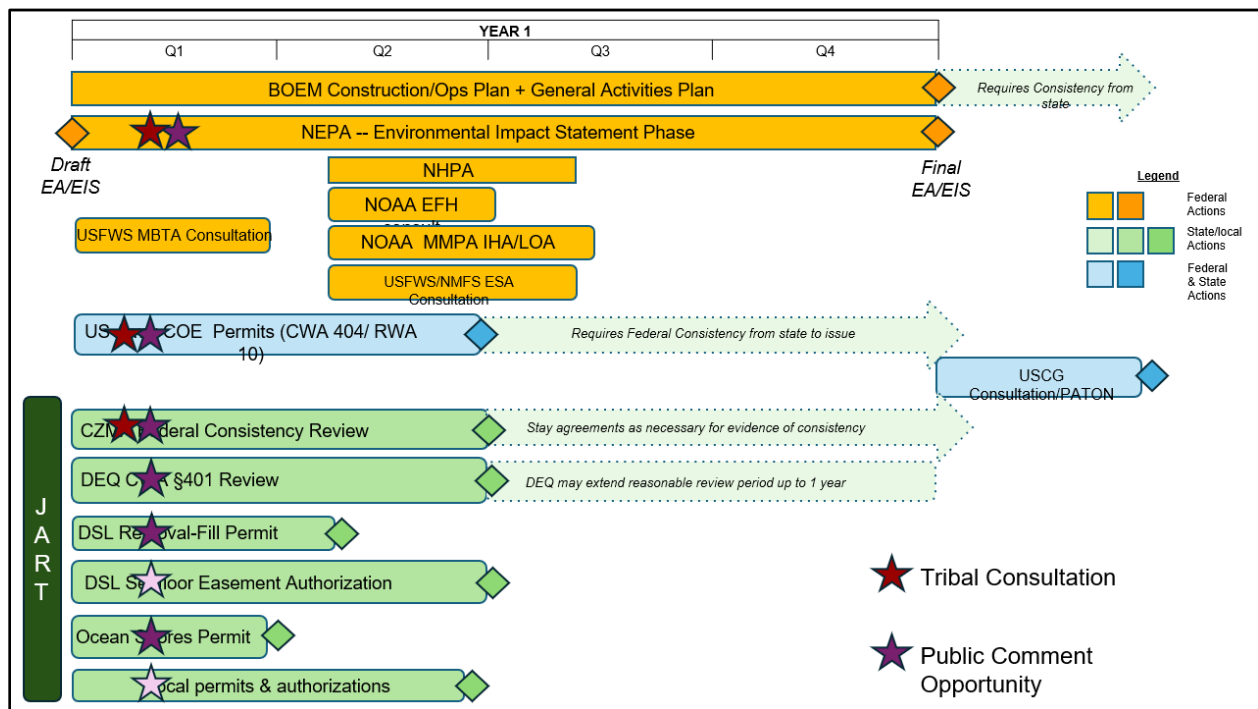
There needs to be adequate resources for the kind of two-way communication at the center of meaningful engagement, and the opportunity and commitment to open that two-way communication. Specific actions include:

- Identify the resources state agencies in charge of convening engagement need;
- Coordinate with federal agencies and developers on outreach and engagement efforts to retain state involvement and reflect state interests in community engagement;
- Build community engagement partnerships with other agencies, local government staff, and non-governmental organizations to combine resources and facilitate consistency in information to communities;
- Clarify community participation expectations in Joint Agency Review Teams and other regulatory processes at the state and local level, and document these opportunities in policy or guidance; and
- For state-led engagement activities, establish and consult an ongoing body/steering committee to guide engagement.
- The State of Oregon must operate consistent with state law and policy related to consultation with the Nine Federally Recognized Tribes of Oregon

5.1.1.1 Action: Engage in continual public information sharing early in the process and throughout all phases of development

While there are formal opportunities for public input during the state federal consistency review of federal permits, plus the state and local permits and authorizations related to portions of an OSW project that occur within state territory (subsea cables in the Territorial Sea, cable landings, shoreline

support facilities, etc.), the state should provide additional opportunities for public engagement and information throughout the pre-permitting and permitting stages.



Between a leasing action and the permit review process, the BOEM regulations provide for a period of up to five years for a lessee to conduct site investigation activities and prepare a COP application. During this time, the state should:

- Implement three-party ongoing engagement between the state, Tribes, and the project developer; (Section 5.4.11)
- Participate in a West Coast Science Collaborative initiated by California and provide regular public updates on the status of regional uncertainty management efforts and the state offshore wind research agenda; (Section 5.3.2)
- Engage an Oregon-specific science entity focused on OSW that is transparent to the public. (Section 5.3.2)
- Provide regular public updates on characterization activities being conducted by the lessee, either through OPAC or via separate public meetings; (Section 5.3.2)
- Provide guidance and technical support to Community Agreement conversations between potentially affected communities and lessees; (Section 5.5.1)
- Participate in an Offshore Wind Energy Fisheries Collaborative. (Section 5.5.2)

During the federal consistency review of a COP, the state should continue the above activities and also conduct additional public engagement directly on the coast, beyond what is required in the federal regulations governing these reviews. The state should also seek formal consultation with the nine federally recognized Tribes of Oregon and seek information about how the proposed project effects intersect with established policies of Tribal governments (Section 5.4.7).

If a project permit is approved, the state should host periodic public information updates throughout the construction and operation stages, either through OPAC or via a separate agency-hosted venue.

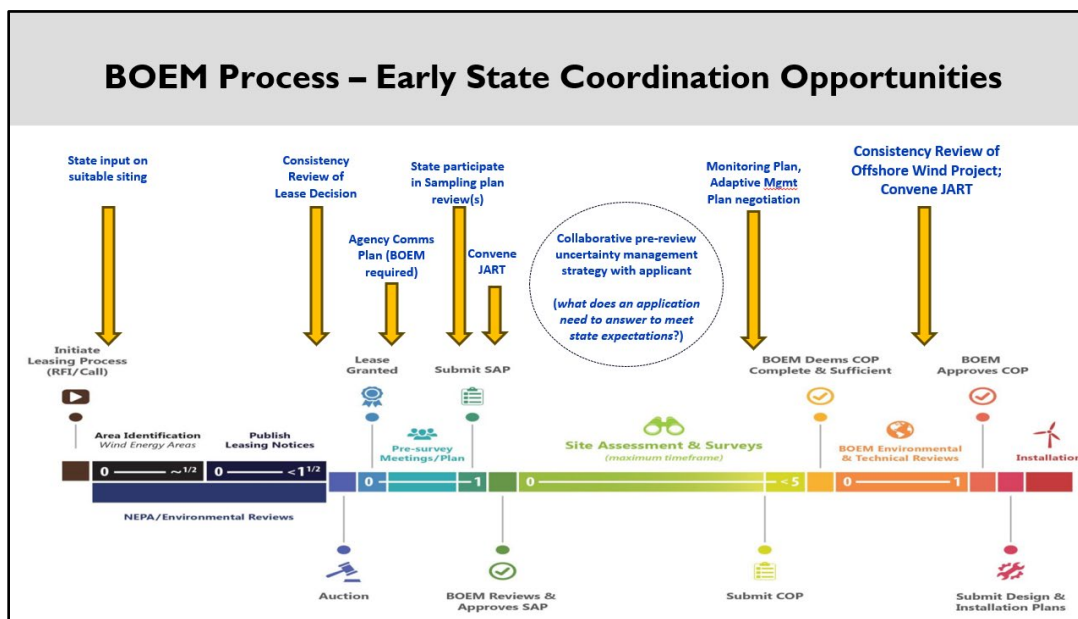
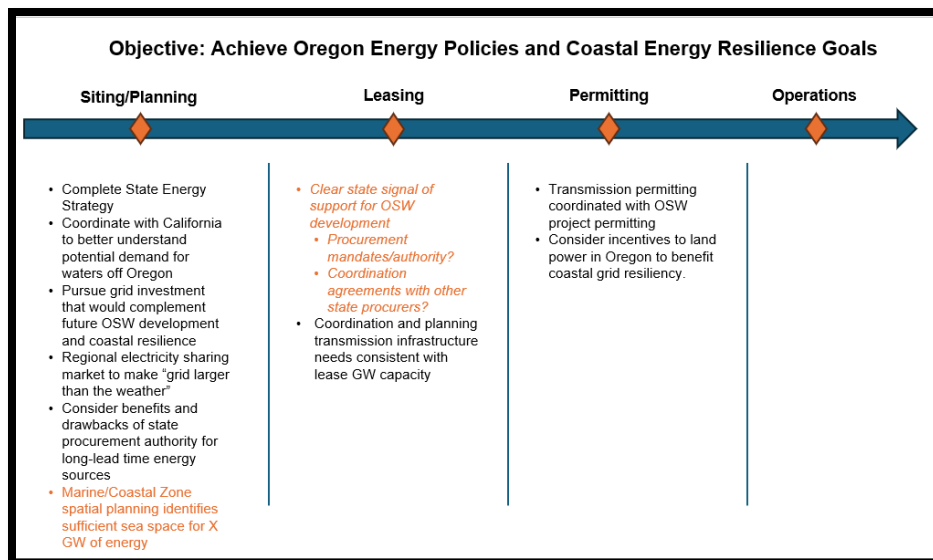


Figure 23. Early state coordination opportunities to manage project uncertainty and risk.

5.2 Objective: Achieve State Energy and Climate Policy Objectives and Clarify the Paths to Development

Oregon is one of six western states with a 100 percent clean energy mandate. HB 2021 mandates that Oregon's investor-owned utilities (IOUs) reduce greenhouse gas emissions associated with electricity sold to Oregon consumers to 80 percent below baseline emissions (average 2010-2012) levels by 2030, 90 percent below baseline emission levels by 2035, and 100 percent by 2040. Utilities have predicted Oregon's energy demand will increase by more than 20 percent during the next five years. This increase in demand will result in challenges in meeting clean energy mandates and force the state to think critically about the costs to customers.



5.2.1 Strategy: Articulate the Value of Offshore Wind to the State and Set the Stage for Future “Market Signals” that Oregon is Interested in Pursuing Offshore Wind

5.2.1.1 Action: Complete coastal and state-wide socioeconomic studies to quantify and articulate the economic costs and benefits and job opportunities from offshore wind for Oregon

Many of the potential benefits that could derive from offshore wind energy do not fit the traditional model of “least cost, least risk” measures of prudence that govern large utility energy portfolio investment. Similarly, the potential economic benefits and jobs offshore wind may offer the state represent an additional incentive that should be formally quantified and considered. The state should support additional study of the potential costs and benefits of offshore wind energy to inform future policy and investment decisions. The Oregon Energy Strategy includes recommended Clean Energy Action 3, which is to, “Report on developments in emerging technologies, including long-duration storage, enhanced geothermal, floating offshore wind, and small modular nuclear reactors, to identify the role they can play in meeting the state’s electricity needs; also explore opportunities for pilot programs in the near-term.” This Roadmap endorses this recommendation with a further recommendation that this analysis considers holistic costs and benefits beyond meeting the state’s energy needs alone.

5.2.1.2 Action: Continue to refine the Oregon Energy Strategy in future iterations to account for changing conditions related to offshore wind and the regional energy market

The Oregon Energy Strategy’s reference model included assumptions that resulted in it not including offshore wind energy in Oregon’s future energy mix. These included an assumption that California fully realizes its goal to develop 25 GW of offshore wind by 2045, cost models that showed alternative emerging technologies beating offshore wind by very small projected margins, and a coarse “pipeline model” representation of the actual state grid infrastructure that does not account for real transmission

and market access. The model might also be refined through consideration of other beneficial factors such as economic development and grid reliability/resilience value of different electricity generation alternatives. As currently presented in the reference case, the offshore wind industry may perceive that the state is less interested in pursuing opportunities to continue exploring offshore wind or in seeking to provide the market signals the industry has expressed a need for in order to consider investment in Oregon. This Roadmap recommends that the OES be periodically reassessed with updated modeling to test and refine the baseline findings and evaluate whether other strategic considerations or actions might emerge over time based on updated assumptions.

5.2.1.3 Action: Evaluate energy infrastructure needs and see what role OSW and other renewables can play, with a focus on energy resilience and reliability.

