



DLCD

Department of
Land Conservation
& Development



OCMP

Oregon Coastal
Management Program



FEBRUARY 20-21 MEETING PACKET





AGENDA:

Offshore Wind Energy Roadmap Roundtable #5

Date: Thursday, February 20 (Full Day) and Friday, February 21 (Half Day)

Time: 9:00 AM - 5:00 PM (Thursday), 9:00 AM - 12:30 PM (Friday)

Location: Chinook Winds Casino Resort, 1777 NW 44th St, Lincoln City, OR 97367

Zoom Link: <https://us02web.zoom.us/meeting/register/BQCC1-7qStmmCMZrBdpWdw>

Meeting Objectives:

- Connect identified effects of concern to existing enforceable policies and identify gaps
- Discuss what engagement expectations should be addressed in the Roadmap
- Follow up on the Energy Policy conversation from January in light of ODOE modeling
- Focused discussion of exit ramps and adaptive management

Thursday, February 20	
9:00am	Arrival, Welcoming • Providing a moment for participants to join and settle in. • Welcome from the Confederated Tribes of Siletz Indians Refreshments: Coffee, hot tea, and water will be provided.
9:30am	Social, Economic and Community: - Recapping the feedback on effects from Dec 19 - Presentation on existing enforceable policies tied to social, economic, and community effects
10:00am	Environment: - Recapping the feedback on effects from Dec 19 - Presentation on existing enforceable policies tied to environmental effects
10:45 am	Deep dive: Visual effects, enforceable policies, and gaps - Recapping what we know about visual effects & considerations important to people - Presentation on the enforceable policies tied to visual effects - Small group conversation focusing on: • Discussion on policy gaps related to geography, project lifecycle phases, and visual effects of concern. • Full group report out
12:00 pm	Public Comment Part I
12:30 pm	Lunch Break (provided)



1:30 pm	Where are the Gaps in enforceable policies? Small group rotations focusing on: • Discussion on policy gaps related to geography, project lifecycle phases, and environmental and social effects of concern. ◦ Are there specific risks or uncertainties that require clearer guidelines or standards? • Conversation to identify areas where policies are either missing or insufficient to address the specific challenges (e.g., environmental, science, fisheries, workforce development).
3:00 pm	Reporting out: Where are the Gaps in enforceable policies? • What did we hear at each station? • What additional information is needed to turn an identified gap into a policy recommendation?
3:30pm	Break
3:45 pm	Engagement expectations • What are the important process principles at each stage of offshore wind development to guide public involvement and engagement? • What needs to happen next?
4:15 pm	Reporting out: What are the engagement expectations? • What did each group talk about? • What additional information is needed to turn an identified gap into a policy recommendation?
4:45 pm	Public Comment Part II
4:55pm	Wrap-Up and Reflection • Review the progress made throughout the day, highlighting key takeaways from each workgroup. What have we achieved, and what are the next steps moving forward? • What to expect from Day 2
5:00pm	Adjourn



Friday, February 21	
8:30am	Arrival and Recap • Providing a moment for participants to join and settle in. • Brief recap of Thursday's discussion and objectives for Friday • Roadmap Roundtable schedule and meetings going forward Refreshments: Coffee, hot tea, and water will be provided.
9:00 am	Energy Part II • ODOE models • Discussion about challenges, opportunities
10:00 am	Exit Ramps & Adaptive Management (small groups) • Where in the development process are they? • What triggers moving into an exit ramp? • What happens in an exit ramp and what are the expectations? • What frameworks and recommendations should Oregon look to for adaptive management as part of the Roadmap?
11:00 am	Exit Ramps & Adaptive Management (full group) • Full group report outs
11:30am	Updates • Workgroup updates (marine spatial planning, research, community benefit) • Focus group updates (energy industry) • Do we want to invite BOEM to one of our upcoming meetings? Is the Brookings 3/31 the right time and place?
12:00 am	Public Comment
12:15pm	Final Wrap-Up and Reflections - Consolidation of insights and feedback. - Next steps
12:30pm	Adjourn

OFFSHORE WIND ENERGY ROADMAP ROUNDTABLE

JANUARY 9, 2025 ROUNDTABLE MEETING SUMMARY





Offshore Wind Energy Roadmap Roundtable

Thursday, January 9, 2024 from 9:00 AM - 12:30 PM

And from 2:00 pm to 4:00 pm

Online Roundtable Meeting

DRAFT Meeting Summary

Meeting Recording:

Meeting Slides:

Attendees:

Roundtable (RT) members:

Rick Eichstaedt (CTCLUSI- Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians); Ashley Audycki (Rogue Climate); Ann Vileisis (Kalmiopsis Audubon Society); Mike Graybill (public); Ranfis Giannettino Villatoro (BlueGreen Alliance); Jason Busch (Pacific Ocean Energy); John Bragg (Friends of South Slough); Kyle Stevens (International Port of Coos Bay, OCEAN); Natalya Stranadko (DSL); Julia B. DeGraw (National Wildlife Federation); Dawn Barlow (Oregon State University Marine Mammal Institute); Bill Gorham (public); Jenny Jones (public); Karie Silva; Scott McMullen (Commercial fishing industry); Kelly Andrews (NOAA); Annie Merrill (Oregon Shores Conservation Coalition); Charlie Plybon (Surfrider Foundation); Joe Liebezeit (Bird Alliance of Oregon); Jena Carter (The Nature Conservancy); Joshua Basofin (Climate Solutions); Nicole Hughes (Renewable Northwest); Susan Chambers (West Coast Seafood Processors Association); Katrina Thompson; Dean Apostol (Scenic resource and environmental planning); Marcus Hinz (tourism); Kevin Howard (Climate advocacy); Delia Kelly (agency?); Melissa Cribbins; Nick Edwards, Lexie Woodward, Nate Stokes, Julie Siestreem, Hans Radtke, Scott Stricland (SMART Local 16); Caitlin Barns (Stantec); Lorne Bulling, Rober Westerman, Lilah Ise (agency?); Kyle Stevens (International Port of Coos Bay, OCEAN); Hannah Dondy-Kaplan_BPA;

Other participants via Zoom:

Mandy McNab (DLCD), Michael Mitton, Jason Parham, Lynn Coker, Elisa Sawyer, Mike Oknomiewski, Jadelin Castellaw, Steve Joner, Hack Barth, Christopher Hall, Erin kester, Sabra Comet, Andrea Copping, Steve Wilson, Sara Swett.

Department of Land Conservation and Development staff: Jeff Burrigh, Andy Lanier, Cynthia Smidt, Eva Krukowski, Hui Rodomsky,

Oregon Consensus Facilitators: Bobby Cochran, Sofia Castellanos, Trevor Hildebrand.

I. Executive Summary

The roundtable focused on key topics related to Oregon’s energy strategy and offshore wind development, including forming workgroups, integrating offshore wind into the grid, and addressing uncertainties through adaptive management. Presentations covered infrastructure needs like transmission upgrades, BPA’s evolving role, and the importance of clear targets to guide planning. Participants discussed challenges with modeling assumptions, costs, and risks, and emphasized the need to align efforts with Oregon’s clean energy policies like HB 2021. The meeting ended with a reminder about the next 1.5-day roundtable session in Lincoln City on February 20–21, 2025.

Action Item	Who	Date

II. Welcome attendees and provide updates

Opening Remarks:

Sofia Castellanos, from the Oregon Consensus facilitation team, began the meeting sharing a few important reminders to ensure smooth participation:

- The meeting is being recorded.
- Participants were encouraged to use the “Raise Hand” feature on Zoom to ask questions or make comments during the conversation.
- Sofia reminded roundtable members to avoid engaging in side conversations in the chat to ensure that everyone’s input is shared aloud. Andy and Trevor were designated to monitor the chat and ensure that all contributions were addressed.

Sofia highlighted that there would be two opportunities for public comment later in the meeting, specifically for those in the public listening in.

- Roundtable members were asked to keep their video on if possible to foster engagement.
- Only roundtable members were reminded to participate and speak during the discussions.
- Sofia closed the opening remarks with an important reminder about the norm of WAIT, “Why Am I Talking?” or “Why Am I **not** talking?” Participants were encouraged to assume good intentions, be thoughtful about the impact of their words, and engage in meaningful, respectful dialogue.

Acknowledgment and Opening Updates:

Jeff Burrigh from DLCD, began the meeting with an acknowledgment of the lands and a moment of recognition for the National Day of Mourning for President Carter.

- Sofia outlined the structure of the meeting, highlighting the two planned sessions and reviewing the agenda.
- Jeff provided updates on the work completed since the last meeting, including an overview of the key topics addressed. He discussed the outcomes and impacts of this work and reviewed the content and role of the questions box in gathering input.

Question Box Discussion:

- Jeff facilitated a detailed conversation about the questions submitted to the question box by both roundtable members and the public. He presented a synthesis of the recurring themes and topics that emerged, which were identified as particularly relevant based on discussions from the past three meetings.
- In closing, Jeff emphasized the importance of collaboration moving forward, stating, “Let’s work together and define the path.”

Navigating the State of Science Part I: Presentations by NOAA National Marine Fisheries Service, Pacific Northwest National Lab

Jeff introduced the presentations, highlighting their significance in shaping the roadmap development. He provided an overview of the presenters and their topics, emphasizing the relevance of their contributions to the process. Jeff also informed attendees that the presentation materials would be made available on the roadmap webpage for future reference.

Questions and Comments:

- Ranfis Villatoro from BlueGreen Alliance, raised a question about the importance of workforce and contracting standards in addressing environmental challenges effectively. He emphasized that proper training and qualifications for workers and contractors play a crucial role in mitigating environmental impacts and ensuring the structural integrity of projects. He provided several analogies to illustrate his point: Lead/Asbestos Abatement: Trained professionals are essential to safely manage abatement work, preventing harm to the environment and surrounding communities. Water Infrastructure: Skilled labor is critical for maintaining structural integrity and minimizing potential environmental damage. Commercial Driver’s License (CDL): Proper training for operational roles reduces risks and environmental impacts, highlighting the value of qualifications in various contexts. He suggested incorporating these standards into the broader environmental strategy and offered to submit a written comment for further feedback and integration into the ongoing discussion.

Presentation by NOAA:

Presenter: Lilah Ise, and Kelly Andrews, NOAA Fisheries' Offshore Energy Coordinator for the West Coast,

Lilah Ise provided an overview of NOAA Fisheries' mission and role. As part of NOAA, NOAA Fisheries (NMFS) is responsible for managing U.S. living marine resources, with a focus on fisheries management, protected species, and habitat conservation. She outlined NOAA Fisheries' regulatory and scientific role in the offshore wind development process led by BOEM.

Their responsibilities include: issuing authorizations under the Marine Mammal Protection Act (MMPA), conducting consultations under the Endangered Species Act (ESA) and Magnuson-Stevens Act, and providing input during environmental reviews conducted under the National Environmental Policy Act (NEPA).

Lilah emphasized that while BOEM is the lead federal agency for planning, leasing, and approvals for offshore wind projects, NOAA Fisheries provides essential regulatory and scientific expertise.

She also introduced NOAA's Strategic Plan, which focuses on the science needed to support their regulatory responsibilities and mission areas related to natural resources. A particular emphasis was placed on addressing knowledge gaps specific to the West Coast.

Kelly Andrews delved into NOAA's six key research focus areas, explaining their responsibilities in each and how they prioritize research efforts in coastal areas. He provided an overview of the methods NOAA uses to identify and address priority research items, ensuring that the agency's work aligns with the most pressing needs in coastal and offshore environments.

Research Focus Areas and Priorities for Offshore Wind Energy Impact Assessment

1. Habitat Impacts:
 - Updating habitat atlases, with a particular focus on benthic habitats, essential fish habitats, and conservation areas.
2. Atmospheric Wind Fields and Upwelling:
 - Investigating the potential effects of atmospheric wind fields on upwelling within the California Current.
3. Physiological and Physical Effects
 - Examine the impact of noise and electromagnetic fields (EMFs) on species, including marine mammals and salmon.
 - Assess the role of infrastructure as an aggregating device for species, including haul-out structures for pinnipeds and new substrates for invertebrates.
4. Species Abundance and Distribution
 - Priorities include assessing entanglement risks from infrastructure and marine debris, studying migratory patterns and behaviors (e.g., attraction/avoidance), and evaluating changes in population dynamics and oceanographic conditions.
5. Socioeconomic Impacts
 - Develop fishing footprint atlases to map commercial and recreational fishing activities.
6. Ecosystem and Climate Interactions
 - Develop conceptual models, ecosystem indicators, and methods to detect early warning signs of ecosystem changes.
 - Create risk assessment tools to distinguish offshore wind energy impacts from climate variability, requiring extensive data collection and long-term analysis.

Key priorities include:

1. Modeling Data Loss
 - Analyze the impact of inaccessible survey areas, particularly for large oceanographic vessels, by modeling potential data gaps and their effects on scientific understanding.
2. Developing New Survey Methods

- Design new statistical frameworks, sampling protocols, and data collection methods to adapt to these challenges.
- 3. Data and Integration
 - Ensure integration of historical data with new data collected from innovative platforms.
- 4. Collaborative Development
 - Foster collaboration across the West Coast scientific community, including NMFS Fisheries and other agencies, to share resources, expertise, and strategies for addressing these challenges.

Opportunities and Challenges

- Opportunities: Leverage partnerships with scientific agencies and stakeholders to expand capacity and advance methodologies.
- Challenges: Addressing resource limitations and ensuring robust integration of diverse data sources across agencies and platforms.

The examples of studies that are underway were shared with the RT members, about atmospheric and ocean modeling with OWFs, as well as species distribution modeling, and others.

Questions and comments from RT members: related to the strategic plan presented

Bobby Cochran from Oregon Consensus, synthesized the questions from the chat and asked: “How do you make trade-offs when you have more tasks than you can manage right now?” He highlighted the challenge of balancing the demand for extensive, often novel scientific research with limited resources. Unlike routine monitoring, much of the work involves tackling new and complex questions.

Lilah and Kelly explained that the current focus is on setting priorities for the year, which is influenced by several key factors: partner availability, immediate research needs, long-term planning for future studies.

Collaboration is central to this process, with many projects developed in partnership with organizations like BOEM and universities.

They also highlighted the importance of large-scale, long-term coastal surveys, which provide decades of environmental data. While these surveys are valuable, they are also resource-intensive.

Joshua Basofin asked about how this analysis fit into the timeline of offshore wind development?

- Lilah responded by explaining NOAA Fisheries' role in the process:
 - They have provided data layers to BOEM to support decision-making during the siting stage.
 - NOAA has conducted consultations and will continue to do so as the process progresses.
 - If a developer submits a construction proposal, NOAA will lead an environmental impact statement process for the project under the National Environmental Policy Act (NEPA).

Joe Liebezeit asked the question on how cumulative impacts are being addressed, and how will they interface with the BOEM process?

- Kelly explained that the goal of current analyses is to incorporate as many potential proposed areas as possible, including California's newly identified sea space zones, even if they are not yet part of BOEM's formal proposals.

Scott McMullen asked: Did NOAA install hydrophones to capture baseline noise levels around Block Island or Vineyard for any East Coast projects, and how can that information be applied to the West Coast?

- Lilah noted that while passive acoustic monitoring was utilized on the East Coast, NOAA is currently working to identify partners on the West Coast to establish similar monitoring efforts. The goal is to initiate passive acoustic monitoring in this region to gather baseline noise data and apply insights from the East Coast to inform studies and planning on the West Coast.

Julia DeGraw asked how does NOAA differentiate between climate change impacts and potential impacts from offshore wind development? How do they separate changes caused by climate change from those related to offshore wind projects?

- Kelly acknowledged that this is a complex, "wicked problem." NOAA's current approach involves using atmospheric and ocean modeling to establish long-term averages and natural variations without including wind farms. These models are then rerun with wind farms incorporated to determine if the results deviate from the natural variation observed in the baseline scenario. This process uses historical data to assess the potential impacts of wind farms on atmospheric and oceanic conditions. The priority is to develop reliable indicators that provide as much certainty as possible in distinguishing between these impacts.
- Follow-Up Question: Who is responsible for monitoring the impacts of offshore wind development? Is NOAA the sole agency responsible?
- Lilah clarified that NOAA will be one of the agencies responsible for monitoring offshore wind impacts, but other organizations and technologies will also play a role. Universities, developers, and other monitoring agencies will be needed to address aspects outside NOAA's scope of work, ensuring comprehensive oversight.

Julie Siestreem asked about what is NOAA's capacity and funding to support their research areas?

- Lilah responded that there have not yet been assessments conducted on the West Coast. Developers are currently surveying their lease areas, but that is the extent of ongoing activities in the region. Kelly added that modeling efforts on the East Coast have been more developed and provide a framework to build upon.

Rick Eichstaedt: asked a point of clarification regarding ongoing work, changes in presidential administration, and how research funding impacts the agenda for science planning and research areas.

