## Oregon Territorial Sea Plan

**PART FIVE**:

# Use of the Territorial Sea for the Development of Renewable Energy Facilities or Other Related Structures, Equipment or Facilities

**PART FIVE of the Oregon Territorial Sea Plan [1] describes the process for making decisions concerning the development of renewable energy facilities (*e.g.* wind, wave, current, thermal, etc.) in the state territorial sea, and specifies the areas where that development may be sited. The requirements of Part Five are intended to protect areas important to renewable marine resources (*i.e.* living marine organisms), ecosystem integrity, marine habitat and areas important to fisheries from the potential adverse effects of renewable energy facility siting, development, operation, and decommissioning and to identify the appropriate locations for that development which minimize the potential adverse impacts to existing ocean resource users and coastal communities.**

**Oregon's renewable energy portfolio lists ocean energy as a renewable energy source with potential to reduce dependence on fossil fuels.[2] Renewable energy facilities development may present opportunities to apply technologies that rely on wave, wind, current or thermal energy, that may potentially reduce the environmental impact of fossil fuels. If developed in a responsible and appropriate manner, in accordance with the requirements of this Part and other applicable state and federal authorities, renewable ocean energy may help preserve Oregon's natural resources and enhance our quality of life.**

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## A. Renewable Energy Facilities Development

### 1. Background

Oregon's territorial sea has been identified as a favorable location for siting renewable energy facilities for research, demonstration and commercial power development. These facilities may vary in the type and extent of the technologies employed and will require other related structures, equipment or facilities to connect together, anchor to the seafloor and transfer energy to on-shore substations. The State of Oregon will require the proper siting and development of these facilities in order to minimize damage to or conflict with other existing ocean uses and to reduce or avoid adverse effects on marine ecosystems and coastal communities.

State agencies, including the Oregon Departments of State Lands, Fish and Wildlife, Parks and Recreation, Environmental Quality, Land Conservation and Development, Water Resources, Energy, and Geology and Mineral Industries, need specific policies and standards for considering the siting and regulation of renewable energy facility development in the territorial sea. The policies, standards, data and information within the Territorial Sea Plan should also

assist federal agencies in the siting and regulation of renewable energy facilities development located in federal waters adjacent to the territorial sea.[3]

**NOTE:** ***Notwithstanding Part One, paragraph F.1.b, the following policies and implementation requirements are mandatory. Decisions of state agencies with respect to approvals of permits, licenses, leases or other authorizations to construct, operate, maintain, or decommission any renewable energy facility to produce, transport or support the generation of renewable energy within Oregon's territorial waters and ocean shore must comply with the requirements mandated in the Oregon Territorial Sea Plan. Once NOAA/OCRM approves the incorporation of the enforceable policies of the Territorial Sea Plan into the Oregon Coastal Management Program, they are applicable to those federal actions that affect Oregon's coastal zone and are subject to the federal consistency requirements of the federal Coastal Zone Management Act.***

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## 2. Policies

The following policies apply generally to renewable energy facilities within the Territorial Sea, and establish the guiding principles for the implementation requirements listed in section B. When making decisions to authorize the siting, development, operation, and decommissioning of renewable energy facilities within the territorial sea, state agencies shall[4]**:**

**a.** Maintain and *protect* renewable marine resources (*i.e.* living marine organisms), ecosystem integrity, *marine habitat* and *areas important to fisheries* from adverse effects that may be caused by the installation or operation or removal of renewable energy facility by requiring that such actions:

1.) Avoid adverse effects to the integrity, diversity, stability and complexity of the marine ecosystem and coastal communities, and give first priority to the conservation and use of renewable marine resources;

2.) Minimize effects by limiting the degree or magnitude of the action and its implementation;

3.) Rectify or mitigate the effects that occur during the lifetime of the facility by monitoring and taking appropriate corrective measures through adaptive management; and

4.) Restore the natural characteristics of a site to the extent practicable when the facility and structures are decommissioned and removed.

**b.** Protect renewable marine resources, the biological diversity and functional integrity of marine ecosystem, important marine habitat, areas important to fisheries, navigation, recreation and aesthetic enjoyment (see also Statewide Planning Goal 19 as applied to state agencies).

**c.** Communicate and collaborate with an applicant for a state or federal authorization for the siting, development and operation of renewable energy facilities and affected ocean users and coastal communities to reduce or avoid conflicts.

Agencies will strongly encourage applicants to engage with local, state and federal agencies, community stakeholders, tribal governments and affected ocean users in a collaborative agreement-seeking process prior to formally requesting authorization to initiate a project.[5]

**d.** Limit the potential for unanticipated adverse impacts by requiring, when resource inventory and effects information is insufficient, the use of pilot projects and phased development to collect data and study the effects of the development on the affected marine resources and uses.