Consideration of the grid system value of increased coastal energy resiliency, reduction of east-west grid congestion over the Coast Range, and greater overall resource reliability and predictability of offshore wind compared to other renewable resources may increase the relative value of offshore wind compared to other renewable resources if holistically considered in energy rate regulation and policies. The state should conduct studies of its grid infrastructure to more clearly identify and quantify the potential benefits of improved grid resilience and reliability. The analysis should attempt to articulate the full value of these benefits to lives, property, and community well-being as additional factors to consider in future energy policy, regulation, and investment decision-making.

5.2.2 Strategy: Prepare Oregon’s Energy System for Offshore Wind Potential

5.2.2.1 Action: Support investments and planning for grid infrastructure to increase resilience and facilitate new energy options

Coastal transmission upgrades are a recognized need that must be addressed if offshore wind energy is to be available in Oregon and the greater region. The degree of need varies according to the scale of OSW development and where the power lands on the coast. The Oregon Energy Strategy includes a recommendation for Clean Energy Action 1, which is to, “Establish a state transmission entity with the authority to (1) identify and designate transmission corridors; (2) pursue partial siting and permitting approvals for future projects in those corridors; and (3) provide direct financial support through state bonds for projects that are determined to benefit the public interest.” Policies that contribute to expanded transmission infrastructure have the potential to increase coastal grid resiliency under scenarios that both do and do not include offshore wind development.

5.2.2.2 Action: Coordinate with California and Washington on supply chain opportunities, regional power market opportunities, and transmission planning related to offshore wind

The state should continue to explore ways to work with neighboring states to increase the regional connectivity of the grid and expand the electricity market to a scale that is “bigger than the weather”. A west coast grid that can more easily buy, sell, and transfer power would provide greater cost stability and reduce the risk of investing in generation sources like offshore wind while increasing the overall efficiency of the grid by increasing access to users who need power when it is produced. A regional market could also facilitate the region as a whole to meet its decarbonization goals. Consideration should be given to how a regional power market relates to Oregon Renewable Portfolio Standards and

attainment of the clean electricity goals in HB 2021, particularly the effect to Oregon lands and resources if greater overall energy development is needed to support both Oregon’s goals and the goals of other states.

5.2.2.3 Action: Explore potential economic incentives, energy planning policies, procurement frameworks and authorities, or other amendments to Oregon energy policy that might attract and facilitate long lead-time resources such as offshore wind.

The Oregon Energy Strategy includes a number of recommended actions to incentivize and facilitate investment in renewable energy technologies that are either still emerging or whose value is based on more factors than the traditional “least cost, least risk” regulatory model used by the PUC.

Recommended Action 3 is to, “Report on developments in emerging technologies, including long-duration storage, enhanced geothermal, floating offshore wind, and small modular nuclear reactors, to identify the role they can play in meeting the state’s electricity needs; also explore opportunities for pilot programs in the near-term.” Offshore wind is among a class of emerging energy technologies that requires large capital investment and long lead-times, which necessitates policy and market to reduce risk and encourage the maturity of these technologies. The Roadmap echoes this recommendation.

Action 6 in the Energy Strategy is to, “Direct the OPUC to investigate opportunities to modify utility business models and ratemaking practices to enhance marketplace competition and thereby lower costs in utility planning and resource procurements.” This recommendation could lead to the PUC reforming its regulations to incentivize opportunities such as large-scale generations projects like offshore wind.

5.2.2.4 Action: Consider policy that would require offshore wind energy offshore Oregon to connect to the Oregon Coast grid

A potential future scenario exists where due to the electricity demand and cost of OSW, the power may be purchased by a neighboring state or utility. If this were to occur without first connecting to the Oregon coastal grid, Oregon coastal communities would not receive direct energy resilience benefits that could come from having a new source of electricity generation west of the Coast Range, and the state and large would not benefit from the potential reduction in east-west transmission congestion that could facilitate more renewable energy growth east of the Coast Range. The state should consider implementing a policy that requires an offshore energy project to provide direct grid resilience benefit to coastal power users.

5.2.3 Strategy: Identify Investment and Planning Needs

5.2.3.1 Action: Clarify port infrastructure development needs and integrate with existing estuary management plans and other applicable enforceable policies

The state should continue to investigate the role and necessity of a major port development project to the technical and economic feasibility of potential future offshore wind energy development offshore Oregon. The technology and development options for the offshore wind ecosystem continue to evolve, and there may be future options to support offshore wind turbine staging, integration, and operational maintenance at sea or utilizing floating wharf infrastructure that does not require major estuary

modification or pose challenges to existing critical infrastructure (e.g., the Coos Bay Regional Airport). Further information could help to refine the alternative futures considered in this Roadmap.

5.2.3.2 Action: Assess community complementary investment needs to identify investment needs under different scenarios

Development of an offshore wind industry in Oregon would necessitate investment in coastal community capacity to support workforce development. The state should work to proactively assess these community needs (e.g., housing, infrastructure, social services) under different scales of offshore wind energy development to better understand the challenges and investment required.

5.2.3.3 Action: Study the opportunities and challenges associated with differing models of offshore wind ownership (investor-owned vs. public-owned vs. community-owned vs. other)

[Note for Reviewers: This topic is still being researched and considered.]

5.2.3.4 Action: Conduct Supply Chain and Workforce Assessment and Planning (relates to actions in another section of the Roadmap)

Development of an offshore wind industry requires a trained and ready workforce and establishment of a supply chain of raw materials and components. The state should coordinate or participate in supply chain and workforce assessment and planning based on realistic timelines of when these critical aspects of the system would be needed.

5.3 Objective: Protect the Environment and Species (Marine, Terrestrial, Estuarine, Freshwater)

Any OSW development would need to be consistent Oregon’s enforceable policies meant to conserve wildlife (e.g., birds, fish, invertebrates, marine mammals, etc.), their habitats (e.g., sand, reefs, corals, essential fish habitats, etc.), and the ocean processes that are fundamental to food webs and larger atmospheric cycles.

5.3.1 Strategy: Strengthen State and Local Government Policies, Processes, and Capacity to Address Environmental Effects from Offshore Wind

5.3.1.1 Action: Amend Oregon’s Territorial Sea Plan (and other policies as applicable) to Address Gaps

The state should work with the Ocean Policy Advisory Council, relevant state agencies, and the legislature as necessary to complete rulemaking that addresses the policy gaps and opportunities identified in this Roadmap. These activities should be completed in the near-term before the resulting policies might be needed in future leasing or permit reviews.

5.3.1.2 Action: Support Agency Capacity for Building Expertise in Offshore Wind Effects

As described in the Offshore Wind Energy Capacity Assessment (Appendix X), participation in offshore wind energy siting, leasing, and permitting processes requires substantial investment of resources from state agencies, Tribes, and local governments. To address these capacity needs, the state should seek legislative action to provide adequate capacity support so the state and its partners can build the necessary technical expertise to participate fully in future offshore wind-related activities and accomplish other near-term actions identified in the Roadmap.

5.3.1.3 Action: Monitor changes to federal environmental protection standards and adopt new state policies as needed to ensure “no backsliding”

Oregon enacted a "no backsliding" policy through the Oregon Environmental Protection Act (HB 2250) in 2019, which directs state agencies to maintain baseline federal environmental standards even if those standards are weakened at the federal level. This law currently applies to the Federal Clean Air Act, Safe Drinking Water Act, and Federal Water Pollution Control Act. ORS 468.149 requires that if a change to federal environmental law makes standards less protective of public health or the environment, the Oregon Health Authority and Environmental Quality Commission must maintain state standards that are at least as protective as the original "baseline federal standards". The state should (consider?) adopt and implement a similar approach to other environmental protection standards such as for endangered species and habitats.

5.3.2 Strategy: Responsibly Manage Uncertainty and Risk

Embedded in Oregon’s enforceable policies (Statewide Planning Goal 19 and Territorial Sea Plan Part Five) is a precautionary approach⁹³, recognizing that where there is a reasonable threat of irreversible harm to an irreplaceable resource, such actions should be treated with caution, and it is the responsibility of the proponent of an action to provide information supporting the absence of significant harm. Multiple enforceable policies in Oregon [cite] also articulate a mitigation hierarchy, starting with the foremost principle of avoiding harm and then being well prepared to avoid, minimize, rectify, reduce or eliminate over time, and finally compensate for remaining unavoidable impacts. OSW development would need to be consistent with Oregon’s enforceable policies for the mitigation hierarchy.

Territorial Sea Plan Part Five contains extensive information and inventory requirements to assess the potential individual and cumulative effects of marine renewable energy projects. However, Part Five also recognizes that perfect certainty is not possible, and that an adaptive management approach may be a viable way to address irreducible uncertainties that may only be answered when a project is installed in the water.

Although the state’s review role of a federal Construction and Operations Plan ends once concurrence is given that the COP is consistent with state enforceable policies⁹⁴, the state has an opportunity to establish conditions on its concurrence for any aspects of the project where additional actions or information are needed to demonstrate consistency with the policies. Oregon could use this mechanism of conditional concurrences to require and prescribe an adaptive management plan and framework that defines monitoring requirements and prescribes the response an applicant or federal agency needs to take if the information emerging once the project is operating indicates unexpected or unacceptable conditions or effects.

5.3.2.1 Action: Identify Suitable Sea Space for Development Led by State Interests and Policies

The BOEM-led offshore wind siting process from 2019-2024 attempted to incorporate different interests, perspectives, and sources of information available at the time to identify two Wind Energy Areas offshore Oregon. The process ultimately failed to proceed to leasing. The Offshore Wind Energy Roadmap Roundtable sees an opportunity to pursue a state-led integrated spatial planning process that could encourage and include new information, widen the scope of site suitability analysis to the entire Oregon coast, integrate offshore and onshore suitability considerations (including federal waters), and identify early in the process those areas that would face potential or likely inconsistency with state enforceable policies later in the permitting process. The benefits of this effort would be greater regulatory certainty for developers and a stronger emphasis on avoidance as a means to address effects of concern. Another benefit may be to identify applicable policies currently in place as well as potential additional policies needed to secure the state’s interests and move forward responsibly, should offshore wind energy be proposed off Oregon in the future.

⁹³ National Oceanic and Atmospheric Administration. (2024). Precautionary Approach. Accessed at <https://www.noaa.gov/precautionary-approach>.

⁹⁴ Other state or local authorizations related to subsea cables and onshore infrastructure may provide additional means for ongoing regulatory oversight, but these authorities would not extend to an offshore facility in federal waters.

Once state agency roles are identified and resources are allocated to pursue this effort, DLCD should convene, guide, and/or drive an effort to update spatial planning information for the entire Oregon coast, inclusive of:

- Federal waters;
- The territorial sea; and
- Onshore and estuarine areas (e.g., for infrastructure, transmission, navigation or port utilization, habitat mitigation needs).

Marine/Coastal Zone spatial planning should identify areas of the ocean where Floating Offshore Wind energy (OSW) infrastructure are: A) likely consistent with state policies and goals, B) potentially consistent based on meeting conditions and further review, and C) less suitable or inconsistent with state policies. A desired outcome of the effort would be to reveal areas that are viable for development, areas where the state would require additional information, and areas where development may be more challenging when accounting for applicable state standards. BOEM retains leasing authority on the Outer Continental Shelf in federal waters, but information from the state regarding anticipated future constraints is an important input to federal risk-based decision-making.

A spatial planning effort may be combined with a process to update content and standards in Parts Four and Five of the Territorial Sea Plan, which may include spatially applicable standards that could be proactively projected into areas of federal waters within the state’s review jurisdiction. Rather than constitute a “zoning” process for federal waters, the output of the Marine/Coastal Zone spatial planning process may constitute more of an “inventory” of policy-based suitability risks based on the current research and information available.

If resources are available, the state could support the sea space suitability analysis by partnering with other researchers (e.g., NOAA, academic institutions) to deploy research buoys to monitor ocean conditions and investing in geophysical surveys to improve the state’s understanding of seabed topography and habitats of unique or sensitive nature, thereby reducing risks and enabling earlier wind farm designs. These measures could serve both the state’s planning effort and a potential offshore wind interest.

This effort will require resources from government, nonprofit, and business sectors. A fiscal impact analysis is currently under development.