- Lilah explained that NOAA's capacity and research efforts depend on annual congressional funding decisions. NOAA strives to maximize the use of available resources, but future research and planning are shaped by factors such as existing capacity and funding.

Additional Questions from Chat:

Rick Eichstaedt (CTCLUSI): *How much of the Science Plan's work is subject to future funding decisions by the new administration versus nearly completed or already funded?*

Katrina Thompson (NAIC): *Kelly Andrews mentioned four wind energy areas. Could you clarify the number?*

John Bragg: *Are the impacts (cumulative or otherwise) of the project during its lifetime considered alongside, or separate from, the impacts of construction?*

Mike Okoniewski: *At what stage of development would cumulative impacts be researched? There is a big difference between five wind farms and 55 wind farms. Placement location is another factor.*

Jason Busch: *As an example of ongoing monitoring and adaptive management, the recent PacWave FERC permit could be reviewed. It outlines what they plan to do for the wave test site in Newport.*

Ranfis Giannettino Villatoro (BlueGreen Alliance): *Could there be a policy requiring developers to fund an independent assessment that could be overseen by NOAA or another scientific entity?*

Lilah noted the critical role of early investments by developers and the supply side. She stressed the importance of understanding what contracts would be established in advance and how NOAA can contribute to these efforts.

Bobby concluded with a key takeaway: the importance of maintaining ongoing conversations and collaboration with NOAA, ensuring continued engagement and partnership.

Second Presentation: Pacific Northwest National Lab

Jeff introduced Andrea Copping and Hayley Farr, presenters from the Pacific Northwest National Laboratory, highlighting their work on managing risk in the context of uncertainties related to offshore wind energy. Their focus is on adaptive management, aiming to address key questions about unknowns in this field.

Presentation Highlights:

- Hayley presented a high-level overview of the major environmental impacts and concerns associated with offshore wind energy. She discussed current knowledge, identified research gaps, and explored potential mitigation strategies to address these challenges.
- The presentation emphasized the importance of understanding environmental effects, prioritizing research efforts, and developing strategies to reduce risks and improve outcomes for offshore wind projects.
- Goals: Understanding the environmental effects on species, habitats, and ecosystem processes, while addressing uncertainties.
- Framework: A stressor-receptor approach identifies stressors (e.g., turbines, cables, vessel traffic) and receptors (e.g., animals, habitats, ecosystems) to evaluate potential impacts.

Major Areas of Concern and Findings

1. Ecosystem and Habitat Impacts
 - Structures may act as artificial reefs, potentially increasing species richness but requiring monitoring.
 - Large-scale wind farms could affect ocean dynamics, such as upwelling, influencing broader ecosystem processes.
2. Underwater Sound
 - Construction-related noise (e.g., from vessels and cable installation) is localized and temporary.
 - Operational noise from turbines is comparable to fixed-bottom wind turbines, with low risk identified based on existing data.
3. Entanglement Risks
 - Primary Entanglement: Rare due to the engineering and scale of structures.
 - Secondary Entanglement: Concerns about debris, such as derelict fishing gear, require further study.
4. Vessel Strikes
 - Impacts depend on vessel activity, speed, and mitigation measures (e.g., observer presence). Strikes are a global issue for marine mammals and sea turtles.
5. Electromagnetic Fields (EMFs)
 - Effects from power transmission are generally minor, as shown in European studies, but stakeholder concerns highlight the need for continued research.
6. Bird and Bat Risks
 - Concerns include disturbance, displacement, and collision with turbines, particularly for bats, where data is limited. Ongoing research aims to address these gaps.

Opportunities and Resources

- Collaboration with international efforts and leveraging existing data from wave and tidal energy studies are vital.
- Online resources, tools, and ongoing research (e.g., SEER project and international databases) provide valuable insights.

Andrea provided a brief overview of the state and how to deal with uncertainty.

- She shared a set of questions
- The importance of data and what data to use, and how to compare within different contexts and even with different marine species.
- Models are a good tool that need to be real and also validated.
- 3 tools: marine spatial planning, mitigation hierarchy and adaptive management.

Uncertainty is a central challenge in offshore wind development, spanning scientific, regulatory, and practical aspects. Key points include:

Types of Uncertainty:

1. Scientific Uncertainty
 - Data Collection and Accuracy: Are the collected data relevant and accurate for the interactions of interest? Many populations at risk (e.g., marine species) have incomplete demographic and seasonal data, complicating assessments.

- Instrumentation and Measurements: Instruments used for monitoring, such as those for EMF impacts, often operate at a research stage or are adapted from other fields, raising concerns about calibration and field validation.
- Numerical Models: Models are critical but must accurately represent real-world conditions. Validation with field data is essential to ensure reliability.
- 2. Regulatory Uncertainty
 - Regulations for offshore wind, particularly floating wind, are often adapted from other industries (e.g., oil, gas, fixed-bottom wind), which may not be entirely applicable.
 - Challenges include measuring baselines, detecting changes attributable to wind farms, and assessing the effectiveness of mitigation measures.
- 3. Broader Uncertainty
 - Financial Risks: Resource allocation and stakeholder confidence are impacted by uncertain outcomes.
 - Alternative Solutions: The need for renewable energy is clear, but viable alternatives must be evaluated for regional suitability, particularly along the West Coast.

Strategies for Managing Uncertainty

1. Marine Spatial Planning (MSP)
 - MSP integrates science, stakeholder engagement, and spatial data to identify suitable areas for development while minimizing conflicts.
 - Past lessons, such as the Oregon Territorial Sea Plan, underscore the importance of involving all stakeholders early to avoid conflicts and revisions.
2. Mitigation Hierarchy
 - A structured approach prioritizing:
 1. Avoidance: Prevent harm to species, habitats, and processes.
 2. Minimization: Reduce unavoidable impacts.
 3. Restoration: Repair affected areas.
 4. Offsetting: Compensate for residual impacts.
3. Adaptive Management
 - A flexible, iterative approach that adjusts management actions based on monitoring results and emerging data.

Dealing with Data Limitations

- Leveraging data from existing European floating wind farms provides valuable insights, though extrapolations to the U.S. context must account for differences in species and environments.
- Combining field observations with validated models ensures a more robust understanding while acknowledging limitations.
- How to look for adaptive management to build offshore wind in Oregon?
- Andrea shared the steps that that might take: determine if the AM is suited, ensure robust monitoring plan, convene AM team, and ensure other strategies.

Comments and Questions:

Jeff asked *“Who do you think has implemented adaptive management most effectively around the world, and what makes their approach successful?”*

He highlighted the context of the state's regulatory role, noting limited opportunities for intervention, primarily at stages such as lease decisions, permit approvals, and he pointed out the challenge of lacking consistent enforcement authority post-permit. He asked for insights on global examples of successful adaptive management and the lessons that might be applied to ensure a robust approach during permit decisions. He also raised a critical question about whether damage caused by offshore wind development, once done, can ever truly be undone.

Responses and Discussion:

Andrea highlighted the State of Maine as an example of effective adaptive management. She explained how Maine formed an adaptive management team that worked collaboratively with regulators and the community, laying a strong foundation for cooperation. This team operated for about three years, fostering a trust-based environment to address challenges collectively.

Andrea emphasized that while states have limited opportunities for intervention, creating an adaptive management team could serve as a consistent and proactive tool. Rather than relying solely on strict regulatory authority, this team could focus on partnership, ongoing dialogue, and collaboration, promoting a sustainable and flexible framework for adaptive management.

Nicole Hughes from Renewable Northwest noted that as a former wind energy developer, Nicole pointed out that Oregon already has strong examples of adaptive management in action. She referenced the Oregon Energy Facility Siting Council, which employs an adaptive management framework to address species impacts. Site certificates for existing wind farms in Oregon illustrate how adaptive management principles have been used effectively, particularly for mitigating avian and bat impacts or noise issues.

Drawing from her experience, Nicole shared that wind farms she has worked on have successfully incorporated adaptive management strategies to respond to changing conditions. However, she noted that there are some types of impacts that adaptive management is not well-suited to address. Nicole asked Andrea to provide examples of infrastructure project impacts where adaptive management might fall short, to better understand the limitations of this approach.

Andrea explained that adaptive management is particularly useful in situations where there is uncertainty around data and its analysis.

Additional Questions from the Chat:

Christopher Potter noted that "Adaptive management needs to address the needs of a society and the amount of risk it is willing to take."

Rick Eichstaedt (CTCLUSI) built on this, adding: "Adaptive management needs to consider risk as well—what are the potential impacts if things go wrong? If the risk is too great, it should not be applied absent additional information or measures." Rick also raised the critical question of how adaptive management can be applied to cultural resource impacts, suggesting that this area requires special consideration and a tailored approach to ensure that cultural resources are adequately protected.

Additional Comments and Questions:

Dean Apostol highlighted that offshore wind development involves not only scientific information but also economic and political factors, posing a challenge for adaptive management to address these complexities. He recommended the book *The Science of Scenery* by Andrew Lothian, which explores how data and analysis shape decisions. Dean emphasized that the challenge lies in determining how to use the gathered data and analysis to guide decisions that balance these diverse factors.

Jenny Jones asked about the minimum distance from the shoreline for proposed wind energy locations in Oregon and sought clarification on the status of leasing in the state.

Jeff clarified that leasing has not yet occurred for the proposed wind energy areas in Oregon. BOEM conducted a multi-year process to identify these areas, but they have not progressed to the leasing stage.

Mike Graybill emphasized that the group's primary task is to develop a strategy with off-ramps, ensuring flexibility throughout the process. He noted that adaptive management comes into play only after key decisions, such as agreeing to move forward with wind energy development in Oregon, have been made. He likened adaptive management to mitigation, highlighting that it becomes relevant only after a project is approved.

Andrea Copping agreed that adaptive management is a valuable tool but emphasized that it is only effective once there is something to evaluate, such as assessing project impacts. Importantly, she stressed that adaptive management must be integrated early in the planning process for offshore wind development.

Additional Comments from Chat:

Kyle Stevens highlighted a key point regarding the regulatory framework, noting that *60 million acres need to be offered for oil and gas leases before BOEM can issue offshore wind (OSW) leases in a given year.*

Nicole Hughes suggested an addition to the discussion on the Precautionary Principle. She referenced Andrea's earlier statement, emphasizing the importance of not assuming that the absence of offshore wind projects in Oregon means there is no knowledge about potential impacts. Nicole urged the group to recognize existing data and insights that can inform planning and decision-making.

Presentation Slide on Conceptual Frameworks:

Jeff's presentation emphasized the diverse approaches available for addressing uncertainty and risk, showcasing a nuanced understanding of these challenges. He illustrated these approaches as existing along a spectrum, which includes:

1. Precautionary Principle
 - At one end of the spectrum is the precautionary principle, which asserts that when there's a threat of irreversible harm to an irreplaceable resource, the absence of evidence of harm does not mean harm isn't occurring.
2. Adaptive Management
 - Adaptive management, as discussed, operates on a "learn by doing" approach: take an initial step, monitor carefully, and adjust as needed.

3. Risk Retirement
 - Another concept is "retiring risk." This occurs when enough is known about a potential issue to confidently conclude it is no longer a significant concern.
4. Mitigation
 - Mitigation occupies a middle ground, aiming to avoid harm proactively, even when uncertainty about its existence persists.

Jeff concluded with a critical question: "Who governs the science?" He emphasized the importance of collaborative approaches, such as science collectives, in ensuring that scientific efforts are balanced, credible, and actionable to effectively inform decision-making.

Establishing Workgroups:

Overview:

Three potential workgroups were identified based on feedback from the survey sent to roundtable (RT) members. The discussion focused on:

- Recommendations and follow-up questions regarding these workgroups.
- How to proceed with involving RT members and other experts who should join these workgroups.
- Planning the upcoming meetings for each workgroup.

Questions and Discussion:

Natalya Stranadko asked a clarifying question regarding the time commitment: Does the 3-hour timeframe apply to all workgroup meetings combined or to each meeting individually?

- Jeff's responded that the time commitment refers to a 3-hour window for each meeting. The facilitation team is estimating the specific time needed, but each meeting is expected to last between 2 to 3 hours.

Bobby emphasized that participation in these workgroups is entirely voluntary.

Mike Graybill raised a question about the scope of marine spatial planning, noting that the concept remains unclear to him. He viewed it as a technocratic theme and mapping exercise and asked what the group would actually be discussing.

- Jeff explained that a "planning-to-plan" conversation is needed first to clarify the scope and objectives of the marine spatial planning workgroup.

Input was gathered via the chat from roundtable members regarding which workgroups they would like to join

Community Benefits and Other Legally Enforceable Agreements

- Scott Strickland
- Robert Westerman (IBEW 932)
- Nicole Hughes
- Joshua Basofin
- John Schaad (BPA)
- Heather Mann
- Nate Stokes
- Lynn Coker
- Mike Okoniewski
- Rachel Lucine (BGA)
- Nick Edwards
- John Bragg

Research Agenda and Coordination

- Nicole Hughes
- Julia DeGraw (Representative from NWF: either Lucy Lefkowitz or Shayna Steingard)
- Hans Radtke
- Justin Ainsworth (ODFW)
- Jason Parham (Kitware)
- Robert Westerman (IBEW 932)
- Steve Rumrill (ODFW Shellfish Program Lead in Newport) Suggested by John Bragg
- Nick Edwards
- Justin Ainsworth Marine Resources Program Manager. suggested by Delia Kelly

Marine Spatial Planning

- Julia DeGraw (Representative from NWF: either Lucy Lefkowitz or Shayna Steingard)
- Nick Edwards

Additional Input on Workgroup Participation:

Joe Liebezeit expressed interest in participating in the Research Agenda and Coordination workgroup.

Nicole suggested involving additional state agencies, such as ODEnergy and Business Oregon, to enhance the workgroups' scope and impact. She also recommended including representatives from local governments, particularly in the Community Benefit Agreement workgroup, to ensure diverse perspectives and expertise.

Bobby noted that there are already members from local government involved in the roundtable. He suggested that these individuals could be approached directly to join the Community Benefit Agreement workgroup and contribute to its discussions.

Public Comment Part I:

Jason Parham (Kitware) raised a question about data management, particularly in federal programs like NOAA's. He noted that while vast amounts of data are collected, much of it remains unused, stored on hard drives or research computers, due to the lack of resources to process it manually. He emphasized the need for automated solutions to address this challenge, particularly in light of limited staffing, such as interns or analysts, to manually review the data. Jason proposed that automating data analysis could achieve two key goals: enabling more effective data-driven decision-making, and prioritizing human review by flagging the most critical data points for attention.

He inquired whether strategies for automating data analysis had been discussed in previous groups or if this topic is planned for future sessions. He emphasized the importance of addressing this issue as part of the research and monitoring agenda to maximize the value of collected data.

This comment highlights the need for integrating automation into data analysis processes to ensure the efficient use of collected data for informed decision-making

Afternoon Session:

Jeff began the afternoon session by introducing the panelists and setting the stage for the discussion. He highlighted critical questions for consideration, such as:

- What is the role of simply reducing demand?
- How does energy conservation fit into the broader conversation, particularly as we reflect on President Carter's legacy of promoting energy efficiency and conservation on this day of remembrance?

These questions framed the session's focus on the importance of energy conservation and its role in addressing current and future challenges. Jeff emphasized the relevance of integrating these ideas into the ongoing discussions about offshore wind energy and sustainable development.

First Presentation: Oregon Department of Energy (ODOE)

Michael Freels provided an overview of Oregon's Energy Strategy, which will culminate in a comprehensive report to the Oregon Legislature by November 2025. He described the process used to develop the strategy, highlighting key considerations and methodologies employed by the ODOE team.

Key Highlights:

- The strategy aims to reduce greenhouse gas emissions by 80% by 2050 to meet Oregon's decarbonization targets.
- Focus Areas:
 - Technical analysis, stakeholder engagement, and policy recommendations to inform energy decisions.
 - Energy modeling to explore decarbonization pathways.
- Energy Modeling:
 - Utilizes a reference scenario (current policies) and six alternative scenarios to identify potential pathways for decarbonization.
 - Scenarios analyze trade-offs, focusing on factors like affordability, reliability, land use, and equity.
 - Examines the impacts of slower energy efficiency adoption, limitations on utility-scale electricity, and other policy decisions.
 - Identifies "least cost pathways" while addressing potential community-level effects, including energy burden, air quality, job impacts, and spatial mapping.
- Stakeholder Engagement:
 - Input is collected through advisory groups, working groups, public sessions, and government-to-government tribal consultations.
 - Policy working groups will begin on February 12, 2025, focusing on equity, building efficiency, clean electricity, low-carbon fuels, and transportation electrification.
 - A public webinar is scheduled for January 31, 2025, at OMSI, with both in-person and virtual participation options.

Michael extended an invitation to roundtable members to join any of the five policy working groups. The findings will be compiled into a final report for the governor and legislature by November 2025.