**e.** Encourage the research and responsible development of ocean-based renewable energy sources including wave, tidal, and wind that meet the state's need for economic and affordable sources of renewable ocean energy.

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## B. Implementation Requirements

State agencies shall apply the following implementation requirements when considering a proposal for the placement or operation of a renewable energy facility development within the Oregon Territorial Sea. Regulating agencies shall comply with the standards and procedural requirements in Part Five of the Territorial Sea Plan as prescribed below. This includes the cables, connectors or other transmission devices that connect, anchor, support or transmit energy between the separate components within a renewable energy facility. The requirements in Part Four, Uses of the Seafloor for Telecommunication Cables, Pipelines, and other Utilities, as applied to state agencies, will apply to the utility cables that transmit the electrical energy from the renewable energy facility to the on-shore substation.[6] The requirements in Part Two, Making Resource Use Decisions, Sections A and B, will not apply to the evaluation, siting or operation of renewable energy development or other related structures, equipment or facilities.

**1. Siting: areas designated for renewable energy facilities development.**

**a. In State Waters:**
Pursuant to the requirements for amending the Territorial Sea Plan under ORS 196.471, to carry out the policies of the Oregon Ocean Resources Management Act and consistent with the statewide planning goals, the Land Conservation and Development Commission has designated areas of the territorial sea appropriate for the development of renewable energy facilities, and established the review standards for siting projects within those designated areas.[7] (See appendix C map). Renewable energy facilities development of the state lands of the territorial sea lying seaward of Extreme Low Water (which is the seaward boundary of the Ocean Shore State Recreation Area) shall be sited within the areas designated for that use so as to avoid, minimize or mitigate the adverse effects of that development, and to protect: renewable marine resources, biological diversity and functional integrity of marine ecosystem, important marine

habitat, and areas important to fisheries, as defined in Statewide Planning Goal 19 Ocean Resources.

**b**. **In Federal Waters:**
The Department of Land Conservation and Development will review federal decisions to permit, license, or otherwise authorize renewable energy facilities development within the waters and seafloor of the outer continental shelf adjacent to the Oregon Territorial Sea for consistency with the Oregon Territorial Sea Plan and the applicable enforceable policies of the Oregon Coastal Management Program pursuant to NOAA's CZMA federal consistency regulations at 15 C.F.R. part 930.[8] If a federal action, including the issuance of any federal authorizations, is subject to Oregon CZMA review, it shall be supported by the information required in NOAA's regulations at either 15 C.F.R. §§ 930.39, 930.58 or 930.76.[9]

**2. State Agency Review Process**

Pursuant to ORS 196.485 and ORS 197.180, state agencies shall apply the policies and provisions of the Oregon Ocean Resources Management Plan, Oregon Territorial Sea Plan, and Goal 19 Ocean Resources as required to comply with State Agency Coordination Programs (OAR chapter 660, divisions 30 and 31).

In accordance with the federal Coastal Zone Management Act, federal consistency regulations (15 C.F.R. part 930), and ORS 196.435, the Department of Land Conservation and Development will review the consistency certification together with required necessary data and information submitted by the applicant for federal authorization for a renewable energy facilities development to ensure the project is consistent with enforceable policies of the Oregon Coastal Zone Management Program, including the Oregon Territorial Sea Plan.

The Department of State Lands shall coordinate the review of requests for approval of proprietary authorizations in consultation with the Joint Agency Review Team (JART) as described in subsection B.3.a below.

**3. JART Project Review Process and Coordination**
The Department of State Lands (DSL) shall convene the JART in order to facilitate the coordination of state and federal agencies, in consultation with local jurisdictions, during the pre-application and application phases, as they apply their separate regulatory, proprietary, or other authorities to the review of a proposed renewable energy facility development.

a. The DSL will invite representatives from the following agencies, jurisdictions and organizations to be members of the JART:
1) Departments of Fish and Wildlife, Parks and Recreation, Environmental Quality, Land Conservation and Development, Water Resources, Geology and Mineral Industries, Energy;
2) Federal agencies, as invited, with regulatory or planning authority applicable to the proposed project and location;

3) Local jurisdictions including representatives from affected cities and counties;
4) Statewide and local organizations and advisory committees, as invited, to participate in the JART application of specific standards, including but not limited to those addressing areas important to fisheries, ecological resources, recreation and visual impacts; and,
5) Federally Recognized Coastal Tribes in Oregon.