In order to successfully identify suitable sea space, the spatial planning process should explicitly define a goal of finding an amount of space suitable for a specified amount of energy production capacity. The process should be limited to a duration of approximately 18 months. The process should make every attempt to include OSW industry participation and expertise to identify feasibility needs and constraints. The process should be inclusive of multiple forms of knowledge (government, university, and private business information; traditional knowledge; and lived experiences from traditional ocean users) and coordinated with planning efforts in California and Washington.

5.3.2.2 Action: Develop and Pursue a Research Agenda for Oregon

If the state is going to enact an offshore wind presence off the coast of Oregon, a number of state and region-specific research needs have been identified. At the direction of the Ocean Policy Advisory

Council, a Scientific and Technical Advisory Group volunteer sub-working group reviewed the current literature around the state of the science for floating offshore wind, coupled with uncertainties and effects of concern specific to Oregon and the California Current Large Marine Ecosystem. Additional feedback was obtained through consultation with the Offshore Wind Energy Roadmap Roundtable that advised in the development of this plan. This review culminated in the creation of an initial set of Research Agenda Recommendations and a framework for further prioritization, included as **Appendix X** of this Roadmap.

The manner in which these uncertainties and questions are resolved may take a myriad of routes, including:

1. Collection of new data from comparable projects and ecosystems around the world that can provide new information regarding the likelihood or severity of an effect of concern;
2. Collection of new data or information specific to Oregon or the CCLME regarding species, habitats, uses of ocean resources, or community socioeconomic effects, which may be measured against relevant state policies;
3. Implementation of an Adaptive Management and monitoring program that can identify changes resulting from an OSW installation offshore Oregon. This strategy would need to be coupled with sufficient baseline information to detect a change and a specified plan of action post-permitting to respond to unexpected changes.

The Oregon offshore wind research agenda should be accomplished in coordination with other research efforts around offshore wind in the US and particularly on the west coast as part of the West Coast Science Collaborative described in this subsection.

Timing of Research Needs

Before leasing, Oregon will work to improve our understanding of the cumulative capacity of the California Current Large Marine Ecosystem to accommodate offshore wind technology from an environmental and socioeconomic perspective. Further leasing offshore Oregon should not progress until a cumulative impact assessment has been completed. This cumulative assessment can be conceptual in nature, and need not answer all questions or uncertainties about a specific configuration or technology of a future project in the lease area. Sensitivity analysis of the relative effects from a range of likely project proposals should be included to account for uncertainties that may not be able to be answered before a project exists and the actual effects can be monitored directly. Sensitivity analysis could also include scenarios related to potential changes to ocean species and habitats. The cumulative assessment could provide a basis to evaluate successive individual project proposals relative to the overall capacity “budget” of the region to accommodate the environmental, economic, and social effects of that project. The cumulative assessment could also evaluate viable development scenarios that are less than the maximum development “budget” scenario.

The research agenda timing is also important to the completion of a state-led spatial planning and sea space suitability effort. Some information about the presence of uses and resources important to the state, and the potential effects to those resources, would identify those parts of the potential development areas that are of greater or lesser concern relative to state policies. Spatial planning can also inform the spatial dimension of cumulative impact.

The research and information needs for spatial planning during the next 4-5 years should be focused more on the “inventory” of valuable resources than the potential effects and benefits from a project on those resources. A cumulative impact assessment prior to leasing would then address a range of potential effects under different development scenarios.

Before the state issues a decision that a floating offshore wind project is consistent with Oregon Enforceable Policies, the specific questions identified in the Research Agenda must be resolved, such that they provide sufficient evidence that the project will be consistent with state enforceable policies. If research needs are not met at the time of COP review, the state may either extend the period of review until the necessary information is provided or else object to the project. In the event of objection, the project would not move forward barring a successful appeal to the US Secretary of Commerce.

Oregon should begin coordinating with the West Coast Science Collaborative upon its launch (expected early 2026) to meld research needs and seek efficiencies in region-wide research efforts.

Oregon should support the early collection of baseline information that may be used in future offshore wind project evaluations. The baseline information should be at a level of resolution to be useful in future development. For example, absent Wind Energy Areas to focus a baseline information need, it is likely not efficient to collect fine-scale information about seafloor habitats. Through the course of state-led sea space suitability planning (Section 5.3.2), broad priority areas may be defined (e.g., high wind potential, low conflict zones, examples are the prior WEAs) where it may be appropriate to initiate scalable, habitat-focused baseline data collection that can be refined later if WEAs are designated. If baseline information collection is pursued, it should be in coordination with other information needs to identify co-benefits.

OPAC and the Oregon Department of Energy should remain engaged in offshore wind research in future years and maintain the Research Agenda status. OPAC should work with relevant state agencies and other entities to stay abreast of offshore wind technology advancements relevant to Oregon.

Adaptive management planning should be completed prior to permitting for individual OSW projects. State enforceable policies in Part Five of the TSP do require adaptive management plans, but the level of detail of the plan and the thresholds for management actions are not well defined in the policy. The Adaptive Management Plan should include sufficient specificity and “triggers” to provide the state the greatest ability to respond to unexpected effects after the state role in federal permitting decisions has passed.

Funding Support Needs:

The Research Agenda developed to support this Roadmap is incomplete and requires dedicated resources to capture the current state of knowledge relative to the uncertainties and research needs identified.

The funding and implementation of a cumulative impact assessment is uncertain. At present, and based on past experience with the Programmatic EIS that was initiated after California’s first leasing round, it is unlikely that a federal agency will lead a cumulative assessment effort prior to leasing in Oregon. Similarly, the offshore wind industry is unlikely to invest in a significant cumulative assessment effort

when it is now known which development companies would proceed to a lease. To address this challenge, the State of Oregon should work with the new West Coast Science Collaborative or one of the regional universities to lead a cumulative assessment, supported by a variety of funding sources including the state.

Absent this investment by the state, it is unlikely that a leasing decision would be supported by a cumulative impact assessment. The fallback position would be for the state to proceed with leasing absent a cumulative assessment, on the knowledge that cumulative impacts are required to be included with a project application to be consistent with existing state enforceable policies. Without this assessment, the state could object to the project under its CZMA federal consistency authority, and the lease would eventually be forfeited by the developer. This was the strategy taken during the 2024 BOEM leasing decision.

5.3.2.3 Action: Establish a Research Collaborative to build Oregon-specific scientific consensus and coordinate with other west coast states

Funded by the 2024 California legislature, the California Ocean Protection Council has begun the process of establishing a West Coast Science Collaborative dedicated to addressing the regional science and research needs associated with offshore wind development. The WCSC is following the example of the Regional Wildlife Science Cooperative⁹⁵ on the east coast, incorporating fisheries impacts and also including the model of the Responsible Offshore Science Alliance (ROSA)⁹⁶.

The RWSC is hosted by the two Regional Ocean Partnerships on the Atlantic coast, the Northeast Regional Ocean Council (NROC) and the Mid-Atlantic Regional Council on the Ocean (MARCO), with support from the Coastal States Stewardship Foundation.

[Note for reviewers: The proposed structure of the WCSC is currently under development as of September 2025. Additional information will be included when it is available.]

The benefits of joining the WCSC include:

- The WCSC can guide the prioritization and funding of research activities consistent with an Oregon and regional research agenda. This could result in collaborative interstate research efforts that make the most of limited funding and avoid overlapping or duplicative work. There may also be synergies where a research effort in one state could be slightly modified or expanded to address the needs of another state and increase the relevance of the science overall.
- State agencies responsible for making permitting decisions and assessing OSW effects relative to state policies will be able to benefit from the collected wisdom of the WCSC to support science-based decision-making.
- The WCSC has the opportunity to seek scientific consensus among those interests and organizations who will eventually participate in state decision-making through public processes,

⁹⁵ <https://rWSC.org/>

⁹⁶ <https://www.rosascience.org/>

consultation, or other involvement. This may include state and federal agencies, tribes, fishing communities, academia, environmental non-government organizations, and other interested parties. If successful, the WCSC can be a place for vetting of the science and provide a forum for discussing remaining concerns or uncertainties collectively.

- The WCSC can integrate multiple types of knowledge, including traditional and indigenous ecological knowledge from Tribes, lived experience from ocean users such as fisheries, and the specific needs of affected communities.
- A regional science entity could play a key role in developing a cumulative impact assessment as described in the Research Agenda action above.

Action Option 1:

The State of Oregon should create a multi-party science collaborative, similar to one starting in California, that brings together state and federal agencies, Tribal staff, university researchers, fisheries users, and other non-governmental interests to be a clearinghouse for the state of the science and direction of resources toward priority research areas. This state body should both act as an independent science collaborative for Oregon and represent Oregon's interests in the WCSC led by California. The Department of Land Conservation and Development should lead the Oregon-specific science collaborative under direction of the Oregon Ocean Policy Advisory Council. The state should also consider a policy mandating consultation with a state science entity when making significant state decisions related to offshore wind energy development, such as procurement, leasing, permitting, etc.

Action Option 2:

Oregon state agencies should participate in the WCSC led by California. To support representative participation, Oregon state agencies should convene regular meetings with multiple parties within Oregon, report the activities and findings of the WCSC, and gather feedback to advise on state interests. The Ocean Policy Advisory Council could serve as a convening body for interacting with the WCSC and discussing state-specific science and research needs similar to the function of a state-led offshore wind science collaborative; however, this work would have to be balanced with OPAC's other priorities.

Funding Support Needs:

Action is needed by the Legislature to fund and direct Oregon's creation of a science collaborative. As an interim (or permanent) step, the Legislature could support state agency involvement in the California-led WCSC until the appropriate time to consider forming a state-specific science collaboration body if and when offshore wind in Oregon is reinitiated.

There would be added benefit for a fund to be established that would allow the state to join effort with other states on specific research activities and gain cost efficiency of research that would benefit both the state and the region. The Oregon Ocean Science Trust may represent a vehicle for funding offshore wind research or serve as a model for a separate dedicated entity focused on offshore wind energy science and research needs.

5.3.2.4 Action: Funding Support for an Oregon Offshore Wind Research Agenda and Oregon Offshore Wind Energy Science Collaborative

The state should establish a funding mechanism to support implementation of an Oregon Offshore Wind Science Collaborative and an associated Oregon Offshore Wind Research Agenda. Such a fund could follow the model of the Oregon Ocean Science Trust, which was established through Senate Bill 747 in 2013 and is designed to collect and distribute funding to promote ocean and coastal knowledge, research, and monitoring. It is recommended that the mechanism allows third-party grants, donations, or gifts to supplement funding support. An initial focus of an Oregon Offshore Wind Science Collaborative should be to build on the volunteer-led research agenda efforts in this Roadmap and refine state science priorities through a resourced effort.

5.3.2.5 Action: Define a Framework for Monitoring and Adaptive Management Specific to Offshore Wind

For an offshore wind energy project in federal waters, once the state has issued a federal consistency decision at the COP phase (prior to construction), there is no formal means for the state to hold ongoing oversight or enforcement of the project in the event the at effects are different than anticipated or if there is an incident such as turbine component failure. Under the CZMA regulations, a state cannot “take back” a decision that a project is consistent with state policies if the effects are later found to be different from those anticipated during the permitting phase.

Part Five of the Territorial Sea Plan requires developers to provide a Monitoring Plan and an Adaptive Management Plan. The purpose of the Monitoring Plan is to, “provide for the implementation of a routine standardized monitoring program for potential impacts on specific resources as specified by the resource inventory and effects evaluation”, and the Adaptive Management Plan is intended to, “provide a mechanism for incorporating new findings and new technologies into the operation and management of the project”. The Adaptive Management Plan is required to include performance standards and adaptation measures built on the monitoring requirements such that, “When the monitoring results show that the performance standards are not being met due to the operation of the facility, adaptation measures designed to bring the operation into compliance with the performance standard will be applied to the operation of the project.”⁹⁷ (TSP Part Five)

An example of an Adaptive Management Framework and Monitoring Plan in practice can be found in the example of the PacWave project led by OSU⁹⁸. The applicant collaborated extensively with relevant state and federal agencies before a permit application was submitted to clearly define project uncertainties and develop achievable mitigation and monitoring measures to address potential risks. The state should build on this work to develop Adaptive Management Plans for offshore wind energy projects that are incorporated into the project permits and enforceable by the federal agencies overseeing project activities after permitting. The state should also explore the additional step of instituting Adaptive Management Plans as contractual agreements directly with developers to provide

⁹⁷ https://www.oregon.gov/lcd/OCMP/Documents/TSP_Part5_PublicationVersion_correctedEPs_01172023.pdf

⁹⁸ https://www.oregon.gov/lcd/OCMP/FCDocuments/5.C.2_PacWave_FERC_Vol_III_Appendices_E-O_20190530.pdf

necessary evidence that the project can achieve state policy standards. By making these provisions contractually obligated, the state may have an additional enforcement mechanism and not have to rely exclusively on federal oversight of the permit.