Jason Sierman provided examples of the energy modeling exercises, demonstrating how scenarios are compared to the reference case to inform decisions and guide the strategy effectively.

- The modeling informs policy discussions by analyzing theoretical pathways, not predicting the future.
- Scenarios explore potential outcomes, such as:
 - Impacts of slower energy efficiency adoption.
 - Implications of limiting utility-scale electricity generation.
- Results will guide discussions on balancing trade-offs like affordability, reliability, and equity.

Presentation by Zack Baker (Oregon Public Utility Commission):

Overview:

Zack Baker, Policy Advisor for the Public Utility Commission (PUC), provided a brief overview of the PUC's role in relation to offshore wind projects. He clarified that the PUC is an economic regulator of investor-owned utilities and is not part of the Oregon Coastal Management Program, making its role distinct from other state agencies involved in offshore wind.

PUC Roles in Offshore Wind:

1. Reviewing Utility Resource Planning and Procurement:
 - Includes reviewing Integrated Resource Plans (IRPs) and Clean Energy Plans (CEPs).
 - Oversees acquisitions, competitive bidding requirements, and Requests for Proposals (RFPs) related to offshore wind resources procurement.
2. Participation in Regional Transmission Planning:
 - Utilities engage in buying and selling electricity across the region, with transmission lines often crossing state boundaries.
 - Regional transmission planning is crucial to ensuring efficient electricity distribution across the Northwest.
 - Participation in groups like CREPC-TC (Committee on Regional Electric Power Cooperation and Transmission Collaborative), an informal workgroup addressing regional transmission issues.
3. Review of Transmission Lines Involving Land Condemnation:
 - Includes evaluating applications for Certificates of Public Convenience and Necessity (CPCNs), which are required for the construction of transmission lines.

Key Takeaways:

- The PUC's role is focused on economic regulation, ensuring that offshore wind projects align with regional transmission requirements and utility resource planning processes.
- Regional collaboration is essential to address transmission challenges and facilitate efficient energy movement across state lines.
- The PUC's authority includes oversight of transmission line proposals, including land use considerations like condemnation.
- Three Identified Roles of the PUC in Offshore Wind Projects:
 - Reviewing Utility Resource Planning and Procurement:
 - Includes Integrated Resource Plans (IRPs) and Clean Energy Plans (CEPs), Requests for Proposals (RFPs), and cost recovery processes.
 - IRPs outline utilities' plans to meet energy demand through least-cost, least-risk strategies over a 20-year horizon.

- CEPs focus on meeting House Bill 2021 targets, requiring investor-owned utilities to decarbonize retail electricity sales.
 - Competitive bidding is required for procurements exceeding 80 MW or five years, with exceptions for emergencies or unique customer benefits.
 - The PUC evaluates procurement prudence to determine whether utilities can recover costs from customers.
- Participation in Regional Transmission Planning:
 - Engages in forums like Northern Grid, West Tech, and CREPC Transmission Collaborative (CREPC-TC).
 - Northern Grid focuses on FERC-regulated regional transmission planning and recently extended its planning horizon to 20 years.
 - West Tech develops actionable 10- and 20-year transmission plans to support the future energy grid.
 - CREPC-TC facilitates collaboration among western states and provinces on transmission coordination and cost allocation.
 - Regional planning forums identify transmission needs but lack authority to mandate project construction.
- Reviewing Transmission Lines Involving Condemnation of Land:
 - The PUC reviews applications for Certificates of Public Convenience and Necessity (CPCNs) when utilities seek to construct transmission lines requiring land condemnation.
 - CPCNs assess the necessity, safety, feasibility, and public interest of proposed projects under Oregon law.
 - The process supports court proceedings for land condemnation but does not directly condemn land.
 - This role applies primarily to onshore transmission lines and is relevant in later project stages.
- Current Status and Future Involvement:
 - The PUC's involvement in offshore wind projects has been limited so far.
 - With offshore wind still in early stages of development, the PUC's roles may evolve as projects progress.
- Next Steps and Resources:
 - The PUC aims to ensure utility actions align with public interest, affordability, and equity while supporting decarbonization goals.
 - Links to additional resources and the presenter's contact information were shared for follow-up.

Comments and Questions:

Nataliya Stranadko asked for clarification on the term PURPA (Public Utility Regulatory Policies Act), seeking a better understanding of its relevance to the discussion.

Jeff posed a detailed question regarding future decision-making for offshore wind, focusing on cost concerns:

- "What happens if offshore wind is too expensive? For example, if a developer or utility proposes a project that would charge Oregon ratepayers significantly more than they currently pay, does the PUC have the authority to deny that request?"
- Jeff highlighted the concept of "prudence" as a central aspect of the PUC's decision-making. He asked whether this authority could influence whether offshore

wind projects on Oregon's coast can move forward if costs are deemed unreasonable for ratepayers.

Zack confirmed that costs are a critical consideration for the PUC. He provided insights into how the PUC evaluates offshore wind projects:

- The PUC aims to identify least-cost, least-risk resources through its planning and prudence determinations.
- Offshore wind's status as a clean energy resource could positively influence its evaluation, potentially giving it an advantage in planning decisions despite higher costs.
- Utilities don't always pass all costs directly to customers. In some cases, business decisions may allow utilities to absorb certain costs, adding complexity to cost evaluations.
- Offshore wind costs are also influenced by factors such as:
 - Comparisons with other energy resources.
 - Supply chain issues.
 - Market dynamics that may shift over time.

Zack emphasized that while cost is a key factor in the PUC's decision-making, the evaluation process is dynamic and influenced by multiple variables.

Additional Comments from Chat:

Robert Westerman (IBEW 932) asked for clarification on the PUC's role, specifically whether it applies to investor-owned utilities (IOUs) or if the PUC also sets rates for public utilities.

Hannah Dondy-Kaplan (BPA) clarified that the PUC does not set rates for public utilities, only for investor-owned utilities.

Nicole Hughes highlighted that utilities plan on a two-year cycle, adding complexity to the rate recovery process for offshore wind (OSW), which is considered a "long-lead procurement resource." She explained that it is harder to justify the cost of a resource that won't be operational for 10 years compared to one with a shorter timeline and less risk. Also mentioned that Oregon labor standards for OSW projects are established under HB 4080.

Lorne Bulling added that HB 2021 and its subsequent technical fix bill established labor standards, which are now part of the minimum bid requirements for OSW projects.

Ranfis Villatoro expanded on this, stating that HB 2021 minimum labor provisions are embedded as part of the minimum requirements for OSW project RFPs and contracts.

Presentation by Bonneville Power Administration (BPA):

Presenters: Hannah Dondy and John Schaad, Governmental Affairs Department

Overview:

Hannah and John provided an overview of BPA's role in generation and transmission, emphasizing how the system is evolving to accommodate new clean energy sources like offshore wind. BPA is part of the federal Department of Energy and sells power generated by federal dams, primarily to public utilities.

Key Highlights:

- Generation and Transmission:

- BPA operates a large transmission network across the Pacific Northwest, from Oregon to Montana.
- 20% of the power BPA generates is used in Oregon.
- The transmission system was likened to a state highway system, with roads, highways, and traffic representing power flows.
- **Current Energy Sources:**
 - BPA's energy mix includes hydro, coal, nuclear, and natural gas.
 - Oregon's energy policies, such as HB 2021, are driving utilities to adapt and implement clean energy solutions.
- **Offshore Wind Integration:**
 - Offshore wind generation is expected to primarily serve local coastal loads, which will reduce power flows on BPA's east-west transmission lines. This could free up capacity on the cross-coast range transmission system.
 - Connecting offshore wind to the grid requires new processes and infrastructure, as existing transmission systems were designed for land-based power sources.
- **Active Transmission Service Requests:**
 - BPA currently has 2,750 MW of active transmission service requests from the southern Oregon coast to the Portland area.
- **Feasibility Study Results:**
 - Integrating large-scale offshore wind in southern Oregon will require:
 - Higher capacity 230 KV and 500 KV high-voltage (HV) transmission lines.
 - A 500 KV transmission loop to reliably interconnect generation and transport power from the coast to load centers.

Comments and Questions:

Nataliya Stranadko asked about the timeline for completing all processes mentioned in the presentation, including studies and agreements, asking specifically how long these processes take in months.

Hannah Dondy-Kaplan (BPA) clarified Nataliya's question and responded that these processes can take a year or more to complete. She explained that this lengthy timeline is why BPA is reevaluating its processes to provide more certainty around resources before conducting studies.

She shared an example of an offshore wind developer who applied for interconnection last year, but the application wasn't realistic because they lacked "site control" (a lease in this case). With BPA's new tariff, developers must now have site control—such as a BOEM lease—before they can apply for transmission studies.

Jason reiterated Hannah's point about BPA's new tariff, emphasizing that developers now need to secure site control, such as a BOEM lease, as a prerequisite for conducting transmission studies.

Jeff asked if BPA could serve as a buyer of offshore wind to resell it to public utilities as a marketer?

Hannah and John explained that while no formal mechanism currently exists for BPA to act as a buyer and marketer of offshore wind, it remains a possibility for the future. BPA is actively evaluating its resource needs through its Resource Program, with the 2024 program recently completed and the 2026 program underway. These programs analyze load forecasts and available resources.

If future assessments identify a gap between supply and demand, BPA may need to procure additional resources, and offshore wind could be among the options considered.

Jeff's Follow-Up discussed the energy model used in Oregon's strategy, describing it as a least-cost resource tool designed to evaluate options for meeting decarbonization targets, such as those outlined in House Bill 2021.

Discussion on Energy Modeling and Offshore Wind:

Jason highlighted that Oregon's energy strategy model simplifies complex variables, such as extreme weather events, contractual constraints, and the intricacies of the transmission systems. For instance:

- The model assumes regional cooperation and simplifies the Western U.S. grid into zones, bypassing the complexities of the 38 separate transmission and utility systems.
- Contractual limitations, such as those under the Northwest Power Act, are not modeled in detail.

These simplifications highlight the gap between theoretical pathways outlined by the model and the practical realities of implementation.

Jason pointed out that the energy strategy model assumes a single market for energy sharing in the region, a significant simplification compared to today's fragmented systems. This assumption underscores the aspirational nature of the modeling and highlights the challenges in aligning theoretical results with practical realities.

Additional Comments and Questions:

Nicole Hughes asked Jason for clarification: "Did I hear you just say that the base assumption for the energy strategy is a single market?"

Ranfis Villatoro asked Jason about modeling scenarios: "Are you considering a scenario where we do nothing? For example, if energy efficiency or solar is the most cost-effective option, what would the cost implications be for homeowners, building owners, or others? If we do nothing, how would that play out?"

Michael Freels clarified that the Oregon Department of Energy (ODOE) is not modeling a scenario where the energy system remains unchanged (business as usual). Instead, the modeling complies with existing decarbonization policies, such as HB 2021 and the Clean Power Plan (CPP), focusing on achieving success within these frameworks.

Mike Graybill raised a broader question for future consideration: "How does risk and vulnerability factor into an evaluation of a new energy source?"

Comments and Questions from Chat:

Dean Apostol noted the difficulty in planning without clear targets: "Powering the coast alone might take 50 offshore turbines, while powering California could require 2,500 turbines. It's hard to know what we are planning for with no target."

Jason Sierman (Oregon Department of Energy) provided clarification on cost and risk considerations, explaining that:

- The Oregon PUC assesses and regulates costs and risks associated with "doing nothing," meeting Oregon's load growth needs, or complying with the state's clean energy policy requirements for investor-owned utilities (IOUs) and their customers.

- For customer-owned utilities (COUs), the governing boards of individual utilities perform similar assessments and regulate accordingly.

Public Comment Part II

Mike Okaneski, representing the West Coast Pelagic Conservation Group, shared insights from his extensive experience in the fishing and processing industries across Oregon, Washington, and California, as well as his involvement in offshore wind discussions on both coasts. He highlighted key observations:

1. Existing Port Infrastructure:
 - Washington, under Jay Inslee's leadership, has been preparing to establish a robust supply chain for offshore wind, utilizing Seattle and Tacoma's deepwater ports. These ports have the infrastructure to support manufacturing, assembly, and deployment operations.
 - In California, Long Beach has allocated 400 acres for offshore wind development, and Humboldt Bay is considering an 80-acre development plan.
2. Oregon's Port Limitations:
 - Compared to Washington and California, Oregon lacks significant port infrastructure to support large-scale offshore wind manufacturing and assembly.
 - Jobs directly associated with offshore wind development on the Oregon coast may be limited due to this lack of infrastructure.
3. Job Creation Expectations:
 - Early discussions from BOEM about substantial job creation on the Oregon coast were likely overstated. Upon further inquiry, BOEM clarified that the number of jobs would be far fewer than initially projected, primarily due to infrastructure constraints.

Mike advised staying informed about other states' activities and infrastructure developments to understand the competitive landscape and plan effectively for Oregon's involvement in offshore wind.

Closing:

Jeff wrapped up the meeting by sharing logistics for the next roundtable session, which will be a 1.5-day session held in Lincoln City on February 20 and 21, 2025. He thanked everyone for their active participation over Zoom and encouraged continued engagement in the upcoming discussions.

The meeting adjourned at 4:10 PM with appreciation for the contributions and collaboration throughout the day.

Links and other reading/materials recommendations added in chat:

- Block Island Wind Farm:
<https://tethys.pnnl.gov/wind-project-sites/block-island-wind-farm>
- California Current:
<https://www.integratedecosystemassessment.noaa.gov/regions/california-current>
- BOEM:
<https://www.boem.gov/renewable-energy/state-activities/california-offshore-wind-draft-programmatic-environmental-impact>
- U.S. Offshore Wind Synthesis of Environmental Effects Research (SEER):
<https://tethys.pnnl.gov/us-offshore-wind-synthesis-environmental-effects-research-seer>

- Knowledge based at Tethys:
<https://tethys.pnnl.gov/knowledge-base-all?search=adaptive+management>
- Oceanographic Responses to Offshore Wind: From First Principles to Potential Effects:
<https://tethys.pnnl.gov/events/oceanographic-responses-offshore-wind-first-principles-potential-effects>
- Book recommendation: The Science of Scenery: How we see scenic beauty, what it is, why we love it, and how to measure and map it. By Dr Andrew Lothian.
- Oregon Offshore Wind Mapping Tool
<https://offshorewind.westcoastoseans.org/visualize/#x=-126.88&y=43.62&z=6&logo=true&controls=true&dls%5B%5D=true&dls%5B%5D=0.5&dls%5B%5D=359&dls%5B%5D=true&dls%5B%5D=0.5&dls%5B%5D=697&basemap=ocean&themes%5Bids%5D%5B%5D=5&tab=active&legends=false&layers=true>
- California Offshore Wind Programmatic Environmental Impact Statement
- Feature Image
- <https://www.boem.gov/renewable-energy/state-activities/california-offshore-wind-programmatic-environmental-impact>
- Energy Strategy Website- [State of Oregon: DATA & REPORTS - Oregon Energy Strategy](#)
- Public Comment Portal- [Oregon Energy Strategy - Public Comment Portal · Customer Self-Service](#)
- Info on Policy Working Groups- [State of Oregon: DATA & REPORTS - Energy Strategy Working Groups](#)
- Modeling Results Event, January 31st- § [State of Oregon: DATA & REPORTS - Oregon Energy Strategy Engagement Opportunities](#)
- Oregon Energy Strategy
- Pathways to Oregon's Energy Future: [OES-Modeling-Results-Flyer-1.31.2024.pdf](#)
- PURPA Qualifying Facilities: <https://www.ferc.gov/qf>
- Electricity Mix in Oregon:
<https://www.oregon.gov/energy/energy-oregon/Pages/Electricity-Mix-in-Oregon.aspx>
- Northwest Regional Forecast of Power Loads and Resources. August 2024 through July 2034:
<https://www.pnucc.org/wp-content/uploads/2024-PNUCC-Northwest-Regional-Forecast-final.pdf>
- Northwest Regional Forecast:
<https://www.pnucc.org/system-planning/northwest-regional-forecast/>
- 2025 Integrated Resource Plan (Draft):
https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/integrated-resource-plan/2025-irp/2025_DRAFT_IRP_Vol.1.pdf

Action items

- ☐ Establish Workgroups: Finalize the formation of three proposed workgroups based on feedback from roundtable members.
- ☐ Public input opportunities are clear and accessible, including the upcoming public webinar on January 31, 2025.
- ☐ Finalize logistics for the 1.5-day in-person session in Lincoln City on February 20–21, 2025.