In addition to ongoing monitoring requirements and a regular reporting and collaboration framework, the state should require clear response and accountability measures in the Adaptive Management Plans required under Part Five of the Territorial Sea Plan. These measures would be triggered if ongoing monitoring indicates the existence of unanticipated actual effects of project operation compared to the expected conditions.

During a future amendment of Part Five, the state should consider amending the Adaptive Management Plan requirements to provide further details and standards regarding the expectations for ongoing collaboration and mitigation measures.

5.3.2.6 Action: Clarify and Strengthen Accountability Measures for Offshore Wind Energy Projects throughout Their Entire Lifecycle

At the federal level, Following BOEM’s approval of the COP, BOEM hands off lead agency duties to BSEE. During Construction and Operations, BSEE oversees the implementation and maintenance of safety management plans developed by the lessee. BSEE also monitors the lessee’s management and evaluation of structural integrity and critical safety systems to ensure that the facilities are responsible for the operational life of the lease. The agency may conduct scheduled and unscheduled inspections to determine whether the lessee is in compliance with laws, regulations, and the terms and conditions of the lease, among other things. BSEE may also conduct investigations if an incident (such as a fire), injury, or fatality occurs. The agency may also take enforcement action, such as issuing noncompliance notices, cessation orders, suspension of operations, and certain lease suspensions, if necessary.⁹⁹

Enforceable policies should be updated so that any emergency response jurisdictions, actions, and post-emergency remedies are clear and timely between the state, BSEE, BOEM, and other relevant federal agencies. Oregon should seek to establish a memorandum of understanding(s) or agreement(s) with BOEM and/or BSEE to clarify roles and responsibilities – and potentially consider including other relevant federal agencies in this process. The emergency response plans required under Part Five should also require timely notification from project operators in the event of an incident. The state should also separately develop timely notification and involvement procedures for affected local jurisdictions and Tribes. That accountability between the State of Oregon, Tribes, OSW developers, and communities need to consider construction, maintenance, decommissioning, and waste management throughout.

Memorialized agreements with communities and affected ocean users should also include durable lines of communication, grievance processes, and compensation measures for economic or other harms. Enforceable Agreements and accountability measures are further discussed in Section 5.3.1.

Callout: Vineyard Wind Blade Incident in Rhode Island and Massachusetts

⁹⁹ [GAO-25-106998, OFFSHORE WIND ENERGY: Actions Needed to Address Gaps in Interior’s Oversight of Development](#)

Once an offshore wind project has been leased and authorized for construction by BOEM, responsibility for oversight of the project is transferred to the federal Bureau of Ocean Safety and Environmental Enforcement. In July 2024, a blade failure on one turbine at the Vineyard Wind project—under construction about 15 miles off the coast of Martha’s Vineyard, Massachusetts—caused one of three turbine blades to break off. Debris, consisting primarily of foam insulation and fiberglass pieces, washed up on local beaches. Local communities expressed concern about the potential impacts of the debris to the environment, marine life, and human health. BSEE sent a team to investigate the incident, according to officials. BSEE called for Vineyard Wind to cease power production and construction and conduct a risk analysis for personnel working in the area. One month following the failure, BSEE allowed Vineyard Wind to resume installation of turbine towers and nacelles and subsequently called for an analysis of the environmental harm caused by the blade failure. Vineyard Wind conducted debris removal following the blade failure, which the manufacturer attributed to a manufacturing flaw.

A 2025 Capstone project by the OSU Masters of Public Policy noted that, “While BSEE was onsite two days after the incident and issued the necessary suspension orders to cease operations while the incident response was underway, their communication to the state and local communities was viewed as insufficient, evidenced by U.S. Representative William Keating’s (MA-9) letter to the agency expressing concern over their lack of communication at the behest of many of his constituents.” The study further observed receiving conflicting answers as to whether BSEE would require or coordinate cleanup efforts in state waters and territory.

In addition to its direct oversight authority, BSEE is responsible for calculating the total amount of financial assurance a lessee is required to provide as part of lease execution. “If these funds are not enough to cover a potential response, the available funds are dispersed by the Office of Natural Resources Revenue (ONRR), with a priority for covering environmental and safety concerns first, as detailed in the MOU between the three agencies (BOEM 2017)” (OSU, 2025).

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5.3.2.7 Action: Involve State Agencies Early in Site Characterization Activities, Looking Ahead to Uncertainty Management Needs

Following leasing, there is a period of up to five years when the lessees conduct site investigation and characterization activities in the lease areas and potential cable corridors to shore as part of developing their project applications to federal and state agencies. The state should be involved early in any post-leasing data collection plans with developers, to increase the likelihood that the information collected may meet the requirements in the Territorial Sea Plan and other state enforceable policies. In the 2024 BOEM leasing federal consistency review, the state was able to secure multiple conditions to include state agency staff early in the information collection process, to ensure developers understand the

¹⁰⁰ <https://www.theverge.com/features/760555/vineyard-wind-turbine-blade-break-nantucket>

¹⁰¹ <https://www.gao.gov/assets/gao-25-106998.pdf>

¹⁰² Baldinger, L. Buys, C., Deines, M., Foley, A., Gustafson-Mecham, C., Harlan, R., Heide, S., Lawson, M., McCaslin, B., Mobley, L., Najam, B. A., Neleyun, G., Nelson, D., Okumu, G., Patrick, E., Rauch, P., Sepulveda, C., Tamplin, S. & Tapia, R. (2025). *Oregon’s offshore wind governance: Policy analysis, process evaluations, and the future of offshore wind development in Oregon* (Unpublished student report). School of Public Policy, Oregon State University. Report prepared under the direction of Drs. Valerie Berseth and Hilary Boudet.

information needs the state will have during its federal consistency review of a Construction and Operations Plan, years after a lease is issued. Similar conditions should be included in any future offshore wind leasing actions.

5.3.3 Strategy: Recognize the Effects of Shoreside Development as an Essential Component of an Offshore Wind Presence in Oregon

[Still to be discussed in the Roundtable and researched further by agency staff whether the Roadmap can include actionable recommendations to better integrate onshore development in conjunction with an offshore wind energy generation project due to the potentially different timing of these activities and the separate permitting actions involved.]

5.4 Objective: Protect Tribal Cultural and Archaeological Resources, Culturally Significant Viewsheds, Subsistence Activities, and other Interests of Tribes

Note on this Draft: The State of Oregon is currently requesting formal consultation with the Oregon federally recognized Tribes focused on the contents of this section and the Roadmap in general. The contents of this draft are subject to change based on the outcome of formal Tribal consultations.

Any OSW development would need to be consistent with Oregon’s enforceable policies meant to protect both A) the physical, cultural resources, gravesites, historic sites, and B) the locations that support cultural practices such as gathering first food and spiritual and religious sites. Federal and state governments have an obligation to establish meaningful consultation and collaboration with Tribal governments in the development of federal and state policies that have Tribal implications to strengthen the Government-to-Government relationships with Tribes.

5.4.1 Strategy: Protection of Culturally Significant Viewsheds

5.4.1.1 Action: Amend Part Five of the Territorial Sea Plan to Include Visual Effects of Cultural Significance to Tribes

Through a rulemaking process to amend Territorial Sea Plan Part Five, the visual resource protection policies may be amended to include specific consideration of culturally significant viewsheds for Tribes and to update the geographic areas that qualify as Class I viewsheds. The state may also consider additional qualifying criteria within Class I viewsheds to find the balance between visual resource protection values and the actual visual expression of potential turbines offshore. While DLCD’s Policy Agenda for all rulemaking, including the Territorial Sea Plan, must receive concurrence from the Governor’s office and the Land Conservation and Development Commission, an amendment could identify and inventory viewing locations of cultural importance to Tribes and establish criteria specific to the effects of offshore wind development on those viewscapes; however, it should be noted that the outcome of any rulemaking cannot be pre-determined.

Some Tribes may prefer to protect information about the specific location of viewpoints of cultural significance while simultaneously protecting those places from unacceptable visual impact. A challenge for future legislative action would be the process and methods by which culturally sensitive information can be protected from public disclosure. This may be accomplished by including new visual resource standards for culturally significant views separately from identification of those sites, which could occur as a need arises. This approach may further challenge a state-led sea space suitability process. Another challenge will be how to incorporate rediscovery of information about important locations that may be discovered in the future.

5.4.2 Strategy: Protection of Natural Resources as Cultural Resources

The State of Oregon recognizes the need to protect natural resources for their many values, including intrinsic, economic, recreational, aesthetic, spiritual, and cultural values. The state also recognizes that natural resources are cultural resources to Tribes. Natural resources may include species, habitats, or other environments of natural value, including natural resources of cultural significance that are not harvested for human uses by Oregon Tribes (e.g., whales)

5.4.2.1 Action: Protect Natural Resources as Cultural Resources by Implementing the Actions Identified in Section 5.3 (Protect the Environment and Species)

These actions include:

- Develop and Pursue a Research Agenda for Oregon
- Establish a Research Collaborative to build Oregon-specific scientific consensus and coordinate with other west coast states
- Define a Framework for Monitoring and Adaptive Management Specific to Offshore Wind, including an implementation plan and resources for long-term state oversight
- Clarify Accountability Measures in the event of emergencies, failures, or other unforeseen harms
- Involve State Agencies Early in Site Characterization Activities, Looking Ahead to Uncertainty Management Needs
- Amend Oregon’s Territorial Sea Plan [and other policies as applicable] to Address Gaps Identified in the Roadmap
- Support Agency Capacity for Building Expertise in Offshore Wind Effects
- Identify Suitable Sea Space for Development Led by State Interests and Policies
- Monitor changes to federal environmental protection standards and adopt new state policies as needed to ensure “no net loss” of standards.

5.4.3 Strategy: Protection of Archaeological Resources, including Underwater Villages

5.4.3.1 Action: Place conditions on any future offshore wind leasing or permitting consistent with the coordination and oversight conditions used in the 2024 BOEM leasing decision.

During the Federal Consistency review of the proposed BOEM leasing action in 2024, the state employed the above policies to negotiate a number of conditions related to the protection of archaeological resources.

5.4.3.2 Action: Require Qualified Marine Archaeologists for Certain Offshore Exploration Activities

During any future federal consistency reviews of offshore wind leasing, the state should interpret the enforceable policies under ORS 97 and ORS 358 such that in order to have sufficient evidence of consistency, a marine archaeologist equipped with the knowledge and experience necessary to perform

their work in seafloor environments is necessary to be present on survey vessels when conducting geotechnical exploration around certain land forms where there is familiarity from Tribes that the location of the bore may be important. The state should also require an Oregon Qualified Archaeologist (marine or other) to be present when cores are opened onshore.

5.4.3.3 Action: Include the Opportunity for Tribal Observers during Potentially Ecologically Disturbing Activities Offshore

During any future federal consistency reviews of offshore wind leasing or Construction and Operation Plans, the state should include a condition that Tribes be allowed the opportunity to have observers aboard vessels for activities with potential to disturb ecological resources. (e.g., sensitive marine resources like ocean floor habitats, corals, inhabitants, migrating whales). The condition should include that Tribal observer requests must be accommodated by project developers to the extent possible, and when not possible, developers must make demonstrable efforts to provide alternate means such as remote observation. Lack of funding should not be the primary rationale for not accommodating Tribal observer requests.

5.4.3.4 Action: Reduce Federal Barriers to Tribal Archaeological Participation through Credentialing Requirements

During any future federal consistency reviews of offshore wind leasing or projects, the state should include a condition that Tribal Historic Preservation Officers (or equivalent as assigned by a Tribe) and their designees are exempt from federal credentialing requirements for qualified archaeologists, on the basis that THPOs are their own experts on places of Tribal historic or cultural significance.