EFFECTS AND POLICIES SUMMARY TABLE,
STATEWIDE PLANNING GOAL 19 POLICIES,
FEDERAL CONSISTENCY INFORMATION REQUIREMENTS
TERRITORIAL SEA PLAN PART 5 INFO REQUIREMENTS



4080 Topic Area	Effect Categories	Key Enforceable Policies
Public Engagement		15 CFR 930.61 (Federal Consistency Public Engagement) National Environmental Policy Act Statewide Planning Goal 1; Goal 19 Management Measure f. DSL/DLCD/OPRD/Local public process requirements for permits
Local and Regional Communities	Recreation and Land Use Aesthetic Resources Socioeconomic Resources and Effects to Coastal Uses Hazards Effects	Territorial Sea Plan 5 (Recreation, Ocean Users, Visual Resource Standards, Hazards contingencies) ORS 390 Ocean Shores Local Plans and Codes (tied to Planning Goals, e.g., Goal 5) OAR 141-140-0040 (affected ocean user conflict)
Economic Opportunity and Sustainment	Socioeconomic Resources and Effects to Coastal Uses	ORS 506.109 Food Fish Policy Territorial Sea Plan 5 (Recreation and Ocean Users) OAR 141-140-0040 (affected ocean user conflict)
Workforce	Socioeconomic Resources and Effects to Coastal Uses	HB 2021 Labor Standards in Energy Procurement HB 4080 Labor Standards (enforceability question)
Tribal Interests (not already addressed under other categories, e.g., environment)	Cultural and Tribal Resources	ORS 358 (Archaeological Resources) ORS 390 (State Historic Preservation) ORS 97 (Archaeological Information Protection) Territorial Sea Plan 5 (visual resource standards) OAR 141-140-0040 (affected ocean user conflict)
Environmental Protection	Geologic and Soils Water Resources Aquatic Life Resources Terrestrial Resources Threatened and Endangered Species Hazards Effects	Planning Goals 16, 17, 18, 19 Territorial Sea Plan 2, 3, 4, 5 ORS 196 Removal Fill ORS 506.109 Food Fish Policy ORS 273/274: State Lands and OAR 141 (Special Uses of State Land) ORS 468b/OAR340 (Water Quality) ORS 496 Wildlife Policy and T/E Species ORS 390 Ocean Shores OAR 141-142 Marine Reserves and Marine Protected Areas
Energy and Climate Goals		HB 2021 Renewable Energy Standards

Policies Contained within Goal 19 – Ocean Resources

<https://www.oregon.gov/lcd/OP/Documents/goal19.pdf>

INFORMATION AND EFFECTS ASSESSMENT REQUIRED

Prior to taking an action that is likely to affect ocean resources or uses of Oregon's territorial sea, state and federal agencies 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.

IMPLEMENTATION REQUIREMENTS

1. Uses of Ocean Resources

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, which are areas and associated biologic communities that are:
 - a) important to the biological viability of commercially or recreationally caught species or that support important food or prey species for commercially or recreationally caught species; or
 - b) needed to assure the survival of threatened or endangered species; or
 - c) ecologically significant to maintaining ecosystem structure, biological productivity, and biological diversity; or
 - d) essential to the life-history or behaviors of marine organisms; or
 - e) especially vulnerable because of size, composition, or location in relation to chemical or other pollutants, noise, physical disturbance, alteration, or harvest; or
 - f) unique or of limited range within the state; and
 4. areas important to fisheries, which are:
 - a) areas of high catch (e.g., high total pounds landed and high value of landed catch); or
 - b) areas where highly valued fish are caught even if in low abundance or by few fishers; or
 - c) areas that are important on a seasonal basis; or
 - d) areas important to commercial or recreational fishing activities, including those of individual ports or particular fleets; or
 - e) habitat areas that support food or prey species important to commercially and recreationally caught fish and shellfish species.

- c. Agencies, through programs, approvals, and other actions, shall
 - 1. protect and encourage the beneficial uses of ocean resources— such as navigation, food production, recreation, aesthetic enjoyment, and uses of the seafloor—provided that such activities do not adversely affect the resources protected in subsection 1., above; avoid, to the extent possible, adverse effects on or operational conflicts with other ocean uses and activities; and
 - 2. comply with applicable requirements of the Oregon Territorial Sea Plan.

2. Management Measures

Management measures for ocean resources and uses shall be appropriate to the circumstances and provide flexibility for future actions. Such management measures may include:

- a. Adaptive Management: to adapt management programs to account for variable conditions in the marine environment, the changeable status of resources, and individual or cumulative effects of uses;
- b. Condition Approvals or Actions: to place conditions or limit actions to protect or shield other uses and resources;
- c. Special Management Area Plans: to develop management plans for certain marine areas to address the unique management needs for resource protection, resource utilization, and interagency cooperation in the areas;
- d. Intergovernmental Coordination and Cooperation: to coordinate, integrate, and co-manage programs and activities with all levels of government, including Indian tribal governments;
- e. Regional Cooperation and Governance: to cooperate with other coastal states, countries, organizations, and federal agencies within the larger marine region to address common or shared ocean resource management issues;
- f. Public Involvement: to involve the public and affected groups in the process of protecting ocean resource, especially through public awareness, education, and interpretive programs;
- g. Precautionary Approach: to take a precautionary approach to decisions about marine resources and uses when information is limited.

3. Contingency Plans:

State and federal agencies, when approving or taking an action that could, under unforeseen circumstances, result in significant risks to ocean resources and uses, shall, in coordination with any permittee, establish appropriate contingency plans and emergency procedures to be followed in the event that the approved activity results in conditions that threaten to damage the marine or estuarine environment, resources, or uses.

Types of Information required in order to be consistent with Territorial Sea Plan Part 5 (renewable energy facilities)

Under the state's Federal Consistency authority, the state may object to a federal authorization or permit that does not demonstrate consistency with these information requirements (i.e., at the time of a permit application, which would come after a lease). Federal Consistency reviews may be extended 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:

930.63 State agency objection to a consistency certification.

(a) If the State agency objects to the applicant's consistency certification within six months following commencement of review, it shall notify the applicant, Federal agency and Director of the objection. A State agency may assert alternative bases for its objection, as described in [paragraphs \(b\) and \(c\)](#) of this section.

(b) State agency objections that are based on sufficient information to evaluate the applicant's consistency certification shall describe how the proposed activity is inconsistent with specific enforceable policies of the management program. The objection may describe alternative measures (if they exist) which, if adopted by the applicant, may permit the proposed activity to be conducted in a manner consistent with the enforceable policies of the management program.

(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. The objection may describe alternative measures (if they exist) which, if adopted by the applicant, may permit the proposed activity to be conducted in a manner consistent with the enforceable policies of the management program.

(d) **Alternatives.** If a State agency proposes an alternative(s) in its objection letter, the alternative(s) shall be described with sufficient specificity to allow the applicant to determine whether to, in consultation with the State agency: adopt an alternative; abandon the project; or file an appeal under subpart H. Application of the specificity requirement demands a case specific approach. More complicated activities or alternatives generally need more information than less-complicated activities or alternatives. See [§ 930.121\(c\)](#) for further details regarding alternatives for appeals under [subpart H of this part](#).

Information Requirements in Oregon Enforceable Policies

The following requirements are found in Territorial Sea Plan Part 5. Additional information requirements may be present in the processes associated with Water Quality Certifications under DEQ, Removal-Fill Permits and Easements under DSL, Ocean Shore Permits under OPRD, and Local permit or review processes.

Inventory Content

To evaluate the magnitude of the proposed project, the likelihood of project effects, and the significance of the resources and uses that the project may affect, regulating agencies shall require that the applicant include consideration of certain factors in the inventory. The Resource and Use Inventory and Effects Evaluation and Special Resource and Use Review Standards requirements apply to all renewable energy facility projects for which an applicant pursues a DSL proprietary authorization, unless the requirements are waived by DSL or otherwise addressed in another subsection of the plan. In addition to the resource inventory and effects evaluation content of this paragraph, projects are also subject to the Special Resource and Use Review Standards specified in paragraph B.4.g.

- 1.) Information regarding the development, placement, operation, maintenance, and decommissioning of the project:
 - (a) Location (using maps, charts, descriptions, etc.);
 - (b) Numbers and sizes of equipment, structures;
 - (c) Methods, techniques, activities to be used;
 - (d) Transportation and transmission systems needed for service and support;
 - (e) Materials to be disposed of and method of disposal;
 - (f) Physical and chemical properties of hazardous materials, if any, to be used or produced;
 - (g) Navigation aids; and
 - (h) Proposed time schedule.
- 2.) Location and description of all affected areas, including, but not limited to:
 - (a) Site of the renewable energy facility;
 - (b) Adjacent areas that may be affected by physical changes in currents and waves caused by the project;
 - (c) Utility corridor transiting the territorial sea and ocean shore; and
 - (d) Shoreland facilities.
- 3.) Physical and chemical conditions including, but not limited to:
 - (a) Water depth;
 - (b) Wave regime;
 - (c) Current velocities;
 - (d) Dispersal, horizontal transport, and vertical mixing characteristics;
 - (e) Meteorological conditions; and (f) Water quality.
- 4.) Bathymetry (bottom topography) and Shoreline Topography (LIDAR Light Detection and Ranging)
- 5.) Geologic structure, including, but not limited to:
 - (a) Geologic hazards, such as faults or landslides of both marine and shoreline facility areas;
 - (b) Mineral deposits;
 - (c) Seafloor substrate type; and
 - (d) Hydrocarbon resources.
- 6.) Biological features, including, but not limited to:
 - (a) Critical marine habitats (see Part Five, Appendix A);
 - (b) Other marine habitats;
 - (c) Fish and shellfish stocks and other biologically important species;

- (d) Recreationally or commercially important finfish or shellfish species;
 - (e) Planktonic and benthic flora and fauna;
 - (f) Other elements important to the marine ecosystem; and
 - (g) Marine species migration routes.
- 7.) Cultural, economic, and social uses affected by the renewable energy facility, including, but not limited to:
- (a) Commercial and sport fishing;
 - (b) State or federally protected areas;
 - (c) Scientific research;
 - (d) Ports, navigation, and dredge material disposal sites;
 - (e) Recreation;
 - (f) Coastal community economy;
 - (g) Aquaculture;
 - (h) Waste water or other discharge;
 - (i) Utility or pipeline corridors and transmission lines;
 - (j) Military uses; and
 - (k) Aesthetic resources.
- 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.

Written Evaluation.

Regulating agencies shall require the applicant to submit a written evaluation of all the reasonably foreseeable adverse effects associated with the development, placement, operation, and decommissioning of the proposed renewable energy facility. For purposes of the evaluation, the submittal shall base the determination of “reasonably foreseeable adverse effects” on scientific evidence. The information and data to comply with the Special Resources and Uses Standards is specified in paragraph B.4.g. The evaluation shall describe the potential short-term and long-term effects of the proposed renewable energy facility on marine resources and uses of the Oregon territorial sea, continental shelf, onshore areas and coastal communities based on the inventory data listed in paragraph B.4.d and the following considerations:

- 1.) **Biological and Ecological Effects:** Biological and ecological effects include those on critical marine habitats and other habitats, and on the species those habitats support. The evaluation shall determine the probability of exposure and the magnitude of exposure and response, as well as the level of confidence (or uncertainty) in those determinations. The evaluation need not discuss highly speculative consequences. However, the evaluation shall discuss catastrophic environmental effects of low probability. Factors to consider include, but are not limited to:
- (a) The time frames/periods over which the effects will occur;
 - (b) The maintenance of ecosystem structure, biological productivity, biological diversity, and representative species assemblages;
 - (c) Maintaining populations of threatened, endangered, or sensitive species;
 - (d) Vulnerability of the species, population, community, or the habitat to the proposed actions;
 - and (e) The probability of exposure of biological communities and habitats to adverse effects from operating procedures or accidents.

2.) **Current Uses:** Evaluate the effects of the project on current uses and the continuation of a current use of ocean resources such as fishing, recreation, navigation, and port activities. Factors to consider include, but are not limited to:

- (a) Local and regional economies;
- (b) Archeological and historical resources; and
- (c) Transportation safety and navigation.

3.) **Natural and Other Hazards** Evaluate the potential risk to the renewable energy facility, in terms of its vulnerability to certain hazards and the probability that those hazards may cause loss, dislodging, or drifting of structures, buoys, or facilities. Consider both the severity of the hazard and the level of exposure it poses to the renewable marine resources and coastal communities. Hazards to be considered shall include the scouring action of currents on the foundations and anchoring structures, slope failures and subsurface landslides, faulting, tsunamis, variable or irregular bottom topography, weather related, or due to human cause.

4.) **Cumulative Effects** Evaluate the cumulative effects of a project, including the shoreland component, in conjunction with effects of any prior phases of the project, past projects, other current projects, and probable future projects. The evaluation shall analyze the biological, ecological, physical, and socioeconomic effects of the renewable energy facility development and of other renewable energy facility projects along the Oregon coast, while also taking into account the effects of existing and future human activities and the regional effects of global climate change.

(a) In conducting the cumulative effects analysis, the applicant shall focus on the specific resources and uses, as detailed under paragraph B.4.d that may be affected by the incremental effects of the proposed project and other projects in the same geographic area. The evaluation shall include but not be limited to consideration of whether:

- i. the resource and uses are especially vulnerable to incremental effects;
 - ii. the proposed project is one of several similar projects in the same geographic area; iii. other developments in the area have similar effects on the resources and uses; iv. these effects have been historically significant for the resource and uses; and v. other analyses in the area have identified a cumulative effects concern.
- b) The JART shall make recommendations as to the adequacy of the cumulative effects analysis that regulating agencies shall require of the applicant for phased development projects as described under subparagraph B.4.f.3 and subsection D.1. The JART will use the analysis to inform the location, scale, scope and technology of subsequent stages of the phased development project.

5.) **Adaptive Management** Regulating agencies and the project developer shall 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.

OFFSHORE WIND EFFECTS TABLE
(UPDATED POLICIES AND GAPS DRAFT)



Offshore Wind Effects Compilation & Enforceable Policy Worksheet

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
AQUATIC GEOLOGY				
Effects of project presence, installation, and removal activities on local geology and soils.	Impacts of cables on seafloor, anchor chain sweep, shoreline, reef (if fixed), Related effects to terrestrial resources, including cultural resources, are addressed elsewhere in this table.	Statewide Planning (SP) Goal 16/17/18/19 Territorial Sea Plan (TSP) Part 2/3/4/5 ORS 273 – State Lands Generally ORS 274 – Submersible and Submerged Lands ORS 196 – Removal-Fill OAR 141-083 – Rules for Granting Easements for Fiber Optic and Other Cables on State-Owned Submerged and Submersible Land within the Territorial Sea OAR 141-125 – Authorizing Special Uses on State-Owned Land	TSP Part 4, Policy 4.3.2 (information requirement) Geologic structure, including, but not limited to: 4.3.2.1 Geophysical imaging and geotechnical investigation of full planned HDD routes across the shoreline sufficient to characterize subsurface geotechnical properties and plan HDD construction in a way that avoids drill pipe breakage, inadvertent return, surface settlement, and other complications. 4.3.2.2 Geologic hazards, such as faults or landslides; Page 9 19 4.3.2.3 Mineral deposits; and 4.3.2.4 Seafloor substrate type TSP Part 3, Policy 6.b.B Protection of rocky habitat resources (i.e. living marine organisms and their habitat) shall be prioritized over development of non-renewable ocean resource uses. DSL: DSL acts through the State Land Board DSL: Application process for removal-fill permit and undersea cables easement authorization within the territorial sea DSL: Short-term access authorization for geological or other type of survey DSL: Decommissioning requirements for undersea cables Local plans and codes may require geotechnical reports and include geophysical hazard polices	GAP (DSL): DSL authority to charge fees and compensation rates for the easement (Legislation Session 2025 SB 793 regarding undersea cables will hopefully address this issue) GAP (DSL): Could be an appropriate action to amend and add a section about renewable energy facilities/structures on state lands under ORS 273 GAP (DSL): Decommissioning and removal of cables together with the Emergency Response Plan requirements GAP (DSL): Separation standards between cables
Effects of project on sediment transport processes (erosion, accretion, scour)	Sediment transport impacts in riverine, riparian, wetland, estuarine and marine areas	Goal 19 TSP Part 4 Statewide Planning Goal 16/17/18 Local Plans and Codes (Goal 16, 17, 18)	TSP Part 4, Policy 4.2 (information requirement) Location and description of all affected areas, including, but not limited to: 4.2.1 Proposed route of the cable, pipeline, or other utility; and 4.2.2 Onshore facilities. Additionally for pipelines or other utilities or fixtures: (a) Adjacent areas that may be affected by physical changes in currents and waves caused by the project or development action; TSP Part 4, Policy 4.3 (information requirement) Physical and chemical conditions including, but not limited to: 4.3.1 Bathymetry (bottom topography) and Shoreline Topography, including profile of water depth along the route; Additionally for pipelines or other utilities or fixtures: (a) wave regime; (b) typical and maximum current velocities; and (c) dispersal characteristics. Goal 16 requires proposed actions to be, “consistent with the resource capabilities of the area and the purposes of [the applicable] management unit.”	Info need: when does sediment transport effect become an issue that interacts with a policy? Habitat effects? Property effects? Additional refinement needed to identify all potential policy connections (e.g., Ocean Shores, DOGAMI policies, etc.) depending on location and type of effect.

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
WATER RESOURCES				
Effects of surveys, facility development, activities in estuaries, seafloor anchor placement, cable installation, or other work on water quality, including sediment suspension.		Goal 19 TSP Part 4/5 ORS 468b, OAR 340 – Water Quality (specifically 340-041-0036 Turbidity)	Turbidity (Nephelometric Turbidity Units, NTU): No more than a ten percent cumulative increase in natural stream turbidities may be allowed, as measured relative to a control point immediately upstream of the turbidity causing activity. However, limited duration activities necessary to address an emergency or to accommodate essential dredging, construction or other legitimate activities and which cause the standard to be exceeded may be authorized provided all practicable turbidity control techniques have been applied and one of the following has been granted: (1) Emergency activities: Approval coordinated by the Department with the Oregon Department of Fish and Wildlife under conditions they may prescribe to accommodate response to emergencies or to protect public health and welfare; (2) Dredging, Construction or other Legitimate Activities: Permit or certification authorized under terms of section 401 or 404 (Permits and Licenses, Federal Water Pollution Control Act) or OAR 14I-085-0100 et seq. (Removal and Fill Permits, Division of State Lands), with limitations and conditions governing the activity set forth in the permit or certificate.	GAP? Information requirements in Parts 2/4/5 do not specify water quality effects unless they have an ecological effect. Goal 19 does not specify water quality unless it is related to ecological effects.
Effects of anchor chain sweep (specific to water quality)	Release of elements (naturally occurring or otherwise) from sea floor Destruction of benthic habitat is addressed later in this table	Goal 19 TSP Part 4/5 ORS 468b, OAR 340 – Water Quality (specifically 340-041-0036 Turbidity)	TSP Part 5, B.4.d Inventory Content...subsection 3 and 6 Part 4, Inventory Content. - 4.3.3.3 Benthic flora and fauna that may be affected by the project or development action; and 4.3.3.4 Other ecosystem elements that may be affected by the project or development action. See policies related to benthic community effects. See policies related to aquatic species effects. See turbidity policy above	

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effects of toxins introduced by the Project (e.g., antifouling paint or coatings) on water quality.		SP Goal 19 TSP Part 5 ORS 468b, OAR 340 – Water Quality	TSP Part 4, Section 4.1. (information requirement) Physical and chemical properties of materials, if any, to be used or produced (e.g., chemicals used in horizontal directional drilling (HDD), materials which may be transported by a pipeline, etc.); SP Goal 19, Policy 1 TSP Part 5 Ecological Resources Protection Standard [in designated areas]: Renewable energy facilities shall have no significant adverse effect on ecological resources of concern. 468B.020 Prevention of pollution. (1) Pollution of any of the waters of the state is declared to be not a reasonable or natural use of such waters and to be contrary to the public policy of the State of Oregon, as set forth in ORS 468B.015. (2) In order to carry out the public policy set forth in ORS 468B.015, the Department of Environmental Quality shall take such action as is necessary for the prevention of new pollution and the abatement of existing pollution by: (a) Fostering and encouraging the cooperation of the people, industry, cities and counties, in order to prevent, control and reduce pollution of the waters of the state; and (b) Requiring the use of all available and reasonable methods necessary to achieve the purposes of ORS 468B.015 and to conform to the standards of water quality and purity established under ORS 468B.048. [Formerly 449.095 and then 468.715] OAR 340-041-0004: (1) Purpose. The purpose of the Antidegradation Policy is to guide decisions that affect water quality to prevent unnecessary further degradation from new or increased point and nonpoint sources of pollution, and to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing beneficial uses. The standards and policies set forth in OAR 340-041-0007 (Statewide Narrative Criteria) through 340-041-0350 (The Three Basin Rule: Clackamas, McKenzie (above RM 15) & the North Santiam) supplement the Antidegradation Policy.	GAP (TSP Part 5): The ecological resource standards in Part 5 are spatially limited. Part 5 could be amended to make these standards broadly applicable to the resource rather than the location.
Effects to water quality from construction, including dredging (e.g., vessel and maintenance operations).	Includes ballast water, inadvertent spills, in estuarine and open sea, temperature changes from water used in cooling structures	TSP Part 5 ORS 465 – Hazardous Waste ORS 468b, OAR 340 – Water Quality Goal 16 and Local codes	See above water quality standards.	

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effects to water quality from operation and maintenance (e.g., vessel and maintenance operations)	Includes ballast water, inadvertent spills, in estuarine and open sea	TSP Part 5 ORS 465 – Hazardous Waste ORS 468b, OAR 340 – Water Quality OAR 340-143 – Ballast Water Management ORS 783 – Ballast Water	Numerous water quality standards apply to inadvertent spills from vessels. See also accidental spill policies below. TSP Part 5, g. Special Resources and Uses Review Standards. 1.) The following siting and development requirements apply to the construction, deployment or maintenance of a renewable energy facility: (a) Consider practicable alternative deployment and placement of structures in proximity to the proposed project area that would have less impact on identified resources and uses. (b) Minimize construction and installation activities during critical time periods for the resources and uses as identified by appropriate regulatory agencies. (c) Minimize disturbance to the identified resources and uses during construction and installation of the renewable energy facility and other structures. ... g. Special Resources and Uses Review Standards. (b) General Fisheries Use Protection Standard. 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 Except as provided in ORS 783.635 (Discharge of ballast water prohibited), a person may not discharge the ballast of any vessel into the navigable portions or channels of any of the bays, harbors or rivers of this state, or within the jurisdiction of this state, so as to injuriously affect such portions or channels of such bays, harbors or rivers, or to obstruct navigation thereof.	GAP (Potential): Biofouling organisms on vessels GAP (TSP Part 5): The ecological resource standards in Part 5 are spatially limited. Part 5 could be amended to make these standards broadly applicable to the resource rather than the location
Effects of accidental spills of fuel, lubricants, marine debris, PFOAs, bisphenols (BPA), and hydraulic oil on water quality in event of release		SP Goal 19 TSP Part 5 OAR 340-141 – Oil spills ORS 468b – Water Quality	OAR 340-141 (1) It shall be unlawful for oil to enter the waters of the state from any ship or high hazard train route or from any fixed or mobile facility or installation located offshore or onshore, whether publicly or privately operated, regardless of the cause of the entry or the fault of the person having control over the oil, or regardless of whether the entry is the result of intentional or negligent conduct, accident or other cause. Such entry constitutes pollution of the waters of the state. 468B.345 (1) Unless an oil spill prevention and emergency response plan has been approved by the Department of Environmental Quality and has been properly implemented, no person shall: (a) Cause or permit the operation of an onshore facility in the state; (b) Cause or permit the operation of an offshore facility in the state; or (c) Cause or permit the operation of a covered vessel within the navigable waters of the state. See also the Ecological Protection Standards in Part 5 and Goal 19	GAP (TSP Part 5): Does not have a general "avoid or mitigate effects" standard that applies anywhere in the ocean. This may include ecological resource standards. Combine (beyond existing language) the zoning and resource standards regardless of location or zone. GAP: According to DEQ, OAR 340-141 has a 10k gallon limit to be a "facility" and don't consider multiple smaller turbine facilities (also ORS 468b). Some ambiguity there.
AQUATIC (LIVING) RESOURCES				

Effects to the benthic community or alteration of benthic habitat from marine survey, installation or removal activities and presence of Project structures on or in the seafloor (e.g. anchors, cable).	Disturbance, alteration, conversion or destruction of seafloor habitats from boring/coring surveys, anchor installations, movement or mooring chains, cable placement, etc. Benefits may include nature inclusive design, research platforms, and fish population increase. However, like in the Gulf of Mexico, platforms in open water attract fish, which attract recreational fishing - this could lead to high traffic areas and an increased risk of accidents.	SP Goal 19 TSP Part 2/3/4/5 ORS 273 – State Lands Generally ORS 274 – Submersible and Submerged Lands ORS 196 – Removal-Fill OAR 141-083 – Rules for Granting Easements for Fiber Optic and Other Cables on State-Owned Submerged and Submersible Land within the Territorial Sea OAR 141-085 – Rules Governing the Issuance and Enforcement of Removal-Fill Authorizations Within Waters of Oregon Including Wetlands (including 141-085-0565 Considerations in Evaluating Individual Permit Applications) OAR 141-125 – Authorizing Special Uses on State-Owned Land OAR 141-140 – Rules Governing the Placement of Ocean Energy Conversion Devices On, in or Over State-Owned Land Within the Territorial Sea	See SP Goal 19 Policies to protect marine organisms, marine ecosystem integrity, important marine habitat, and areas important to fisheries. TSP Part 3: Policy A. Consistent with Statewide Land Use Planning Goal 19, actions that are likely to affect rocky habitats shall be developed and conducted to conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social values benefits. Policy B. Protection of rocky habitat resources (i.e. living marine organisms and their habitat) Policy G. Managing agencies shall administer regulations, permits and other agreements in a way that considers the long-term conservation of rocky habitats and organisms. TSP Part 4: 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 4 amendments adopted in 2023 assert that DSL <i>“shall not grant easements on rocky habitat areas within the state territorial sea”</i> TSP Part 5: Policy B.4.g. Special Resources and Use Review Standards. 3) Ecological Resources Protection Standard. 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 specified areas]: Renewable energy facilities shall have no significant adverse effect on ecological resources of concern. Definition of Significant Adverse Effect: 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) Standards in Important, Sensitive, or Unique Areas (as designated by the state): •For rock resources, regulating agencies will apply a buffer of 1000 feet (0.164 nautical miles) to account both for rock reef species foraging and disturbance from development. OAR 141-083 (DSL rules for cable easements): Easements for cables shall be located so as to: (a) Protect the public trust values of commerce (including fiber optic and other cable transmissions), navigation, fishing, and recreation; (b) Conserve living marine and other seabed resources; and (c) Avoid or reduce conflicts with other ocean users and industries. (d) Comply with all applicable local, state, and federal laws including Statewide Planning Goal 19. All cable easements issued under these rules shall require approval by the State Land Board. All cables are to be buried using the best available proven technology whenever Territorial Sea bottom conditions permit to a sufficient depth to minimize conflicts with other ocean users and industries and recognizing the potential need to retrieve the cable for repair or removal.	GAP: state mechanism to consider cumulative effects of multiple projects STRENGTHEN: state policy to identify benthic habitats (e.g. coral habitat, methane seep sites) to be avoided early on GAP (TSP Part 5, Potential): • Vessel operation impacts (e.g., collisions, strikes). • Ecological resource standards are spatially limited and could be revised to be generally applicable to resources regardless of location. • Seasonal considerations (e.g., in water work periods in ocean considering species presence or fisheries uses) • Define “Adverse Effect for Ecological Resource Protection” and role of mitigation on the effect of significance. STRENGTHEN: consider the conservation strategies identified for these habitats in the Oregon Conservation Strategy (Update/revision of the State Wildlife Action Plan currently underway). These strategies are non-regulatory but could be used to guide our thinking, are there any policies in place to help meet these objectives? STRENGTHEN: Add TSP Part 3 Policy J to TSP Part 2 (“Marine development activities, not currently managed by a specific part of the Territorial Sea Plan, that cause significant adverse effects or permanent impacts to the form or function of submerged rocky habitats, or the fisheries dependent upon them, are prohibited.”) GAP (DSL): DSL authority to charge fees and compensation rates for the easement (Legislation Session 2025 SB 793 regarding undersea cables will hopefully address this issue) GAP (DSL): Could be an appropriate action to amend and add a section about renewable energy facilities/structures on state lands under ORS 273 GAP (DSL): Decommissioning and removal of cables together with the Emergency Response Plan
--	--	--	--	---

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
			If determined necessary by the Division in consultation with the easement holder and other interested parties, and if permitted by the applicable federal agency(ies) regulating the cable, the easement holder shall remove the cable from the state-owned submerged and submersible land within one (1) year following the termination of use of the cable or expiration of the easement. Easement holders shall inspect cables to ensure that they remain both within the area authorized by the easement and buried. OAR 141-125: The holder of a lease for a renewable energy project must remove any or all developments as directed by the Department within one year of the date of the expiration or termination of the authorization. The holder of a special use authorization must conduct all operations within the authorized area in a manner that conserves fish and wildlife habitat; protects water quality; and does not contribute to insect or animal infestation, soil erosion or the growth of noxious plants. OAR 141-140: lessee is required to: “Remove ocean energy monitoring equipment, ocean energy facilities and any other material, substance or related or supporting structure from the authorized area as directed by the Department within a period of time to be established by the Department as a condition of the authorization. If the holder of the temporary use authorization or lessee fails or refuses to remove such equipment, facility or other material, substance or related or supporting structure, the Department may remove them or cause them to be removed, and the holder of the authorization or lessee shall be liable for all costs incurred by the State of Oregon for such removal.” DSL: Short-term access authorization for geological or other type of survey General Policy on Removal-Fill. No authorization to place fill or remove material from the waters of this state may: (a) Interfere with the paramount policy of this state to preserve the use of its waters for navigation, fishing and public recreation uses; or (b) Be inconsistent with the protection, preservation and best use of the water resources of this state.	GAP (DSL): Mooring lines should be added/addressed in terms of regulation and requirements GAP (DSL): Separation standards between cables

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effects of changes to marine community composition at the Project site or affected areas beyond the project site (e.g., use patterns, attraction, and aversion). Note: this is a broad effect category that would need additional specification when developing research agenda questions or evaluating consistency with broad policies.	- Includes a broad range of species - Changes in the presence of fouling organisms - Pinniped haulout or seabird perching - Alterations in the distribution or abundance of predators and prey species - Species interactions (as a result of attraction to or avoidance of the Project) - Trophic system changes to local species as well as migratory species (e.g., whales/turtles) - Invasive Species establishment on hard structures - International important biodiversity - Southern resident killer whale/orcas - Beneficial effects may include nature inclusive design, research platforms, fish population increase	SP Goal 19 TSP Part 5 ORS 496 – Wildlife Policy ORS 506 – Food Fish Policy	See SP Goal 19 Policies to protect marine organisms, marine ecosystem integrity, important marine habitat, and areas important to fisheries. TSP Part 5, Policy B.4.g. Special Resources and Use Review Standards. 3) Ecological Resources Protection Standard. 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 specified areas]: Renewable energy facilities shall have no significant adverse effect on ecological resources of concern. Definition of Significant Adverse Effect: 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) ORS 496.012: It is the policy of the State of Oregon that 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. In furtherance of this policy, the State Fish and Wildlife Commission shall represent the public interest of the State of Oregon and implement the following coequal goals of wildlife management: (1) To maintain all species of wildlife at optimum levels. (2) To develop and manage the lands and waters of this state in a manner that will enhance the production and public enjoyment of wildlife. Etc. ORS 506.109: It is the policy of the State of Oregon 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. In furtherance of this policy, the goals of food fish management are: (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.	GAP (TSP Part 5): The ecological resource standards in Part 5 protect species composition but are spatially limited. Part 5 could be amended to make these standards broadly applicable to the resource rather than the location. GAP: Should policies be differentiated by a broad range of species? How would standards differ? Note: The decommissioning requirements in TSP Part 5 and OAR 141-141 imply a preference for natural and native habitats to artificial habitats.
Effects to anadromous coastal fish species (salmon, sturgeon, eulachon, & lamprey) migration in the ocean and coastal rivers	- Marine equipment can generate EMFs that may interfere with the sensory systems of anadromous fish, affecting navigation or orientation, especially if installed in estuaries or near river mouths with anadromy. - Relationship between changes to estuarine refugia and altered predation during in/out migration - Each species has some unique sensitivities.	SP Goal 19 TSP Part 5 ORS 496 - Wildlife Policy ORS 506 - Food Fish Policy	Applicable policies are the same as for marine community composition effects.	GAP: The ISU and ecological resource standards in Part 5 protect ecological resources of concern (e.g., species composition) but are spatially limited. Part 5 could be amended to make these standards broadly applicable to the resource rather than the location.