5.4.4 Strategy: Protection of Areas Used for Cultural Practices

5.4.4.1 Action: Encourage Local Policies to Protect Cultural Sites

The state through DLCD could encourage and potentially support local governments to establish agreements with Tribes to communicate about potential impacts to cultural resources and options for minimizing and mitigating impacts. Local governments may choose to model their coordination strategies after Coos Bay Estuary Policy 18, which requires the protection of cultural sites in addition to archaeological and historical sites, in consultation with Tribes.

5.4.4.2 Action: Seek legislative action to amend state statutes and rules to exclude cultural resource areas from public disclosure when necessary.

The current draft of the new state rule implementing Goal 5 would require local governments to accept a designation of a cultural area proposed by a Tribe. The local governments would retain the responsibility to run a public process to determine whether a proposed action is compatible with Goal 5 based on an economic, social, environmental and energy (ESEE) analysis.

In discussions with Tribal staff for this Roadmap, participants expressed concern with the idea of local governments keeping an inventory of cultural areas identified by Tribes. Instead, there was a preference for the State Historic Preservation Office to be the keeper and protector of cultural area designations, similar to the way SHPO maintains a database of archaeological resources that are protected by state law and not subject to disclosure. However, SHPO does not have the resources to take this on at this

time. Current state laws do not protect cultural resources from disclosure in the same manner that archaeological resources are protected under ORS 192.345.

5.4.4.3 Action: Require Cultural Site Inventories as Part of the Offshore Wind Process

The state should preemptively conduct a cultural resource site inventory as part of an offshore wind spatial planning process, which could inform planning decisions about places to avoid in future leasing. Alternatively, the Territorial Sea Plan and the state rules for Goal 5 should be revised to require (or direct local governments to require in the case of Goal 5) marine energy development proponents to commission a cultural resource inventory as part of the required information for land use decisions or seafloor leasing.

5.4.5 Strategy: Protection of Tribal Subsistence and Commercial Fishing

5.4.5.1 Action: Explicitly Include Tribal Fishing Uses in State Fishery Protection Policies

Territorial Sea Plan Part Five fisheries use protection standards specifically reference commercial and recreational fisheries, which is assumed to include Tribal commercial and recreational fishing, but the standards do not explicitly include Tribal ceremonial or subsistence fishing uses. An amendment to Part Five should consider explicitly including these Tribal fishing uses.

5.4.5.2 Action: DLCD should host a workshop to explore model language that could be used in future Memoranda of Agreement between offshore wind developers and Tribal governments related to Tribal fishery impacts.

The 7C Fishermen's Working Group effort in California is convening a space where fishing communities are meeting with developers, state agencies, and federal agencies to build a framework for ocean user agreements. Oregon should consider a similar process after any future leasing stage; however, prior to that time, the state can begin early informal workshops with Tribes and fishing communities to discuss their interests in a future negotiation, share information from other states, and begin to develop a model framework and language that clarifies and communicates their interests.

5.4.5.3 Action: Amend the Territorial Sea Plan Part Five area-specific fishery use protection standards to make them broadly applicable to types of environments rather than specific geographical areas. This includes the standard of presumptive exclusion unless the project proponent can demonstrate no significant adverse effect on areas important to fisheries and that there be no practicable alternative site.

See Section 5.5.2 for more information.

5.4.5.4 Action: Amend the Territorial Sea Plan Part Five policy around memorialized agreements to make them a firm requirement rather than an encouraged action. Regardless of an explicit policy change, the state should in practice seek evidence of consistency with the fisheries protection policies through memorialized agreements as it has done in past projects.

See Section 5.5.2.4

5.4.6 Strategy: Use Indigenous and Traditional Knowledge in State Decision-Making

- 5.4.6.1 Action: Amend the information requirements in Territorial Sea Plan Part Five to specifically require applicants to seek traditional ecological knowledge via consultation and include traditional ecological knowledge for areas potentially affected by an offshore wind project in the developer’s application to the state.

Indigenous and traditional knowledge is a recognized source of relevant information and evidence when the state is conducting reviews of offshore wind-related projects, both offshore and onshore for offshore wind support facilities. The state is open to incorporating these kinds of knowledge into the formal state review process,

- 5.4.6.2 Action: Include Tribes in a Research Collaborative to build Oregon-specific scientific consensus and coordinate with other west coast states.

The State of California is currently developing a research collaborative that would include state agencies, universities, tribes, fishing groups, and other interests in a shared “science governance” organization. The purpose of the organization would be to assess the state of the science, identify research needs, and interpret new information relevant to the California offshore wind development as it comes in, with an ultimate goal of building a shared scientific understanding and a resource that state agencies could consult when making permitting decisions. The Roadmap process for Oregon is exploring whether a similar model would be appropriate to follow in our state. Such a collaborative would include Tribal representatives and seek to integrate Indigenous and Traditional Knowledge. Tribal capacity to participate in a research collaborative is a significant challenge that the state or others should address through capacity grants or other methods to compensate Tribes for their participation in an ongoing collaborative process.

- 5.4.6.3 Action: Conduct state-led marine/coastal zone spatial planning to identify suitable sea space for offshore wind development

The Roadmap process is considering whether to recommend a state-led spatial planning process, inclusive of federal waters, the territorial sea, and onshore and estuarine areas. A desired outcome of the effort would be to reveal areas that are viable for development, areas where the state would require additional information, and areas where development may be more challenging when accounting for applicable state standards. The process should be inclusive of multiple forms of knowledge (government, university, and private business information; traditional knowledge; and lived experiences from traditional ocean users) and coordinated with planning efforts in California and Washington.

5.4.7 Strategy: Tribal Engagement Expectations in Future Offshore Wind Processes and Inclusion in Offshore Wind Decision-Making

5.4.7.1 Action: Tribal Government Policy Consideration During State Federal Consistency Reviews

Through federal consistency, an additional procedure should be implemented requiring that any relevant policies of Tribal governments that correspond to similar enforceable policies regarding offshore energy of the state will be considered during the review of a proposed project. Formal feedback or determinations from the Nine Federally Recognized Tribes in Oregon regarding whether the proposed project is consistent with existing Tribal government policies will be considered. While the state can't make decisions based on policies of other governments, it can use Tribal government policies as guidance on how to implement its own policies (e.g., ecological protection policies).

5.4.8 Strategy: Opportunities for Co-stewardship and Business Partnership

5.4.8.1 Action: Natural Resource Endowment Fund

The state should explore mechanisms by which it could secure funding from offshore wind developers to establish a natural resource endowment fund, similar to the \$10,000 per MW of nameplate capacity contribution the State of Maine requires as part of its power procurement process for offshore wind. This fund should be dedicated toward ecosystem restoration or mitigation needs that arise through an adaptive management process and should seek co-stewardship opportunities with Tribes in the implementation of restoration measures supported by the fund. The state should develop a prioritization framework to direct funding decisions.

5.4.8.2 Action: The state should include conditions strongly encouraging or requiring (depending on regulatory capability) that Tribes be engaged in overseeing any ground disturbing activities associated with offshore wind development and compensated for this service.

Ground disturbing activities on land or at sea related to offshore wind exploration and development have the potential to uncover or damage archaeological resources or other historical artifacts of interest to Tribes. A potential opportunity exists to simultaneously improve the protection of these resources and provide economic opportunities for Tribes by obtaining services from their historical protection staff to oversee ground disturbing activities performed by the lessee.

5.4.9 Strategy: Data Collection, Monitoring, and Access

5.4.9.1 Action: For any future offshore wind leasing or project reviews, the state should require comparable data accessibility conditions to those secured during the 2024 BOEM leasing review.

During the 2024 BOEM leasing federal consistency review, the state was able to secure a condition requiring the following provisions for data collection and sharing. Similar conditions at minimum should be required in all future leasing or project reviews:

- Share the data and reports included in a SAP or COP submission resulting from site characterization and site assessment activities with the Oregon DLCD concurrent with submittal

to BOEM, unless information therein is exempt from disclosure under FOIA (5 USC § 552) and the regulations contained in 43 CFR part 2 and at 30 CFR § 585.114. In that case, Lessee will provide Oregon DLCD with a redacted copy of the survey reports.

- To the extent practicable, lessees should share survey data with Oregon DLCD upon request for purposes of data verification. This data would be shared with the State as a confidential submission. Oregon DLCD would follow any necessary protection requirements for proprietary information.
- Public Availability of Collected Information: Per federal regulation 30 CFR § 585.114, documents and data resulting from research, surveys, and other data collection efforts conducted during the leasing phase by lessees that are subject to the Freedom of Information Act will be publicly available to the maximum extent feasible.
 - Accommodate requests from the Oregon DLCD for state agency staff to observe survey activities to the extent feasible.

5.4.9.2 Action: MOA/MOU between the state and Tribes for data sharing agreements, subject to applicable information protection requirements.

The state should enter into MOUs/MOAs with interested Tribal governments regarding data sharing post-leasing. These agreements should address interests regarding data sovereignty regarding information that is shared (i.e., that Tribes have the ability to host data themselves and privately evaluate it relative to their own sensitive historical or cultural information). Agreements should also address resource needs around hosting large datasets.

5.4.10 Strategy: State Role in Sovereign Communications between Tribes and Federal Government

5.4.10.1 Action: The state should seek an MOU with federal agencies (notably BOEM) to clearly outline expectations for simultaneous engagement with state and Tribal representatives, with clearly defined goals and expectations for those interactions.

Tribes, the State of Oregon, and the Federal Government all have varying sovereign interests in the uses and resources of the coastal zone. While the offshore wind leasing and permitting process is federally-led, there are phases and aspects of the process for which a “three sovereigns” approach to coordination and communication would best serve our mutual interests. Examples of these phases and aspects include:

- Before leasing areas of the outer continental shelf for offshore wind exploration, notably during the state’s Federal Consistency review of the federal leasing action;
- Before approval of a Construction and Operations Plan by BOEM and the associated permits by the US Army Corps of Engineers, during the state federal consistency review of these permits and authorizations;
- In the event of an inadvertent discovery of archaeological resources, either offshore within state waters or onshore within state jurisdiction;
- In the event of a disaster response overseen by the US Coast Guard or the Bureau of Safety and Environmental Enforcement.

5.4.11 Strategy: Tri-Party Communication with Tribes, State, and Developers

5.4.11.1 Action: The state should include a condition for any future federal leasing actions that stipulate regular meetings between lessees, state agency staff, and designees of affected federally-recognized Tribes. This stipulation shall be reflected in the Agency Communications Plan and Tribal Communications Plan required by BOEM as part of leasing.

Based on conversations with the Nine Federally Recognized Tribes of Oregon as part of developing this Roadmap, there is an interest in greater alignment with both the state and offshore wind developers regarding expectations for project design, survey activities, and project effects. This direct coordination should occur in the years-long period after the leasing stage before a Construction and Operations Plan has been submitted for BOEM review, as well as during the state's federal consistency review of the COP.

A model for state-Tribal-applicant ongoing communication for a coastal project may be found in the Jordan Cove Liquid Natural Gas export terminal project that was proposed in recent years. In the time preceding and during the state review of that project, the Governor's Office convened a quarterly meeting between relevant state agencies and affected Tribes to share information and perspectives. The Oregon Coastal Management Program has also convened meetings between state agencies, with invitations for Tribal involvement, to discuss significant coastal development projects subject to CZMA federal consistency review (e.g., the 2024 BOEM leasing review and the forthcoming Coos Bay Pacific Coast Intermodal Project).

5.4.11.2 Action: The state should consider amending Parts Four and Five of the Territorial Sea Plan to include all potentially affected federally recognized Tribes in the JART process rather than only the coastal Tribes.

The JART requirements currently do not include all of the Nine Federally Recognized Tribes of Oregon as presumptive members.

5.4.12 Strategy: Tribal Capacity Needs to Support Offshore Wind Engagement

5.4.12.1 Action: Support Tribal Capacity Needs

In order to participate in an ongoing engagement process for offshore wind planning and development, there is a recognized need for increased Tribal staff capacity. [Note to Reviewers: DLCD is seeking feedback from Tribes regarding capacity needs. The capacity assessment will be updated in future revisions based on feedback received.]

Options to address this capacity need could include:

1. Capacity grants from federal, state, or third-party

2. Cost recovery support
3. Direct support for Full-Time Equivalent staff

5.5 Objective: Support Coastal and Regional Communities

5.5.1 Strategy: Protect and sustain coastal communities and existing local and regional uses of the coastal zone, including commercial and recreational fishing, recreation, tourism, and aesthetic and spiritual enjoyment

5.5.1.1 Action: Update Oregon’s visual resource inventory and further study community and Tribal values surrounding visual resource effects

Oregon should update its visual/scenic resource inventory in a way that tries to balance identifying large enough areas for viable OSW development, an emphasis on protecting viewsheds important to Tribes, and the “wildness” and scenic value that draws people from around the world to live and play on Oregon’s coast. This may be integrated with the TSP Part Five amendment action. See Section 5.5.1 for further information about this recommended action.

5.5.1.2 Action: Conduct socioeconomic studies to better articulate the potential benefits and adverse effects of offshore wind development to recreation, tourism, and local economies resulting from offshore wind development in Oregon– including any shoreside development proposals.

The state should work through Business Oregon to conduct studies that identify community effects – both positive and negative – that may result from offshore wind development. The timing of this work may depend on the results of state-led sea space suitability identification process to focus efforts on the most likely affected communities. This study would serve both to provide technical support for community benefit agreement negotiations and to inform state review of offshore wind projects against a future community wellbeing net-benefit policy if one is implemented as recommended in the Roadmap.

5.5.1.3 Action: Assess community needs to support offshore wind development (e.g., housing, infrastructure, social services)

This action is discussed in Section 5.5.1 for more information.

5.5.1.4 Action: Support Local Governments in Amending comprehensive plans and codes to address Identified Gaps

The state should support adequate funding for local jurisdictions to address the gaps identified in the Enforceable Policy Assessment of this Roadmap prior to the permitting phase of a potential future offshore wind energy project or onshore/port developments that would support future offshore wind activities. See the Capacity Assessment in Section 3.4 for more information.

5.5.2 Strategy: Protect and Maintain Optimum Management and Uses of Oregon's Fisheries

Figure 24. Measures to Protect Fishing Interests through the Offshore Wind Energy Development Lifecycle

5.5.2.1 Include Fishing Communities in Effective and Precautionary Offshore Wind Area Siting

A consistent theme from fishing community engagement in the development of this Roadmap was that the best way to meet the needs of fisheries if offshore wind proceeds in Oregon is through early and effective engagement during the process of selecting offshore areas to lease for potential development.

Section 5.3.2 recommends a state-led sea space suitability planning process to identify offshore areas that would be most compatible with state enforceable policies. Fishing community members who engaged with the Roadmap process expressed a strong willingness to participate in such a process. The state should engage with all sectors of the fishing industry and related secondary industries to address data gaps in the BOEM siting process, including voluntary definition of important areas or acquisition of commercially available datasets.

5.5.2.2 Action: Assess the use of existing state fisheries protection policies in TSP Part Five for Tribal community impacts and amend as necessary to explicitly consider Tribal ceremonial and subsistence fishing uses in addition to commercial and recreational fishing.

The state should amend the Territorial Sea Plan as necessary to clarify that the fisheries use protection standards apply to all fishing uses, including Tribal ceremonial and subsistence fishing.

5.5.2.3 Action: Amend the Territorial Sea Plan Part Five area-specific fishery use protection standards to make them broadly applicable to types of environments rather than specific geographical areas. This includes the standard of presumptive exclusion unless the project proponent can demonstrate no significant adverse effect on areas important to fisheries and that there be no practicable alternative site.

Currently, the generally applicable fisheries use protection standards focus on the minimization of adverse effects to fishing users from renewable energy development, while more stringent standards apply to areas within the territorial sea that have been formally designated as "Resources and Uses Conservation Areas" or "Resource and Use Management Areas" that presumptively exclude these areas unless the applicant can demonstrate that the project will have no reasonably foreseeable adverse effect on areas important to fisheries. The standards for Conservation Areas further require that there be no practicable alternative site. For a project located in federal waters, it is not clear that these exclusionary policies would apply because they are outside of the formally zoned areas within the territorial sea, although areas in federal waters may have similar high value to state fishery uses. If these exclusionary policies were made more broadly applicable to types of environments rather than specified zones, they would be more clearly applicable in future federal consistency reviews of renewable energy

projects within the state’s Geographic Location Description, which currently extends beyond state waters to a depth of 500 fathoms.

5.5.2.4 Action: Amend the Territorial Sea Plan Part Five policy around memorialized agreements to make them a firm requirement rather than an encouraged action.

Part Five of the Territorial Sea Plan encourages memorialized agreements between renewable energy applicants and traditional ocean users to address topics of concern or potential conflict. One notable example of this policy in action was an agreement between the Fishermen Involved in Natural Energy committee and Oregon State University as part of the process of developing the PacWave wave energy testing facility off the coast of Newport. Regardless of an explicit policy change, the state should in practice seek evidence of consistency with the fisheries protection policies through memorialized agreements as it has done in past projects.

5.5.2.5 Action: For any future leasing actions for offshore wind energy exploration, DLCD should establish an Offshore Wind Energy Fisheries Working Group to facilitate the development memorialized agreements between offshore wind developers and fishing communities.

If an offshore wind leasing process in federal waters off Oregon returns in the future, Oregon should follow the example of the state-led “7C Fishermen’s Working Group” in California, which has convened fishing interests, state and federal agencies, and offshore wind lessees into conversations focused on the development of a template for memorialized agreements to “work collaboratively towards a common strategy to avoid, minimize, and mitigate impacts to the fishing industry [from offshore wind energy development] in a consistent and equitable manner”. Senate Bill 286 in the 2024 California legislative session codified into state law the establishment of the California Offshore Wind Energy Fisheries Working Group. Oregon should follow a similar model of engagement to facilitate the development of memorialized agreements that can serve as evidence of consistency with the state enforceable policies protecting fishery uses. Agreements should include clear incident response procedures, enforceable grievance processes, and arbitration frameworks similar to those described for Community Agreements in Section 5.5.1.

5.5.2.6 Action: Explore a Capacity Limit for Phased Offshore Wind Development for Oregon

The state should consider establishing via legislation a cap on the total GW capacity of offshore wind development as an early development step. Some members of the fishing community proposed that a cap on development would give the seafood sector some measure of confidence and certainty for future fishing activities. This would allow for the continuance of inter-generational fishing family businesses, allow fishermen and processors to make better business plans with confidence and allow ports and communities some stability. Oregon enforceable policies in the Territorial Sea Plan establish a state preference for novel marine renewable energy development to first implement pilot projects to obtain adequate information and data and measure the effects. In conversations with OSW industry

representatives, however, it was made clear that the economic risk of smaller pilot-scale projects is too great to be of interest, and it was pointed out that many of the state’s uncertainties about offshore wind effects may only be answerable through full-scale development of an array.

HB 3375 established a goal for development of up to three gigawatts of floating offshore wind energy within federal waters off the Oregon Coast. This amount was supported in part by an NREL study that found the existing coastal grid infrastructure could support up to 2.6GW of offshore wind generation capacity, provided that amount was spread across the five major substations west of the Coast Range. The 3GW planning goal influenced the Wind Energy Area identification process under BOEM in 2024. A subsequent study from NorthernGrid found that the coastal grid infrastructure needs to support 3 GW would require substantial investment¹⁰³.

The use of a phased approach to development may provide a reasonable limit to effects on ocean uses and resources, while still advancing state climate and energy goals and fostering an offshore wind industry in the region for potential further development in the future. For example, a capacity limit of approximately 1GW may meet the minimum array size requirement for economic feasibility and supply chain stimulation needed by the offshore wind industry, while simultaneously requiring only moderate grid infrastructure investment (\$45-68 million for approximately 1.1GW to the two southernmost substations versus \$820M-1.2B for 3GW, according to the NorthernGrid study). A state-led siting process, furnished with a clear upper-limit “pilot array” target that provides reasonable assurance to affected users for the foreseeable future, could assist with identification of the most compatible areas offshore Oregon in consideration of state policies. A legislative cap could be accompanied by clear criteria based on information obtained from a pilot array and the development experience of California.

5.5.2.7 Action: Include Fishing Community Perspectives in an Oregon Offshore Wind Research Agenda, Oregon-Based Science Collaborative, and the California-Led West Coast Science Collaborative

As described in Section 5.3.2, this Roadmap recommends the establishment of an Oregon-specific multi-party science collaborative whose purpose would be to oversee an Oregon Offshore Wind Research Agenda and continue to evaluate the changing state of science and uncertainty regarding offshore wind effects specific to the uses and resources of Oregon. This state-specific body could interact with the new West Coast Science Collaborative initiated by the State of California in support of its offshore wind development plans to incorporate regional science needs and integrate research efforts along the Pacific west coast. In developing an Oregon offshore wind science collaborative, the state should engage fishing communities and invite their participation, to incorporate experiential observations from ocean users and address the uncertainties and perceived risks of fishing communities.

¹⁰³ https://www.northerngrid.net/private-media/documents/2022_ESR_OSW_Approved.pdf

5.5.2.8 Action: Sustain Ongoing Engagement with Fishing Communities through Support of Fishing Community Groups Focused on Marine Energy

Fishing communities in Oregon are central to the state’s coastal economy and cultural heritage. Their knowledge and perspectives are critical pieces of an equitable, transparent, and responsible offshore wind energy planning process. To build trust and strengthen collaboration, Oregon should adopt practices that sustain long-term engagement, provide clear and structured pathways for fisheries input, and recognize diverse voices within the fishing industry, including commercial, recreational, Tribal, and related support sectors.

Sustained engagement with Oregon’s fishing communities is critical to ensuring that offshore wind energy development is approached with transparency and fairness. The recommendations below highlight best practices for strengthening fisheries input into state processes, drawing on lessons learned from past Oregon experiences (e.g., PacWave), comparative state models in California and New York, and emerging research on stakeholder engagement (Braunbauer *et al.* 2023; Reilly-Moman & Leslie 2025). Collectively, these practices point to the need for Oregon to establish durable structures for two-way engagement that serve fishing community interests, and continue throughout project lifecycles, and can evolve alongside offshore wind development.

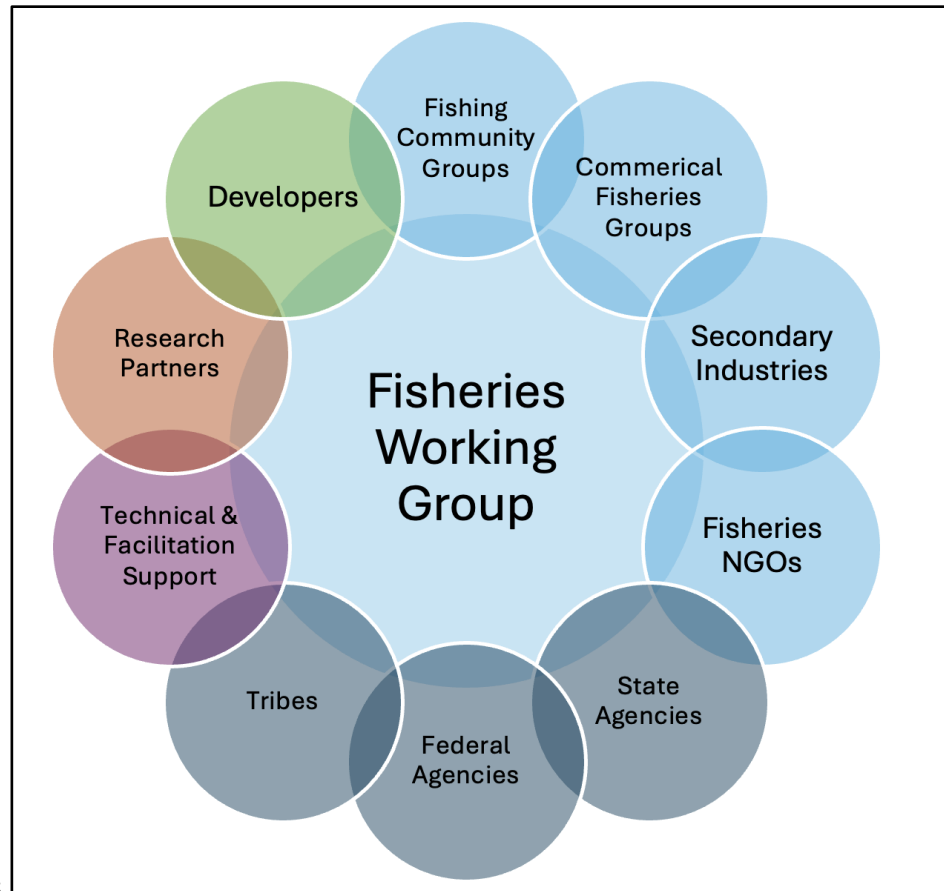
Establishing and Sustaining Engagement with Fishing Communities

- Partner with fishing community groups (e.g., Fishermen Involved in Natural Energy (FINE), the Fishermen’s Advisory Committee for Tillamook (FACT), and Southern Oregon Ocean Resource Coalition (SOORC), Newport Fishermen’s Wives, Charleston Fishing Families) to strengthen their capacity to serve as engagement and local advisory venues.
- Meet fishing communities where they already gather by attending meetings with existing networks (e.g., PFMC meetings, Commodity Commissions, Oregon Coast Anglers, Midwater Trawlers Cooperative).
- Hold in-person meetings along the coast at venues where fishing communities gather, complemented by virtual options to reduce participant barriers. Offer participant support when soliciting input.
- Establish a statewide communication hub or listserv to ensure consistent two-way information sharing between state agencies, developers, and fisheries stakeholders.
- Identify and support neutral conveners (e.g., Oregon Sea Grant) to facilitate unbiased engagement and education with diverse fishing communities and sectors.