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effects of underwater noise/vibration on marine mammals, fish, sea turtles, and seabirds from survey, construction, operation and monitoring activities. This [should] include both operations of the turbine, anchors/tethers, and transmission lines/infrastructure.	• Bird behavior, whale foraging behavior, migratory routes, predator-prey interactions • Acoustic effects that could disturb or disorient fish, lead to fish avoidance or alter migration. • Masking, impacts to communication and perception • Crabs and lobster may also be impacted • Invertebrates, shellfish as it comes closer to shore (e.g., sand dollars, D crab)	SP Goal 19 TSP Part 5 ORS 496 – Wildlife Policy	Applicable policies are the same as for marine community composition effects and benthic community effects.	See TSP Part 5 gaps above
Effects or risk of collision or entanglement with Project structures, entangled gear, or service vessels to marine species.	• Bird and bat strikes • Mammal entanglement or collision • Ship strikes	SP Goal 19 TSP Part 5 ORS 496 – Wildlife Policy ORS 506 – Food Fish Policy	Applicable policies are the same as for marine community composition effects.	See TSP Part 5 gaps above.
Effects of Project marker and vessel lighting on seabirds and marine species.	• Lighting may attract seabirds (especially nocturnal phototactic species) to structures, increasing risk of collision • Lighting may attract forage species and their predators increasing the opportunity for interaction with in-water structures near the ocean surface • "Fallout" attraction of birds to anthropogenic light sources can lead to mortality (?) • Lights can also attract and aggregate prey, potentially attract predators to areas of higher risk of collision/entanglement/impact?	SP Goal 19 TSP Part 5 ORS 496 – Wildlife Policy	Applicable policies are the same as for marine community composition effects.	See TSP Part 5 gaps above
Effects of changes in wave energy on neritic/seafloor, littoral and shoreline habitat	Assumption that extraction of wind energy changes wave size/energy at the surface and in subsurface waves.	SP Goal 19 TSP Part 5	Applicable policies are the same as for marine community composition effects and benthic community effects.	STRENGTHEN: Consider the conservation strategies identified for these habitats in the Oregon Conservation Strategy (Update/revision of the State Wildlife Action Plan currently underway). These strategies are non-regulatory but could be used to guide our thinking, are there any policies in place to help meet these objectives?
Effects of changes to electromagnetic fields (EMFs) on species sensitive to EMF	Effects to navigation, orientation, or prey detection; especially if installed in estuaries or near river mouths with anadromy. Dynamic electrified cable and its effect on ecosystem as they move through waters.	SP Goal 19 TSP Part 5 ORS 496 – Wildlife Policy	Applicable policies are the same as for marine community composition effects.	GAP: The ecological resource standards in Part 5 should be amended to be broadly applicable to the resource rather than the location.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effects of Project construction, operation and maintenance on state-listed (Oregon ESA), special-status or strategy species not protected under the federal ESA	Removal of floating kelp mats that naturally act as habitat attractants for forage fish	Goal 19 TSP Part 5 ORS 496 – Wildlife Policy ORS 496.171 – Wildlife Management authority for Threatened/Endangered species OAR 630-100 – Threatened or Endangered Species	Applicable policies are the same as for marine community composition effects. OAR 635-100-0130: Before a state agency takes, authorizes, or provides direct financial assistance for any action on land owned or leased by the state, or for which the state holds a recorded easement, the state agency shall consult with the department to determine whether the action is consistent with the survival guidelines established by the commission. If a state agency fails to adopt the recommendations made by the department under section (2) of this rule, it shall consult with the department and demonstrate in writing that: (a) The potential public benefits of the proposed action outweigh the potential harm from failure to adopt the recommendations; and (b) Reasonable mitigation and enhancement measures shall be taken, to the extent practicable, to minimize the adverse impact of the action on the affected species.	WISHLIST: OAR 635-100-0040 Oregon’s Sensitive Species Rule WISHLIST: OAR 635-100-0125 State Threatened and Endangered Species List STRENGTHEN: Consider the conservation strategies identified for these species in the Oregon Conservation Strategy (Update/revision of the State Wildlife Action Plan currently underway). These strategies are non-regulatory but could be used to guide our thinking, are there any policies in place to help meet these objectives? GAP (TSP Part 5): The ecological resource standards in Part 5 should be amended to be broadly applicable to the resource rather than the location.
Effects to seabirds resulting from avoidance of the project area	May affect feeding/migration activity or other risks. Loons have been studied to avoid project areas due to perceived risk	SP Goal 19 TSP Part 5	Applicable policies are the same as for marine community composition effects.	See TSP Part 5 gaps above
Effects to species from marine debris, hydraulic fluids, PFOAs, bisphenols (BPA), and oil contamination from offshore wind equipment or support vessels releasing into the ocean environment	Ingestion, bioaccumulation	SP Goal 19 TSP Part 5 ORS 496 – Wildlife Policy ORS 506.109 – Food Fish Policy	Applicable policies are the same as for marine community composition effects.	See TSP Part 5 gaps above
Energy extraction effects to upwelling and primary production, both locally and cumulatively across the California Current Large Marine Ecosystem (including regional effects from projects located in CA and WA)	• Reduction of primary productivity • Relocation of productivity • Change in migration and forage behavior (e.g., birds fly out to upwelling fronts) • Changes to ocean mixing • Changes to larval distribution or ocean transport • Compounding effects of energy extraction and climate change.	SP Goal 19 TSP Part 5 ORS 496 – Wildlife Policy ORS 506.109 – Food Fish Policy	Applicable policies are the same as for marine community composition effects and benthic habitat effects.	See TSP Part 5 gaps above

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effects related to invasive species introduction from vessel activities and permanent infrastructure attachment	• Risks of invasive species introduction at sea and especially in estuaries from vessels or imported materials or manufacturing. • Risks onshore from construction/disturbance in terrestrial, riparian, wetland, freshwater systems.	Statewide Planning Goal 19 ORS 496.012 - Wildlife DEQ Ballast Water regs	ORS 496.012: It is the policy of the State of Oregon that 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. In furtherance of this policy, the State Fish and Wildlife Commission shall represent the public interest of the State of Oregon and implement the following coequal goals of wildlife management: (1) To maintain all species of wildlife at optimum levels. (2) To develop and manage the lands and waters of this state in a manner that will enhance the production and public enjoyment of wildlife. Etc.	GAP: ODFW implements OARs to prohibit introduction of invasive species in freshwater systems especially 635-056-0050 & 635-056-0130 (Prohibited Species), 635-059-0000 (Aquatic Invasive Species) & 635-059-0010 (Inspection/Reporting). GAP (Potential): Regarding risks of invasive species introduction at sea and especially in estuaries from vessels or imported materials or manufacturing. Includes risks onshore from construction/disturbance in terrestrial, riparian, wetland, freshwater systems. GAP (TSP Part 5): Does not elevate indigenous species or explicitly discuss invasive species effects as a distinct threat to indigenous species.
Effects to estuaries from project development and cables	• Pollution from biofouling, ballast water, spills; • Changes to hydrodynamics and species/habitats from dredging; • Shoreline development impacts; • Loss of eel grass habitat • Permanent effects from channel deepening and changes in species behavior	SP Goal 16/17 TSP Part 4/5? DEQ Ballast Water regs ORS 273/274 – State Lands ORS 196 – Removal-Fill ORS 496.012 – Wildlife Policy Local plans and codes	SP Goal 16: Where consistent with the resource capabilities of the area and the purpose of [any] management unit, the following uses may be allowed: pipelines, cables and utility crossings, including incidental dredging necessary for their installation; SP Goal 17: "General priorities for the overall use of coastal shorelands (from highest to lowest) shall be to: 1. Promote uses which maintain the integrity of estuaries and coastal waters; 2. Provide for water-dependent uses; 3. Provide for water-related uses; 4. Provide for nondependent, nonrelated uses which retain flexibility of future use and do not prematurely or inalterably commit shorelands to more intensive uses; 5. Provide for development, including nondependent, nonrelated uses, in urban areas compatible with existing or committed uses; 6. Permit nondependent, nonrelated uses which cause a permanent or long-term change in the features of coastal shorelands only upon a demonstration of public need." See Removal Fill policies and standards above. See DSL cable easement policies above. See DEQ ballast water policies above.	QUESTION: Unclear whether TSP Parts 4 and 5 apply in estuaries, including ecological resource protection standards. SP Goal 19 does not apply in estuaries. Question: should OAR 635-415 (Fish and Wildlife Habitat Mitigation Policy) be added to this item?
Rocky reef and nearshore ecosystem effects from projects and cables	• Potential upwelling changes to reef productivity • Direct interactions caused by where infrastructure is placed • Downstream effects of anchors and impacts to sediment movement seasonally • Route cables to achieve burial to max extent practicable by siting away from hard substrate	SP Goal 19 TSP Part 3/4/5 ORS 496 – Wildlife Policy	Applicable policies include those above for marine community composition effects and benthic habitat effects.	See TSP Part 5 gaps above

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Co-effects of climate change and offshore wind	Exacerbation of adverse climate effects or mitigation of?	SP Goal 19 TSP Part 5 ORS 496 – Wildlife Policy ORS 506.109 – Food Fish Policy	Applicable policies include those above for marine community composition effects and benthic habitat effects. TSP Part 5, 4.) Cumulative Effects Evaluate the cumulative effects of a project, including the shoreland component, in conjunction with effects of any prior phases of the project, past projects, other current projects, and probable future projects.13 The evaluation shall analyze the biological, ecological, physical, and socioeconomic effects of the renewable energy facility development and of other renewable energy facility projects along the Oregon coast, while also taking into account the effects of existing and future human activities and the regional effects of global climate change. TSP Part 5 - d. Adaptive Management Plan. An adaptive management plan to provide a mechanism for incorporating new findings and new technologies into the operation and management of the project. The adaptive management plan shall include performance standards that are based on results of the resource inventory and effects evaluation and incorporated in the study design of the monitoring plan as described in paragraph C.3.c (Monitoring Plan).	See TSP Part 5 gaps above
Cumulative effects to marine food webs	Combined effects of all the above on marine species abundance, behavior, and migration, both near the project and regionally	SP Goal 19 TSP Part 5 ORS 496 – Wildlife Policy ORS 506.109 – Food Fish Policy	Applicable policies include those above for marine community composition effects and benthic habitat effects. TSP Part 5 4.) Cumulative Effects Evaluate the cumulative effects of a project, including the shoreland component, in conjunction with effects of any prior phases of the project, past projects, other current projects, and probable future projects.13 The evaluation shall analyze the biological, ecological, physical, and socioeconomic effects of the renewable energy facility development and of other renewable energy facility projects along the Oregon coast, while also taking into account the effects of existing and future human activities and the regional effects of global climate change.	See TSP Part 5 gaps above
Impacts on project structures and the need for fish screening, or entrainment in a device structure.		TSP Part 5 ORS 498 – Fish Screening OAR 635-012 – Fish Passage Criteria and Mitigation Criteria	See Part 5 Ecological Resource Protection Standard ORS 498.306: Any person who diverts water from any body of water in this state in which any fish, subject to the State Fish and Wildlife Commission’s regulatory jurisdiction, exist may be required to install, operate and maintain screening or by-pass devices to provide adequate protection for fish populations present at the water diversion in accordance with the provisions of this section. (h) The person owning or operating an artificial obstruction shall maintain the fish passage structure in such repair and operation as to provide fish passage of native migratory fish at all times required by the Department.	See TSP Part 5 gaps above
Marine Reserves, Marine Protected Areas, and certain TSP Part 3 designations prohibit utility siting		SP Goal 19 TSP Part 3/4 ORS 496 – Wildlife Policy OAR 141-142 – DSL Rules that establish Marine Reserves and Marine Protected Areas	Applicable policies include those above for marine community composition effects and benthic habitat effects.	GAP: Not currently included as enforceable policies: OAR 635-012 ODFW’s Rules for Marine Reserves and Protected Areas OAR 736-029 OPRD’s Rules for Marine Reserves and Marine Protected Areas

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
TERRESTRIAL RESOURCES				
Effects of temporary displacement of and/or disturbance to wildlife and botanical resources in the immediate vicinity during Project construction.	• Destruction of plants • Displacing animal species • Lost recreational access	ORS 390 – Ocean Shores OAR 736-020 – Ocean Shore Permit Standards ORS 496 – Wildlife Policy Local plans and codes	ORS 390.655 Standards for Improvement Permits The standards shall be based on the following considerations, among others: (1) The public need for healthful, safe, aesthetic surroundings and conditions; the natural scenic, recreational and other resources of the area; and the present and prospective need for conservation and development of those resources. (2) The physical characteristics or the changes in the physical characteristics of the area and suitability of the area for particular uses and improvements. (3) The land uses, including public recreational use if any, and the improvements in the area, the trends in land uses and improvements, the density of development and the property values in the area. (4) The need for recreation and other facilities and enterprises in the future development of the area and the need for access to particular sites in the area. [1969 c.601 §11; 1979 c.186 §22] OAR 736-020-0005 Factors Evaluated (1) Each site on the ocean shore presents different conditions and applicants have varying project needs. Evaluations point up the relative significance of the general, scenic, recreational, safety, and other interests of the public. In acting on any application for an ocean shore permit under ORS 390.640, 390.715 or 390.725, the Department shall consider: (a) Provisions necessary to protect the affected area from any use, activity or practice that is not in keeping with the conservation of natural resources or public recreation; (b) The public need for healthful, safe, esthetic surroundings and conditions; the natural, scenic, recreational, economic and other resources of the area and the present and prospective need for conservation and development of those resources; (c) The physical characteristics or the changes in the physical characteristics of the area, and the suitability of the area for particular uses and improvements (This may include bank alignments, topography, shoreline materials and stability, width of the beach, past erosion, storm water levels, sand movement, water currents, adjoining structures, beach access, land uses, etc.); (d) The land uses, including public recreational use; the improvements in the area; the trends in land uses and improvements; the density of development; and the need for access to particular sites in the area. (e) The need for recreation and other facilities and enterprises in the future development of the area and the need for access to particular sites in the area. (2) Public opinion in response to public notice or hearings on an application shall be considered in evaluating each proposed ocean shore project. (3) Considered together, and in accordance with the intent of the Legislature, the factors listed in sections (1) and (2) of this rule assist in the overall decision for granting, an ocean shore permit, or denying, or modifying the ocean shore permit application when the level of impact is determined to be unacceptable.	

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Shoreline effects of cable placement	Beach/dune ecosystem impacts	SP Goal 17/18 ORS 390 – Ocean Shores OAR 736-020 – Ocean Shore Permit Standards Local plans and codes	Applicable policies are similar to the terrestrial policies above.	STRENGTHEN: Consider the conservation strategies identified for these habitats in the Oregon Conservation Strategy (Update/revision of the State Wildlife Action Plan currently underway). These strategies are non-regulatory but could be used to guide our thinking, are there any policies in place to help meet these objectives?
Effects of habitat alteration or loss due to the presence of onshore Project structures (e.g., power monitoring and control building, support facilities).		ORS 496 – Wildlife Policy Local plans and codes others?	Applicable policies are similar to the terrestrial policies above.	STRENGTHEN: Consider the conservation strategies identified for these habitats in the Oregon Conservation Strategy (Update/revision of the State Wildlife Action Plan currently underway). These strategies are non-regulatory but could be used to guide our thinking, are there any policies in place to help meet these objectives?
Effects of Project construction, operation and maintenance on state-listed, special-status or strategy species not protected under the federal ESA.		SP Goal 19 TSP Part 4/5? ORS 496 – Wildlife Policy Local plans and codes	Applicable policies are similar to those for marine community composition and benthic habitats.	WISHLIST: OAR 635-100-0040 Oregon’s Sensitive Species Rule WISHLIST: OAR 635-100-0125 State Threatened and Endangered Species List STRENGTHEN: Consider the conservation strategies identified for these habitats in the Oregon Conservation Strategy (Update/revision of the State Wildlife Action Plan currently underway). These strategies are non-regulatory but could be used to guide our thinking, are there any policies in place to help meet these objectives?
Wildfire hazards associated with transmission lines	Increased threat to species (injury, mortality, displacement) and risk of habitat damage	ORS 496 – Wildlife Policy ORS 757.963-966 (2021) requires utilities to develop wildfire protection plans	oregonlegislature.gov/bills_laws/ors/ors757.html ORS 757.963 (1) A public utility that provides electricity must have and operate in compliance with a risk-based wildfire protection plan that is filed with the Public Utility Commission and has been evaluated by the commission. The plan must be based on reasonable and prudent practices identified through workshops conducted by the commission pursuant to ORS 757.960 and on commission standards adopted by rule. The public utility must design the plan in a manner that seeks to protect public safety, reduce risk to utility customers and promote electrical system resilience to wildfire damage. ORS 757.966 (2) A consumer-owned utility must have and operate in compliance with a risk-based wildfire mitigation plan approved by the governing body of the utility. The plan must be designed to protect public safety, reduce risk to utility customers and promote electrical system resilience to wildfire damage.	GAP? Additional information/research needed into existing state policies surrounding transmission operation. ORS 757 not included in enforceable policy suite for federal consistency