Establishing an Offshore Wind Energy Fisheries Working Group

- Convene a structured working group with representation from commercial, recreational, and Tribal fisheries, as well as secondary industries (e.g., processors and distributors) and coastal ports. Include representation from state and federal agencies, science and research partners, fisheries NGOs, and developers.
- Create clear expectations for working group members to avoid engagement fatigue. Develop a charter outlining framework, goals, and time expectations to promote accountability and transparency. Include feedback from participants to finalize the charter.

- Create a flexible participation structure. Enable working group members to engage according to their capacity, skills, and interests, including contributing to tasks or forming subcommittees as appropriate.
- Resource the group with facilitation, travel and participation support, and technical expertise to ensure thorough and sustained participation.
- Draw on models from California and New York by providing direct compensation to working group members and creating dedicated funding mechanisms supported by state and developer



contributions.

Figure 1. Recommended components of a Fisheries Working Group, illustrating the different constituents, partners, and support roles that contribute to effective collaboration and engagement. Fishing communities include commercial, recreational, and Tribal.

Including Fishing Perspectives in Science and Research Collaboratives

- Ensure fishing community representatives are invited to participate in Oregon’s offshore wind research agenda and science collaborative.
- Incorporate experiential knowledge, such as changes in species distribution, ocean conditions, and gear interactions, into state funded research design and monitoring frameworks.
- Establish a framework to inform representatives how their input is incorporated into research questions, methods, and findings and acknowledge when input is *not* included.
- Create pathways for collaborative research projects where fishing vessels and crews can directly support data collection.

- Coordinate with regional science collaboratives to align research questions and ensure Oregon fisheries' priorities are represented regionally.
- Provide capacity support such as travel stipends or compensated participation to lower barriers for fisheries stakeholders to engage meaningfully in science collaboratives
- Designate the Fisheries Working Group as an advisory body to Oregon's offshore wind research agenda, ensuring fishing community priorities are carried forward consistently.

Framework and Support for Engagement

Oregon should create a long-term, state-supported fisheries engagement framework that combines local-level dialogue, a formal Fisheries Working Group, and integration of feedback into siting, research, and management. This framework should be backed by dedicated state funding, neutral facilitation, and clear channels for transparent communication. By institutionalizing fisheries engagement in this way, Oregon can ensure that fishing communities remain active partners and have agency in decision-making as the state explores offshore wind energy as an energy resource.

5.5.3 Strategy: Recognize the Effects of Shoreside Development as an Essential Component of an Offshore Wind Presence in Oregon

[Still to be discussed in the Roundtable and researched further by agency staff whether the Roadmap can include actionable recommendations to better integrate onshore development in conjunction with an offshore wind energy generation project due to the potentially different timing of these activities and the separate permitting actions involved.]

5.5.4 Strategy: Enforceable Community Agreements to Support Coastal Communities

Community benefits from offshore wind development can take multiple forms depending on the community affected, the needs and interests of that community, and the nature and scale of effects that benefits are intended to mitigate. It is important to recognize that community benefits focused solely on financial compensation or investment are just one tool for addressing and securing community interests. Utilizing a comprehensive Community Benefit Agreement or other legally enforceable agreements can also address other aspects of an offshore wind project such as protective measures and commitments or monitoring/mitigation measures not otherwise required under a permit or policy. It is also important that any agreement has clear enforcement mechanisms that may reach beyond the permitting phase of a project into the construction, operation, and decommissioning phases.

While direct financial compensation should be a last resort for damages to the environment or livelihoods affected by an OSW project, there may also be instances where funding on the front end for research, community engagement, or other early investments can be a useful part of a community

agreement that promote community well-being. It is also important to incorporate the concept that projects with generational impact should have generational oversight and benefit.

In the best-case scenario, the state of Oregon should consider supporting groups, Tribes, and local governments in developing and utilizing a comprehensive Community Benefit Agreement or other legally enforceable agreements to address other aspects of an offshore wind project such as protective measures and commitments or monitoring/mitigation measures not otherwise required under a permit or policy. It is also important that any agreement has clear enforcement mechanisms that may reach beyond the permitting phase of a project into the construction, operation, and decommissioning phases. In this approach, the State of Oregon could help collate several agreements into a “book of agreements”—or the Oregon Offshore Responsible Development Agreement—to protect and preserve the diverse interests and stakeholders.

Under the existing federal leasing process for offshore wind, BOEM instituted a multiple-factor auction format by which a lessee may obtain “bidding credits” by committing to make qualifying monetary contributions toward achieving beneficial community outcomes. In its final sale notice for the proposed Oregon leases, BOEM offered bidding credits for bidders who entered into community benefit agreements or invest in workforce training or supply chain development. BOEM offered a 15 percent workforce training and/or supply chain bid credit, a 5 percent Lease Area Use Community Benefit Agreement (CBA) bid credit and a 5 percent general CBA bid credit, for a total bidding credit of up to 25 percent. It is important to note that these community benefit agreements do not serve as mitigation measures for the impacts of offshore wind. In discussions with BOEM staff, it was explained that the bidding credits offered during leasing represented the “floor” for the total amount of community benefit that may ultimately result from an offshore wind project, and any additional community benefit agreements would either be the result of voluntary action by the lessee or result from other applicable state or federal requirements.

BOEM Proposed Bidding Credits for Oregon

In the Final Sale Notice for the Oregon WEAs, BOEM stated that it will grant bidding credits to bidders that commit to one or more of the following, subject to review of the bidder's BFF and Conceptual Strategy.

- i. Supporting workforce training programs for the floating offshore wind industry or supporting the development of a domestic supply chain for the floating offshore wind industry, or a combination of both; or
- ii. Establishing a Lease Area Use Community Benefit Agreement (Lease Area Use CBA) with one or more communities, stakeholder groups, or Tribal entities whose use of the geographic space of the Lease Area, or whose use of resources harvested from that geographic space, is expected to be impacted by the lessee's potential offshore wind development; or
- iii. Establishing a General Community Benefit Agreement (General CBA) with one or more communities, Tribes, or stakeholder groups that are expected to be affected by the potential impacts on the marine, coastal and/or human environment (such as impacts to visual or cultural resources) from activities resulting from lease development that are not otherwise addressed by the Lease Area Use CBA.

There are multiple different types and structures for community benefit agreements. For the purposes of this Roadmap the following definitions are used:

BOEM Community Benefit Agreement: A type of community benefit included as a mechanism in the lease bidding process by BOEM. This type of CBA is specific to compensation and does not include other non-monetary measures.

Community Benefit Agreement: A legally binding, negotiated agreement between a project proponent/developer and a community, often represented by a coalition of community group(s), outlining benefits they will receive in return for their support or non-opposition of a project.¹⁰⁴

Community Agreement: A legally-binding, enforceable contract signed by one or more community groups and a developer that requires the developer to provide specific monetary benefits or compensation, or to implement non-monetary actions to the local community.

Public Agreement: A type of Community Agreement facilitated by a public entity such as a state or federal agency. A state may be a signatory to the agreement and there may be limitations based on state regulations and authorities.

Private Agreement: A type of Community Agreement where private entities are parties to the agreement with developers. Agreements would be enforceable based on the terms included in the agreement, utilizing civil contract laws.

The discussion and negotiation of community benefits and other enforceable agreements (Community Agreements) require ample time, broad participation, good information, and resources to organize and support community participation. The state can play an important role in convening and supporting these conversations.

Tenets of Community Agreements for Offshore Wind:

1. Community Benefits processes and outcomes should be consistent with the following *Core Values*:
 - a. Inclusivity
 - b. Transparency
 - c. Public Leverage
 - d. Accountability/Oversight
 - e. Equity for people who need the most support (e.g., working families, low-income people, veterans, seniors, Latinx people, and workers who speak limited English)
 - f. Community Benefit Agreements are not intended a panacea to address all potential effects of offshore wind. Some effects may only be able to be addressed through avoidance. Communities – especially fishing communities - are not interested in being “bought out” of a multi-generational way of life.
 - g.
2. The term “Community” may be defined broadly and may include communities of place, practice, cultural identity, or other organizing concepts.

¹⁰⁴ <https://www.energy.gov/sites/default/files/2024-12/CBA%20Guidance%20FAQ.pdf>

3. Multiple communities may have different community agreements that could be combined in a “book of agreements”.
4. Tribal benefits are separate from other community benefits, but there may be opportunities to combine efforts while considering the unique interests of Tribes.
5. It is important to provide for community capacity early (before leasing) to build coalitions, identify clear needs, and engage on a level playing field. This may include pre-development grants, support for trusted intermediaries, or support for technical/legal assistance to communities. Developers and/or third-party organizations should consider moderating community meetings early in the process to introduce Community Benefit Mechanisms.
6. Community Agreements should have enforceable mechanisms that allow remedies after the permitting phase. Examples of enforceable mechanisms may include:
 - a. Contracts denoting mutual agreement, where parties to the contract have the ability to seek enforcement or remedy through the court system or an agreed alternative dispute resolution;
 - b. Host agreements;
 - c. Grant agreements with public entities;
 - d. Leases and operating agreements with public entities;
 - e. Power purchase agreements involving an energy utility or public regulator;
 - f. The same project may have both private agreements and public agreements.
 - g. Enforceable mechanisms should have measures that provide access to information necessary to monitor whether the agreements are being upheld, without requiring action through the courts.
7. Community agreements need not be just financial in nature and may include other types of agreement such as:
 - a. Protective measures;
 - b. Prescriptive Mitigation actions;
 - c. Monitoring actions;
 - d. Behavioral agreements (e.g., engagement, data sharing, response to harm);
 - e. Investments in infrastructure, human capacity, or other community needs;
 - f. Revenue sharing agreements;
 - g. Information access agreements (related to enforcement);
 - h. Emergency response notification, processes, and procedures;
 - i. Liability agreements.
8. Community agreements should be adaptive and open to revision and review over time as conditions change or community needs change. Some community needs may not present themselves for years after the permitting process. An agreement may include parameters on how to renegotiate/revise the agreement, exits clauses, community endowments overseen by the community, mediation support agreements, or other elements to govern the ongoing maintenance of the agreement over time.
9. Community agreement conversations may be weaved into existing community plans and conversations wherever possible (e.g., community health improvement plan processes, economic development planning, land use plans, capital improvement plans).
10. The role of the state may include:
 - a. Provide legal mechanism to require or incentivize development of enforceable agreements
 - b. Support conversations between affected communities and project developers
 - c. Technical and financial support of communities or third-party coalitions
 - d. Review Community Agreements relative to any relevant enforceable policies or procurement/grant requirements during federal consistency reviews or other formal authorization processes related to an offshore wind project.