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effects of wind energy extraction to swell, coastal erosion, sediment transport to/from beaches, longshore currents, nearshore weather patterns, and sea state	- Altered shoreline habitat - Altered upwelling may affect larval distribution and settlement in nearshore and estuarine environments. - Includes “slump zones” - Influence nearshore retention dynamics (e.g., from relaxation, headlands, reefs, banks)?	Goal 19 ORS 496 – Wildlife Policy TSP Part 5 ORS 390.610 – Ocean Shores	Applicable policies are similar to those for marine community composition. See ORS 390.610 and Part 5 policies related to recreational uses (e.g., surfing)	STRENGTHEN: Consider the conservation strategies identified for these habitats in the Oregon Conservation Strategy (Update/revision of the State Wildlife Action Plan currently underway). These strategies are non-regulatory but could be used to guide our thinking, are there any policies in place to help meet these objectives?
Effect of wind energy extraction and turbulence to precipitation and “fog drip” in redwood forest ecosystems		ORS 496 Wildlife? TSP Part 5? (can it address oceanic effects on terrestrial systems?)		Gap? Additional information needed re: forest protection policies at the state level or within local implementation of the statewide land use planning goals.
Terrestrial habitat effects from transmission upgrades, including battery energy storage systems, required from the project cable landing location all the way to high-power transmission lines		Local plans and codes	See standards for substations or nonconforming uses in local comprehensive plans and codes	GAP: “Battery Energy Storage System” occurring on resource lands (e.g., farm or forest lands), is not well defined in ORS/OAR. Options explored previously 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.
THREATENED AND ENDANGERED SPECIES, CRITICAL HABITAT AND ESSENTIAL FISH HABITAT				
Effects of the Project on federally or state listed species in the Project area, including multiple marine, aquatic and terrestrial species of mammals, fish, birds and reptiles. *		SP Goal 16/17/18/19 TSP Part 4/5 ORS 496 – Wildlife Policy ORS 496.171 – 496.192 – Threatened or Endangered Species ORS 506 – Food Fish Policy Additional policies for onshore species (TBD consult with ODFW)	TSP Part 4 - - Biological and Ecological Effects: 3.5.1.3 Maintaining populations of threatened, endangered, or sensitive species; 4.3.3 Biological and ecological features affected by the project or development action, including, but not limited to: 4.3.3.1 All habitats along the proposed route, specifically including critical marine habitats (see Part Four, Appendix A) TSP Part 5 Sect 3) Ecological Resources Protection Standards. 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.	WISHLIST: OAR 635-100-0040 Oregon’s Sensitive Species Rule WISHLIST: OAR 635-100-0125 State Threatened and Endangered Species List STRENGTHEN: Consider the conservation strategies identified for these species in the Oregon Conservation Strategy (Update/revision of the State Wildlife Action Plan currently underway). These strategies are non-regulatory but could be used to guide our thinking, are there any policies in place to help meet these objectives?
Effects of Project structures and activities on federally designated Critical Habitat (CH).		TSP Part 4/5 ORS 496 – Wildlife Policy	TSP Part 4 - - Biological and Ecological Effects: 3.5.1.3 Maintaining populations of threatened, endangered, or sensitive species; 4.3.3 Biological and ecological features affected by the project or development action, including, but not limited to: 4.3.3.1 All habitats along the proposed route, specifically including critical marine habitats (see Part Four, Appendix A) TSP Part 5 Sect 3) Ecological Resources Protection Standards. 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.	STRENGTHEN: Consider the conservation strategies identified for these habitats in the Oregon Conservation Strategy (Update/revision of the State Wildlife Action Plan currently underway). These strategies are non-regulatory but could be used to guide our thinking, are there any policies in place to help meet these objectives?

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effects of Project structures and activities on federally designated Essential Fish Habitat.		SP Goal 19 TSP Part 4/5 ORS 496 – Wildlife Policy ORS 506.109 – Food Fish Policy	TSP Part 4 - - Biological and Ecological Effects: 3.5.1.3 Maintaining populations of threatened, endangered, or sensitive species; 4.3.3 Biological and ecological features affected by the project or development action, including, but not limited to: 4.3.3.1 All habitats along the proposed route, specifically including critical marine habitats (see Part Four, Appendix A) TSP Part 5 Sect 3) Ecological Resources Protection Standards. 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.	STRENGTHEN: Consider the conservation strategies identified for these habitats in the Oregon Conservation Strategy (Update/revision of the State Wildlife Action Plan currently underway). These strategies are non-regulatory but could be used to guide our thinking, are there any policies in place to help meet these objectives?
Effects from locating projects on habitats that rely on reliable upwelling locations as refugia		TSP Part 4/5	TSP Part 4, 4.3.3 Biological and ecological features affected by the project or development action, including, but not limited to: 4.3.3.1 All habitats along the proposed route, specifically including critical marine habitats (see Part Four, Appendix A) TSP Part 5 Sect 3) Ecological Resources Protection Standards. 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.	GAP (data): Identifying upwelled areas. If we don't know where the areas are, it is hard to apply the standard.

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
RECREATION AND LAND USE, NON-FISHING RELATED				
Effects of Project land-based structures and facilities on recreational qualities and uses of state park lands.	Port construction, for example, might be in a tourist area. First the loss of economic income because of construction. However, consider refocusing attention to other areas or ecotourism or climate tourism (OSW museum or information center). Also, post construction, have at-sea tours.	ORS 390 OAR 736 Local plans and codes (development standards)	ORS 390.010 Policy of state toward outdoor recreation resources ORS 390.610(4) The Legislative Assembly further declares that it is in the public interest to do whatever is necessary to preserve and protect scenic and recreational use of Oregon’s ocean shore. ORS 390.705 No person shall: (1) Place any pipeline, cable line or other conduit across and under the state recreation areas described by ORS 390.635 (Jurisdiction of department over recreation areas) or the submerged lands adjacent to the ocean shore, except as provided by ORS 390.715 (Permits for pipe, cable or conduit across ocean shore, state recreation areas and submerged lands) . OAR 736-020-0005 Factors Evaluated (1) Each site on the ocean shore presents different conditions and applicants have varying project needs. Evaluations point up the relative significance of the general, scenic, recreational, safety, and other interests of the public. In acting on any application for an ocean shore permit under ORS 390.640, 390.715 or 390.725, the Department shall consider: (a) Provisions necessary to protect the affected area from any use, activity or practice that is not in keeping with the conservation of natural resources or public recreation; (b) The public need for healthful, safe, esthetic surroundings and conditions; the natural, scenic, recreational, economic and other resources of the area and the present and prospective need for conservation and development of those resources; (c) The physical characteristics or the changes in the physical characteristics of the area, and the suitability of the area for particular uses and improvements (This may include bank alignments, topography, shoreline materials and stability, width of the beach, past erosion, storm water levels, sand movement, water currents, adjoining structures, beach access, land uses, etc.); (d) The land uses, including public recreational use; the improvements in the area; the trends in land uses and improvements; the density of development; and the need for access to particular sites in the area. (e) The need for recreation and other facilities and enterprises in the future development of the area and the need for access to particular sites in the area. (2) Public opinion in response to public notice or hearings on an application shall be considered in evaluating each proposed ocean shore project. (3) Considered together, and in accordance with the intent of the Legislature, the factors listed in sections (1) and (2) of this rule assist in the overall decision for granting, an ocean shore permit, or denying, or modifying the ocean shore permit application when the level of impact is determined to be unacceptable.	Note/question: wouldn’t local zoning prevent port construction in a tourist area as described in the “effect details”?
Effects to ocean-based recreation from project presence or activities		Goal 19 TSP Part 5 OAR 141-140	TSP Part 5 - 4.) Recreational Resources Standards. The state shall protect recreational resources as a beneficial use of the territorial sea. The standards for recreational resources shall be applied to all renewable energy facility projects throughout the territorial sea, unless otherwise provided by the plan. A determination of impact is based on the inventory of recreational uses contained in the map (Part Five, Appendix B).	

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effects of recovery/clean-up activities associated with spills or other emergencies on coastal recreation.	Exploding turbines or floating infrastructure after a failure	SP Goal 19 TSP Part 5 Operations and Contingency Plans ORS 390 Ocean Shores OAR 340 – Oil spills	See similar item under Hazards Effects below.	
Effects on ocean waves and swell downwind of projects. Effects to safety from physical nearshore changes? Attraction/avoidance?	- Concerning shoreline armoring, changing oceanographic patterns that recreational communities depend upon. - Coast Guard response for at-sea safety. - Nearshore retention dynamics?	SP Goal 19 TSP Part 5	TSP Part 5 - 4.) Recreational Resources Standards. The state shall protect recreational resources as a beneficial use of the territorial sea. The standards for recreational resources shall be applied to all renewable energy facility projects throughout the territorial sea, unless otherwise provided by the plan. A determination of impact is based on the inventory of recreational uses contained in the map (Part Five, Appendix B).	
Closure of beach access during installation, and noise effects to nearby residents		TSP Part 5 ORS 390 – Ocean Shores OAR 736 (OPRD)	TSP Part 5 - 4.) Recreational Resources Standards. The state shall protect recreational resources as a beneficial use of the territorial sea. The standards for recreational resources shall be applied to all renewable energy facility projects throughout the territorial sea, unless otherwise provided by the plan. A determination of impact is based on the inventory of recreational uses contained in the map (Part Five, Appendix B). See ORS 390 and OAR 736 policies above concerning public access and recreation.	
Shoreline privatization effects?		Local plans and codes? ORS 390.620 Pacific Shore not to be alienated	ORS 390.620 Pacific Shore Not to be Alienated (1) No portion of the lands described by ORS 390.610 (Policy) or any interest either therein now or hereafter acquired by the State of Oregon or any political subdivision thereof shall be alienated except as expressly provided by state law. (2) No portion of the ocean shore declared a state recreation area by ORS 390.610 (Policy) shall be alienated by any of the agencies of the state except as provided by law. Some jurisdictions prohibit cable landings in residential areas.	GAP? Is the effect of concern related to the use of public lands for cable landing? Are there other scenarios where the shoreline would be privatized?
Effects to tourism, including nature-based tourism (e.g., whale watching, kayaking) of lost or altered recreation and associated opportunities	- Economic effects to small businesses as recreation economic drivers, tourism avoidance of areas that once had “unspoiled” ocean views, loss of “seafood tourism”, lost dune recreation effects. - Effects based upon access. - Domino effect of negative impacts of tourism. Tourism infrastructure is a driver of economic activity on the coast. Needs to be better understood - Noted above: Port construction might be in a tourist area. First the loss of economic income because of construction. However, potential to refocus attention to other areas or ecotourism or climate tourism (OSW museum or information center). Also, post construction, have at-sea tours.	TSP Part 5	TSP Part 5 - 4.) Recreational Resources Standards. The state shall protect recreational resources as a beneficial use of the territorial sea. The standards for recreational resources shall be applied to all renewable energy facility projects throughout the territorial sea, unless otherwise provided by the plan. A determination of impact is based on the inventory of recreational uses contained in the map (Part Five, Appendix B).	

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
CULTURAL AND TRIBAL RESOURCES				
Effects of the Project on historic, archeological and traditional cultural resources located within the Project Area of Potential Effect (determined in consultation with Tribes and Oregon State Historic Preservation Office)	- Includes nearshore and onshore paleoshoreline - Changes to wave energy and sediment dynamics on benthic habitats may in time result in additional cultural resources being uncovered so regular surveys should be conducted Assumes no visual presence from characterization activities and no other archaeological resources in the vicinity offshore	ORS 97 – Rights and Duties Relating to Cemeteries, Human Bodies and Anatomical Gifts ORS 358 – Archaeological Objects and Sites ORS 390.235 – Archaeological Sites and Historic Material OAR 736-51 – Archaeological Permits	Referenced policies require state archaeological permits in coordination with Tribes.	Note: Federal Consistency regulations require that the state must retain the authority to make consistency decisions and cannot delegate that authority.

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effects of the Project on tribal uses and/or resources located within the Project area.	Includes nearshore and onshore areas (beyond just the project site or WEA)	TSP Part 5 OAR 141-140-0040 Local Plans and Codes (e.g., Coos Estuary Plan Policy 18) OAR 660-023 Programs to Achieve Goal 5 (applicable onshore)	Applicable policies include those above for marine community composition and benthic habitats. See TSP Part 5 Visual Resource Standards TSP Part 5 Sect 6.) 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.²² 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. OAR 141-140-0040: “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.” Policy 18: 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 strategy shall be implemented by requiring review of 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. ... Upon receipt of the statement by the Tribe(s), or upon expiration of the Tribe(s) thirty day response period, the local government shall conduct an administrative review of the Site Plan Application and shall: a. Approve the development proposal if no adverse impacts have been identified, as long as consistent with other portions of this plan, or b. Approve the development proposal subject to appropriate measures agreed upon by the landowner and the Tribe(s), as well as any additional measures deemed necessary by the local government to protect the cultural, historical, and archaeological values of the site. If the property owner and the Tribe(s) cannot agree on the appropriate measures, then the governing body shall hold a quasi-judicial hearing to resolve the dispute. The hearing shall be a public hearing at which the governing body shall determine by preponderance of evidence whether the development project may be allowed to proceed, subject to any modifications deemed necessary by the governing body to protect the cultural, historical, and archaeological values of the site. OAR 660-023-0040 Local governments shall develop a program to achieve Goal 5 for all significant resource sites based on an analysis of the economic, social, environmental, and energy (ESEE) consequences that could result from a decision to allow, limit, or prohibit a conflicting use.	GAP (Potential): For those uses/resources not already covered by a resource protection statute/rule, e.g., water, wildlife. GAP (Potential): Tribal uses and/or resources in onshore areas not within Coos Co?
Effects to lifeways, including sacred views (cultural viewsheds); commercial and subsistence activities, important foods, degraded environment, natural resources as cultural resources	• Include Indigenous Determinants of Health, regional effect from migratory species, • Effect to non-ESA species of importance (e.g., lamprey)	SP Goal 19 TSP Part 5 ORS 496 – Wildlife Policy ORS 506.109 – Food Fish Policy	Applicable standards include those for marine community composition and benthic habitats (offshore) See TSP Part 5 Visual Resource Protection Standards	GAP: TSP Part 5 does not explicitly include sacred Tribal views as Class 1 viewsheds. Effects to estuary species adequately covered by non-marine species and habitat policies?

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
AESTHETIC RESOURCES				
Effects of platforms and navigational lighting on the aesthetic/visual experience from shore (viewshed effects).		TSP Part 5 ORS 390.610	ORS 390.610 Policy: (4) The Legislative Assembly further declares that it is in the public interest to do whatever is necessary to preserve and protect scenic and recreational use of Oregon’s ocean shore. TSP Part 5 - 5.) Visual Resource Protection Standards The regulating agencies shall protect visual resources (i.e. viewsheds of the territorial sea) by applying the following visual resource protection standards to evaluate the potential impact of proposed renewable energy projects on the affected viewsheds. (a) Classification of Viewsheds The following classification system categorizes viewshed sites based on a set of objective criteria related to the unique setting, aesthetic qualities and physical properties of each site. Each viewshed class has a specific objective that determines the level of activity that would be compatible with maintaining the character of the viewshed. The class objectives and project review criteria are used to determine the impact a project has on each affected viewshed. 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. Part 5 contains additional guidance for how agencies shall consider contrast criteria.	
Effects of land-based Project structures and facilities to visual resources or state park lands.	Assumes no land-based structures are part of the lease decision.	ORS 390 Local plans and codes implementing SP Goal 5	ORS 390.610 Policy: (4) The Legislative Assembly further declares that it is in the public interest to do whatever is necessary to preserve and protect scenic and recreational use of Oregon’s ocean shore.	GAP (Potential): Local policies regarding shoreside structures as seen from land (at discretion of local government)
Aesthetic Resources (p.7) economic impact of reduced visitation due to dislike of view shed.	Travel Oregon’s Visitor Profile says most people visit the Oregon coast for wildlife viewing, connection to nature and visiting the beach.	TSP Part 5	TSP Part 5 - 4.) Recreational Resources Standards. The state shall protect recreational resources as a beneficial use of the territorial sea. The standards for recreational resources shall be applied to all renewable energy facility projects throughout the territorial sea, unless otherwise provided by the plan. A determination of impact is based on the inventory of recreational uses contained in the map (Part Five, Appendix B).	GAP (TSP Part 5): Does not explicitly include economic effect policies. GAP: Uncertain if policies exist to restrict adverse effects from projects on tourism or local economy.

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
SOCIOECONOMIC RESOURCES AND EFFECTS TO COASTAL USES				
Effects to fishing, including Tribal, commercial and recreational fishing. This also encompasses those effects to crabbing and shrimping	• Loss of fishing grounds from area exclusion • Changes in fishing effort or distribution from space use or species redistribution. • Loss of catch efficiency due to area avoidance or increased transit time. • Gear loss and entanglement • Space use conflicts • “Fleet squeeze” into available areas • Secondary effects to support industries • Decreased catch from adverse effects to fish species • Increased competition for port space and services from increased vessel presence/traffic • Adverse effects to vessel safety or navigation equipment • Increases to bycatch in available areas • Disruption of scientific management and MSC certification. • Potential disruption of the radar with fishing vessels, safety concern. • NOAA equipment impacts • Temporary effects from cable installation (assuming no crabbing presence in farther offshore areas) • Potential malformation from EMF (UK example?) • Increased activity in harbors and similar increases in activity in nearshore regions where more recreation fishing occurs.	Goal 19 TSP Part 4/5 ORS 506.109 – Food Fish Policy ORS 496.012 – Wildlife Policy	See SP Goal 19 protection standards for marine species and areas important to fisheries TSP Part 5 Section g, 2.) 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. 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: - 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; - Minimize the compaction of fishing effort caused by the reduction in the areas normally accessible to fishers; - Minimize the economic impact resulting from the reduction in area available for commercial and recreational fishing for the effected sectors and ports. - Mitigate possible hazards to navigation and, provide practicable opportunities for vessel transit, at the project location. - 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). ORS 506.109 Food Fish Management Policy It is the policy of the State of Oregon 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. In furtherance of this policy, the goals of food fish management are: (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. [1975 c.253 §15; 1985 c.529 §2] Standard: 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. Definition: Adverse Effect for Fisheries Use Protection Standards: a significant reduction in the access of commercial and recreational fishers to an area spatially delineated as an area important to a single fishing sector, multiple combined sectors, or to the fishing community of a particular port.	GAP (TSP Part 5, Potential): • Vessel operation impacts (e.g., collisions, strikes). • Ecological resource standards are spatially limited and could be revised to be generally applicable to resources regardless of location. • Seasonal considerations (e.g., in water work periods in ocean considering species presence or fisheries uses) • Define “Adverse Effect for Ecological Resource Protection” and role of mitigation on the effect of significance. STRENGTHEN: guidance on what constitutes best available data and when to acquire it STRENGTHEN: apply TSP Part 5 fisheries use standards to all phases of OSW development (see TSP Part5 section B.4.g.2) (Info requirement) Assess the distribution of different fishing efforts (commercial and recreational) to evaluate needed changes to transit due to closed areas, and changes in fishing effort/ distribution due to space use and species distribution.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effects to port space (slip space, dry dock, storage), port services (vessel maintenance), freight (ship/road/rail), harbor-based businesses (fish processors), including resiliency	• Includes both harbor space and airports for support operations. • Increased costs • How resilient are ports to OSW development (i.e. if fisheries are displaced/lose access to fishing grounds how does that impact the coastal ports that depend on those fisheries)?	Local plans and codes?	Coos County reported vessel type proportion restrictions for port marina space.	GAP? Compare to CA: California Coastal Act Section 39234:“Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreation boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided.”
Effects of the Project and potential navigation restrictions on marine transportation		TSP Part 5 – Ocean User Agreements?	TSP Part 5 6. 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.22 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.	GAP (Potential): State does not necessarily regulate marine transportation. OSMB does have authority to regulate vessel speeds and establish restricted areas within the territorial sea, but no such restrictions currently exist.
Effects of the project to maritime safety (e.g., helicopter access, other SAR)		TSP Part 4/5	TSP Part 4/5 information requirement (associated standard applies to fisheries uses only) 2.) Current Uses: Evaluate the effects of the project on current uses and the continuation of a current use of ocean resources such as fishing, recreation, navigation, and port activities. Factors to consider include, but are not limited to: (a) Local and regional economies; (b) Archeological and historical resources; and (c) Transportation safety and navigation. TSP Part 5: General fisheries protection standard: iv. Mitigate possible hazards to navigation and, provide practicable opportunities for vessel transit, at the project location.	Does the state need policies/standards to address safety effects to vessels and ocean users that could result from a project?

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effects of local, state and regional economic benefits and costs resulting from the development and presence of the Project.	• Job creation, housing, economic stimulation, supply chain, cost of electricity to residents and businesses. • Costs of development on existing industries. • Source water demand as a result of increased businesses, housing and economic development. • Need a “willingness to pay” survey to residents and businesses regarding how much they would be willing to pay for OSW. • Overestimating economic effects. Compare with eastern Oregon windfarms; not strong economic driver and lack of local use workforce and development. Many jobs are very specific for well-trained staff. Concern over workforce training. • Energy cost impacts to ratepayers. What price will they be bringing electricity onshore?	ORS 757, OAR 860 – Public Utility Commission Standards for “prudence” for energy rates	Costs are a main driver in assessing procurement decisions – focused on “least cost, least risk”. RFP evaluation criteria sometimes include both price and non-price scoring, the latter of which can potentially address non-monetary benefits.	GAP (Potential): PUC standards only applicable to in-state procurement by Investor Owned Utilities Seeming gap, both in terms of existing policy and also the data required to compare what is gained and lost. Compare to Rhode Island: 650-RICR-20-05-11.10.1(C) Offshore developments shall not have a significant adverse impact on the natural resources or existing human uses of the Rhode Island coastal zone, as described in the Ocean SAMP. In making the evaluation of the effect on human uses, the Council will determine, for example, if there is an overall net benefit to the Rhode Island marine economic sector from the development of the project or if there is an overall net loss. Where the Council determines that impacts on the natural resources or human uses of the Rhode Island coastal zone through the pre-construction, construction, operation, or decommissioning phases of a project constitute significant adverse effects not previously evaluated, the Council shall, through its permitting and enforcement authorities in state waters and through any subsequent CZMA federal consistency reviews, require that the applicant modify the proposal to avoid and/or mitigate the impacts or the Council shall deny the proposal.
Effects on community prosperity, safety, and cohesion resulting from project or supply chain development	Where does prosperity go (e.g., historically marginalized), crime/security pressures, housing quality in addition to quantity (e.g., camps vs. houses), housing for existing residents vs. new; MMIP; local government capacity			GAP? Similar to above
Effects to other types of subsea cables resulting from competition for landing areas onshore and cable routes offshore	Assumes all data reporting would be remote Need clarification. Is this just economic issue or other? Who is responsible? Where should we put all the cables? Nothing guarantees them a rate for pay?		TSP Part 4/5 information requirement (associated standard applies to fisheries uses only) 2.) Current Uses: Evaluate the effects of the project on current uses and the continuation of a current use of ocean resources such as fishing, recreation, navigation, and port activities. Factors to consider include, but are not limited to: (a) Local and regional economies; (b) Archeological and historical resources; and (c) Transportation safety and navigation	GAP (DSL): State separation standards are needed between fiber optic cables, power cables, and pipelines

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effects to scientific research resulting from the presence of offshore structures, vessel traffic, and other project-related changes to offshore conditions	• Displacement or interference with surveys (research, protected species or fisheries stock) • Long-established survey tracklines/sampling stations overlap (to what extent??) with these OWE areas	TSP Part 5 ORS 496.012 – Wildlife Policy ORS 506.109 – Food Fish Policy	TSP Part 4/5 information requirement (associated standard applies to fisheries uses only) 2.) Current Uses: Evaluate the effects of the project on current uses and the continuation of a current use of ocean resources such as fishing, recreation, navigation, and port activities. Factors to consider include, but are not limited to: (a) Local and regional economies; (b) Archeological and historical resources; and (c) Transportation safety and navigation ORS 496.012: It is the policy of the State of Oregon that 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. In furtherance of this policy, the State Fish and Wildlife Commission shall represent the public interest of the State of Oregon and implement the following coequal goals of wildlife management: (1)To maintain all species of wildlife at optimum levels. (2)To develop and manage the lands and waters of this state in a manner that will enhance the production and public enjoyment of wildlife. Etc. ORS 506.109: It is the policy of the State of Oregon 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. In furtherance of this policy, the goals of food fish management are: (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..	STRENGTHEN: consider how we might apply TSP Part 5 protection standards to survey activities, so we continue to get information from surveys that is essential to fisheries management and natural resource protection
Effects to military operations and national security				Outside OR jurisdiction?
Effects to housing from industry growth				GAP (Potential): No state policies require mitigation for new industry growth effects on housing availability or quality.

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Socioeconomic benefits of new industry on workforce, economies, social services, education and training	• Potential benefits from alternative ownership structures? • Businesses are interested in places that offer renewable energy sources to avoid power disruption to operations • Investment begets investments – infrastructure improvements via CBA or property tax increase (increase equipment on sites or new development on property) • Workforce attraction and retention • Secondary effects to support industries – fishing one season, off-season transporting maintenance staff/technicians or other things related to OSW. • Even if we have to import labor or materials, they will still join and become part of community	HB 2021 and HB 4080 (Labor standards) TERO (Tribal Employment Rights Ordinance)? ORS 506.109 – Food Fish Policy TSP Part 5 Fisheries use protection policy	Fishery protection policies may serve as a basis for mitigation or compensation agreements in support of a consistency determination by the state.	GAP (Potential): No current state policies HB 4080 and HB 2021 not currently included as enforceable policies for federal consistency review. HB 2021 applies only to in-state procurement by investor-owned utilities Food Fish Policy could be strengthened similar to other states (e.g., RI) for protection of fisheries uses. Consulting internally on compensatory mitigation enforceable policy basis
Effects on energy resiliency in local communities	• Local grid upgrades • Resiliency benefits of new generation on coast			GAP? More information needed. Is this a benefit we want to see, an adverse effect to avoid? How would it affect OSW development and approval decisions?
HAZARDS EFFECTS				

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Effect of failed/sunken platforms	• Access to fishing grounds • Loss of fishing gear • Marine pollution (e.g., oil, debris, fiberglass shards) • Oregon Beaches, Rocky Habitats, Marine Protected Areas (if structures wash up onshore or sink in nearshore waters. • Risks of collision, entanglement, entrapment, etc. to marine species	SP Goal 19 TSP Part 3/4/5 ORS 390 – Ocean Shores ORS 274 – Submerged Lands ORS 496.012 – Wildlife Policy ORS 506.109 – Food Fish Policy	TSP Part 4 Sect 7. Decommission and Recovery. After the usable, operational, or design life of seafloor infrastructure or fixture an owner or operator shall decommission any infrastructure or fixtures, removing them from the seabed. The owner or operator of the seafloor infrastructure or fixture shall submit a decommissioning plan to DSL for approval pursuant to the terms and conditions of the easement. TSP Part 5 Sect 3.) Ecological Protection Standards (if the affected resource is a marine species or habitat). 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. TSP Part 5 Info Requirement 3.) Natural and Other Hazards Evaluate the potential risk to the renewable energy facility, in terms of its vulnerability to certain hazards and the probability that those hazards may cause loss, dislodging, or drifting of structures, buoys, or facilities. Consider both the severity of the hazard and the level of exposure it poses to the renewable marine resources and coastal communities. Hazards to be considered shall include the scouring action of currents on the foundations and anchoring structures, slope failures and subsurface landslides, faulting, tsunamis, variable or irregular bottom topography, weather related, or due to human cause. TSP Part 5 4.) Decommissioning Plan: An applicant shall provide a plan to restore the natural characteristics of the site to the extent practicable by describing the facilities to be removed a. Contingency Plan: A plan to describe how the facility operator will respond to emergencies caused by a structural or equipment failure due to human error, weather, geologic or other natural event. The plan shall include a description of the types of equipment, vessels and personnel that would be deployed, the chain of command or management structure for managing the facility repairs, recovery or other forms of remedial action, and the process and timeline for notification of state and federal authorities. 3. Project Operation Plan An operation plan is required that describes, at a minimum, information regarding the routine environmental monitoring, safety management and emergency response procedures, facility inspections, and the decommissioning of the project. The operation plan shall explain the procedures and mechanisms that will be employed so that the facility will comply with regulatory standards and other conditions of permit or license approval related to water and air quality, environmental protection and mitigation, facility maintenance and safety, operational failure and incident reporting. An operation plan shall include the following information	STRENGTHEN: policy around decommissioning with added scrutiny before equipment is installed that it is feasible equipment can be successfully removed, if required STRENGTHEN: Operations plan must require decommissioning or recovery of any failed components of a facility (e.g., blades) GAP (DSL): DSL Requirements for the Emergency Response Plan from the applicant and coordination with different stakeholders
Geologically unstable area (e.g., Cascadia Subduction Zone, Heceta slide, seafloor landslides, etc.) co-effects	• Anchor shifting/sliding on the continental slope • Failure of transmission lines • Ongoing vessel activity and habitat disturbance to address equipment problems or failure. • Energy reliability? (positive or negative) • Responsible siting should avoid high risk hazard. Steep slopes, landslide prone areas.	Oregon PUC requirements for energy reliability?	TSP Part 5 Info Requirement 3.) Natural and Other Hazards Evaluate the potential risk to the renewable energy facility, in terms of its vulnerability to certain hazards and the probability that those hazards may cause loss, dislodging, or drifting of structures, buoys, or facilities. Consider both the severity of the hazard and the level of exposure it poses to the renewable marine resources and coastal communities. Hazards to be considered shall include the scouring action of currents on the foundations and anchoring structures, slope failures and subsurface landslides, faulting, tsunamis, variable or irregular bottom topography, weather related, or due to human cause. 3. Project Operation Plan An operation plan is required that describes, at a minimum, information regarding the routine environmental monitoring, safety management and emergency response procedures, facility inspections, and the decommissioning of the project. The operation plan shall explain the procedures and mechanisms that will be employed so that the facility will comply with regulatory standards and other conditions of permit or license approval related to water and air quality, environmental protection and mitigation, facility maintenance and safety, operational failure and incident reporting. An operation plan shall include the following information	GAP (DSL): DSL Requirements for the Emergency Response Plan from the applicant and coordination with different stakeholders GAP (TSP Part 5, Potential): Does not require projects to avoid geologically unstable areas or otherwise mitigate for effects of instability unless it would have an adverse ecological effect. More information needed re: onshore transmission standards and requirements.
UNCATEGORIZED EFFECTS				

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.

Effect of Interest	Effect Details	Enforceable Policies	Enforceable Policy Strongest or Most Applicable Excerpt	Strengthening Issues, Gaps,
Project Decommissioning effects	- Waste management, increased activity, risk of spills or failures, traffic effects, species disruption, noise, port infrastructure for dismantling and transport, etc. - Decommissioning practices and related technical feasibility. - Recycling or disposal of potential components.	TSP Part 4/5 Various offshore and onshore policies could apply depending on activities	TSP Part 4 Sect 7. Decommission and Recovery. After the usable, operational, or design life of seafloor infrastructure or fixture an owner or operator shall decommission any infrastructure or fixtures, removing them from the seabed. The owner or operator of the seafloor infrastructure or fixture shall submit a decommissioning plan to DSL for approval pursuant to the terms and conditions of the easement. TSP Part 5 Info Requirement 3.) Natural and Other Hazards Evaluate the potential risk to the renewable energy facility, in terms of its vulnerability to certain hazards and the probability that those hazards may cause loss, dislodging, or drifting of structures, buoys, or facilities. Consider both the severity of the hazard and the level of exposure it poses to the renewable marine resources and coastal communities. Hazards to be considered shall include the scouring action of currents on the foundations and anchoring structures, slope failures and subsurface landslides, faulting, tsunamis, variable or irregular bottom topography, weather related, or due to human cause. TSP Part 5 4.) Decommissioning Plan: An applicant shall provide a plan to restore the natural characteristics of the site to the extent practicable by describing the facilities to be removed 3. Project Operation Plan An operation plan is required that describes, at a minimum, information regarding the routine environmental monitoring, safety management and emergency response procedures, facility inspections, and the decommissioning of the project. The operation plan shall explain the procedures and mechanisms that will be employed so that the facility will comply with regulatory standards and other conditions of permit or license approval related to water and air quality, environmental protection and mitigation, facility maintenance and safety, operational failure and incident reporting. An operation plan shall include the following information a. Contingency Plan: A plan to describe how the facility operator will respond to emergencies caused by a structural or equipment failure due to human error, weather, geologic or other natural event. The plan shall include a description of the types of equipment, vessels and personnel that would be deployed, the chain of command or management structure for managing the facility repairs, recovery or other forms of remedial action, and the process and timeline for notification of state and federal authorities.	STRENGTHEN: policy around decommissioning with added scrutiny before equipment is installed that it is feasible equipment can be successfully removed, if required STRENGTHEN: Part 5 could include a requirement that decommissioning plans include a waste dispositioning plan that must demonstrate there is a feasible method of waste disposal. GAP (DSL): Requirements for Mitigation Plan, Decommissioning Plan and cables removal, Emergency Response Plan, coordination with different stakeholders, and appropriately calculated compensation costs
Effects to grid reliability and resiliency in the coast, state, and region				GAP? More info needed on the nature of a desired policy.
Effect to attainment of Oregon clean energy targets	- Net gain of carbon offset with the development of OSW projects. Much of the development may require use of fossil fuels. - Concept of Emergy (energy balance for what it takes to generate it; versus how much it provides) - How much energy is lost through transmission to load centers - and how much will it produce.	HB 2021		GAP? Note: Staff research indicates the embedded carbon cost of OSW would be repaid early in the life of a project.
Effects to/from aquaculture?				GAP? Oregon does not have offshore aquaculture policies.
Impacts to low-income and marginalized communities?	Includes energy cost impacts to ratepayers			GAP? More information needed.

NOTE: This table represents in-process draft for discussion and is subject to further revision and legal review. It should not be considered a formal position of the state.