- e. Act as party to a benefit agreement, distinct from other conditions of concurrence under the state’s federal consistency authority. Acting as party to an agreement may provide additional mechanisms for state involvement and enforcement after the federal permitting phase of a project.
- 11. Community Agreements should not strictly bind communities from withdrawing support if warranted. Examples of conditions that may trigger the “fair” withdrawal of support from a project include: a) Conditions change and agreements don’t change to match; or b) Terms of agreements are not honored.
- 12. Balancing Needs with Long-Term Goals: Offshore wind projects span decades, making it challenging to address short-term community needs while planning for long-term outcomes. Projects with a generational impact should have generational oversight and benefit.
- 13. Some risk will remain even if there is a benefit agreement. It is important to consider whether the remaining risks are likely, acceptable, and reversible.
- 14. Informational events and opportunities can provide a venue where interested communities can meet one another and start to build common coalitions.

Resource Needs to Support Community Agreement Engagement and Negotiations

It is important to provide for community capacity early (before leasing) to build coalitions, identify clear needs, and engage on a level playing field. Capacity is also needed on an ongoing basis to support the negotiations, which may require significant time and information about community needs or effects on communities from offshore wind development. To identify the affected communities at the outset, there is also a need for community outreach, notice procedures, access to facilities, notetaking, translation services, and meeting support that will also require resources early in the process. There are also potential state resource needs related to providing technical resources, relevant information to community needs, ongoing monitoring and enforcement of community agreements, if the state is a party to those agreements.

5.5.4.1 Action: Explore creation of new enforceable policies to require large-scale coastal development have a net benefit to coastal communities

There is currently no policy in the state that would require the presence of a CBA to find a project consistent with enforceable policies during the review of an offshore energy project. While east coast states have not been able to require CBAs as part of their federal consistency reviews, they have been able to require fisheries compensatory agreements. The Coastal Zone Management Act does not allow states to require payment to a state for coastal effects, but if a state has a mitigation policy for a coastal effect to a specific use, then a voluntary agreement between an affected community and company that is negotiated outside the formal review process can be used by the state as evidence that the project satisfies the policy and consequently provide federal consistency concurrence. Absent a voluntary agreement that adequately mitigates a reasonably foreseeable effect, the state would be in a position to determine there is insufficient evidence to verify consistency with the “no unmitigated adverse effect” policy. Therefore, it has become the expected norm for these companies to seek voluntary agreements for states that have fisheries mitigation policies.

A “community wellbeing policy” could essentially apply the same framework that has allowed fisheries compensation agreements to exist and support communities at the state level by creating an additional

motivation for companies to pursue community agreements. This approach to amplifying CBAs through the state's federal consistency review does not limit the ability for a community and developer to enter into a CBA that includes provisions beyond what the state would require for concurrence with a state policy.

The State of Oregon should update its enforceable policies and take other actions to require or incentivize the development of Community Agreements that provide benefits to the communities most impacted by OSW development. This includes:

- Expectations that community benefit, or similar enforceable agreements be negotiated with impacted communities and how those agreements will be negotiated;
- Labor standards with preferences for local employment, wages, and other elements consistent with the labor standards in HB 4080 and similar land-side energy development; and
- Expectations that Tribal benefit, or similar enforceable agreements be negotiated with impacted Tribes and how those agreements should be negotiated.

Oregon's new solar siting rules in [OAR 660-023](#)¹⁰⁵ contain requirements for community benefits and could be a model on which to establish a similar net community benefit policy for offshore renewable energy. The rules require all applications for a new solar generating facility in solar resource areas to identify how the project will contribute to addressing community needs and benefits, and they empower local counties to approve community benefit proposals submitted by the applicant when substantial evidence in the record demonstrates that the proposed contributions meet standards for meaningfulness and reasonableness, will serve to help improve a community's social health, well-being, and functioning, and community engagement in the development of contribution proposals.

Section 4 of the Roadmap identifies potential options for how a net community benefit policy could be incorporated into the state's enforceable policy suite for either project development in the ocean or shoreside support projects **[Note for Reviewers: this concept is still being explored by DLCD in consultation with legal consultants and OR DOJ].**

As part of demonstrating consistency with a community benefit policy, should one be established, the state should require that project proponents develop a clear statement of community impact that can help to establish the connection between community agreements and the effects-based policies they are intended to meet. This community impact statement may also serve to help communities in benefit negotiations.

5.5.4.2 Action: Promote and Pursue Enforceability and Accountability for Community Agreements

Community agreements should have enforceable mechanisms that allow remedies after the permitting phase. In implementing potential state enforceable policies around Community Agreements, the state should seek evidence of consistency via enforceable agreements (e.g., contracts, MOUs, or other enforceable mechanisms) with affected communities. Absent sufficient evidence of consistency, the

¹⁰⁵ https://www.oregon.gov/lcd/LAR/Documents/20250213_660-023.pdf

state would be in a position to object to a proposed offshore wind project under its CZMA federal consistency authority due to unmitigated coastal effects. This outcome presupposes that the state has relevant enforceable policies in place (See Section 3).

Once an agreement is in place with contractual or other enforceable mechanisms, those mechanisms would continue to be effective past the completion of the state's federal consistency review of the project authorizations, and the agreements would be enforceable by the parties to the agreements without direct involvement from the state.

Additionally, the State of Oregon, including relevant local government and ports, should explore how it could advance community benefit agreements and other legally

le agreements through contracting for any upgrades related to offshore wind development for ports, and other infrastructure improvements or land transfers. In these scenarios, local, state, and port governments could possibly be the owner of the project and therefore may have ability to agree to community agreements.

5.5.4.3 Action: State Support and Guidance for Convening Community Agreement Negotiations

Community Benefit negotiations should involve primarily affected communities and developers; however, ongoing research has indicated that the involvement of third-party organizations as conveners, trusted brokers, community advocates, or capacity builders can improve outcomes for affected communities.

The state should be involved in future Community Agreement conversations; however, the state should be mindful of the many roles it could be playing as it relates to offshore wind. There is a potential the state could be wearing a regulatory hat, an enforcement hat, and/or could be facilitating public improvements on state or publicly-owned lands, and it is important that it maintains neutrality and trust among all parties in any negotiation. Rather than directly lead community negotiations as a convener or facilitator, the state should proactively identify, and hire with consultation with diverse stakeholders, trusted-third party conveners to ensure inclusiveness, transparency, and collaboration in the potential development and negotiation of a community agreement. Because the state could eventually act as a reviewer of Community Agreements against future enforceable policies focused on community net benefit,

If the state has authority over defining the communities for which a community net-benefit enforceable policy would apply, the state may use its federal consistency role to elevate communities not otherwise included and secure a role in the conversations through that recognition.

The state, via its Coastal Management Program, should develop a framework and guidance for community benefit and other enforceable agreement processes, relative to relevant enforceable policies. The state may provide other support for community benefit negotiations in the form of capacity grants or direct technical assistance, or the state may advocate for developers to provide funding for community capacity as part of the BOEM lease agreement.

5.5.4.4 Action: The state should explore options within power procurement policies and processes to create a framework, RFP, and selection process for power offtaking that would include community agreement requirements.

The state of Oregon could adopt policies that could further create market signals to build offshore wind with conditions for community benefit agreements. For example, the state of Oregon could adopt an Energy Procurement policy that offtakes offshore wind energy and other renewable energy resources. That policy could include the creation of a steering committee, that includes local government, tribes, state agencies, and diverse stakeholders. The review and selection of energy could look at qualities such project soundness, cost (impact to ratepayers), project delivery/timelines, and community benefits in the form of legal agreements (Tribal, community, good neighbor, etc.).

The state could also explore adopting market-incentives that include the requirement of broad stakeholder engagement and inclusion of community benefit agreements and Tribal Benefit Agreements.

Another policy approach could be expedited permitting for projects with broad support from local government, tribes, and diverse stakeholders in a “book of agreements”

5.5.4.5 Action: Fulfill the Resource Needs for Community Agreement Capacity

The state should explore mechanisms by which to support communities in engagement with community agreement conversations. One option would be to consider establishing a fund for pre-development grants, support for trusted intermediaries, or support for technical/legal assistance to communities. Another option would be for the state to negotiate inclusion of these community engagement and community agreement support activities as bid credits under a future BOEM multi-factor auction framework, or as conditions for the developer on any future lease sales, but it is unclear how the state would have a policy against which to object to leasing if this support is not included. Other financial options may warrant exploration, such as PILT, franchise fees for existing public infrastructure ROWs or transmission, construction bonds or other bonding mechanisms to raise fees, or other direct revenue raising measures.

5.5.4.6 Action: Conduct Community Needs Assessments to Support Future Community Agreement Negotiations.

See Section 5.2.3 for more information.

5.6 Objective: Support the Creation of New Economic Opportunities from Offshore Wind—Whether there are turbines off the coast or not

Oregonians should benefit to the greatest extent possible from the economic opportunities associated with OSW development and generation, including opportunities from manufacturing components and vessels, providing maintenance and operations offshore, workforce training, portside services, cutting edge research and development, and supporting power and utility operations onshore. Oregon should also thoughtfully plan for the additional investments in infrastructure, housing, and social services that will be required in Oregon’s coastal communities to support a new OSW energy industry.

5.6.1.1 Action: Articulate and Develop the Supply Chain Opportunity for Oregon

Articulation of the supply chain opportunity for Oregon might start with a state-led supply chain opportunity assessment, inclusive of California and international markets. It could also include designating a senior state official to coordinate with California and Washington on supply chain fulfillment for the west coast and promoting Oregon business. Business connections could also be helped by creating an Oregon Offshore Wind Supply Chain Registry to identify firms with readiness to provide manufacturing, vessel, and support services to the offshore wind industry.

5.6.1.2 Action: Senior state official to coordinate with California and Washington regarding supply chain fulfillment for the west coast

Establish public and private sector leads to shepherd and coordinate economic development programs for offshore wind over the long-term. This should involve a senior level State official or body to coordinate across State agencies and implement Statewide economic development programs for offshore wind. This should also be complemented by a private sector lead outside of State government that focuses on offshore wind business development, either through an existing or new initiative

5.6.1.3 Action: State-led supply chain market opportunity assessment, inclusive of California and international markets

In order for Oregon to realize the market potential of a supply chain industry to support offshore wind energy development in the region and across the world, investment in establishing a local and/or regional supply chain to support the industry is needed. Oregon has an opportunity to support efforts to develop a local supply chain that can fabricate, manufacture and produce components and associated equipment at a scale necessary to serve anticipated OSW projects. The first step is an assessment that identifies local supply chain companies and matches their capabilities to existing and expected opportunities. The objective of the assessment would be to garner supply chain insights to inform future strategic state-level investments, initiatives and policies that will enable companies throughout the supply chain to make more targeted and meaningful connections and partnerships.

5.6.1.4 Action: As identified in the supply chain market opportunity assessment, promote relationships between Oregon businesses and interstate or international markets

The state should support the identification of market opportunities in offshore wind supply chain servicing through relationships, business intelligence, and market analysis based on the Supply Chain Market Opportunity Assessment described above.

5.6.1.5 Action: Understand and Prepare for Future Port Development Needs to support Offshore Wind

Oregon can develop a Port Readiness Plan that identifies investment needs related to supply chain development in concert with other port needs to support offshore wind assembly, manufacturing, installation, and maintenance. Oregon should coordinate with other west coast states on a coastwide port development plan to meet the potential future needs of the offshore wind industry, considering different build-out scenarios. There are also coordination opportunities with other development proposals for Coos Bay, e.g., the Port of Coos Bay Intermodal Container Facility project, to align future needs. All port development plans should be integrated with existing estuary management plans and other applicable enforceable policies.

5.7 Objective: Position Oregon to have an Offshore Wind Workforce that is Housed, Trained, and Equitable

5.7.1 Strategy: Strengthen and Enforce Labor and Safety Standards

Offshore Wind development should develop and use local labor wherever possible. Specific actions include:

- Strengthen and enforce labor and safety standards, especially by strengthening the HB 4080 labor standards as part of Oregon’s enforceable policies. Labor and workforce safety standards should also be consistent at sea with those standards on land.
- Match workforce development with workforce needs. Ensure Oregon has an OSW workforce development and training strategy in place for when the time is right. Ensure workforce development needs are also connected to Port and Supply Chain readiness needs.
- Establish a framework and enforceable policy basis for Community Agreements, inclusive of project labor agreements and other workforce-related agreements (See Section 5.3.1).