b. JART Roles and Responsibilities

1) The JART will coordinate with the Department of State Lands[10] on the pre-application review process, and comment on the adequacy of the resource inventories and effects evaluations required under subsection B.4 (Resource Inventory and Effects Evaluation Standards), below, and NEPA environmental assessments and environmental impact statements.
2) The JART members will make recommendation(s) to state agencies on whether the information provided by the applicant for the proposed renewable energy facility meets the applicable standards and screening criteria associated with the map designation standards and criteria.
3) The JART will make recommendations to the Department of State Lands on the approval of proprietary authorizations, and to other applicable regulatory agencies on their decision to permit, license or authorize proposed renewable energy facility projects.[11]
4) The JART will also consider and make recommendations on the adequacy of the information provided for the operation plan, as required under section C. (Operation Plan Development) below, including the monitoring requirements, mitigation measures, adaptive management plans, construction and operational performance standards, or any other special conditions that a regulating state agency may apply pursuant to the lease, permit, license or other authorization.
5) Regulating agencies who are members of the JART still operate in accordance with their own rules and statutory mandates.

**4. Resource and Use Inventory and Effects Evaluation and Special Resource and Use Review Standards**

The inventory requirements and standards contained within this section, unless otherwise noted and as approved by NOAA, constitute the enforceable policies requirements that the Department of Land Conservation and Development will use to conduct the federal consistency review process pursuant to the CZMA regulations at 15 C.F.R. § 930. The enforceable policies and necessary data and information requirements to initiate the federal consistency review process are referenced or identified in appendix #.

As required by this subsection, data and information to complete the following Resource and Use Inventory and Effects Evaluation and Special Resource and Use Review Standards is required from the applicant, prior to the regulating agencies making any decision. State agencies will assist the applicant by providing readily available data and other information as applicable to the review process. Relevant inventory information included in the application(s) to federal agencies by the applicant may be used to meet the requirements of this section.

**a. Sufficiency of Resource and Use Inventory and Effects**

The information and data to complete the Resource and Use Inventory and Effects Evaluation and apply the Special Resource and Use Review Standards shall be sufficient to identify and quantify the short-term and long-term effects of the proposed renewable energy facility development on the affected marine resources and uses.

**b. Purpose of the Resource and Use Inventory and Effects Evaluation and Special Resource and Use Review Standards**

The purpose of the Resource and Use Inventory and Effects Evaluation and Special Resource and Use Review Standards are to determine whether the proposed actions can meet the policies and standards for the protection of resources, resource users and coastal communities referred to above in subsection A.2 (Policies), above. Resource and Use Inventory and Effects Evaluation and Special Resource and Use Review Standards will help identify where the applicant needs to address deficiencies. The regulating agency will use the evaluation to develop specific measures for environmental protection and mitigation, measures to protect ocean uses, monitoring, and adaptive management.

**c. Use of Available Environmental Information**

Regulating agencies may allow the applicant to use existing data and information from other authoritative sources, including NEPA documents, when complying with the requirements for the Resource and Use Inventory and Effects Evaluation and Special Resource and Use Review Standards.

**d. Inventory Content**

To evaluate the magnitude of the proposed project, the likelihood of the effects of the project, 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 listed below. The Resource and Use Inventory and Effects Evaluation and Special Resource and Use Review Standards requirements apply to all renewable energy projects for which a proprietary authorization from the Department of State Lands is being sought by an applicant, 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 listed below, projects are subject to the Special Resource and Use Standards as specified under subsection (g) below.

1) Proposed factors associated with 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 facility;
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 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, 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 Communities 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.

**e. 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 below in subsection (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 above 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.[12] 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 ecological components, as detailed under paragraph B.4.d above, that may be affected by the incremental effects of the proposed project and other projects in the same geographic area. The evaluation shall consider whether:

1) the resource is especially vulnerable to incremental effects;
2) the proposed project is one of several similar projects in the same geographic area;
3) other developments in the area have similar effects on the resource;
4) these effects have been historically significant for this resource; and
5) other analyses in the area have identified a cumulative effects concern.

B) The Joint Agency Review Team 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 below under subparagraph B.4.f.3 and subsection C.1. The JART will make a determination from 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.

**f. Insufficient/Incomplete Information**

An applicant may not be able to obtain or provide the information required by subsection B.4 (Resource Inventory and Effects Evaluation), above, due to the lack of data available about the effect that the proposed development may have on environmental resources and uses. When JART recommends and the Department of State Lands determines that the information provided by the applicant is not sufficient or complete enough to fulfill the requirements of subsection B.4,[13] the agency has the following options:

1) Agency Discretion
may terminate the state permit decision-making process or suspend the state permit process until the applicant provides the information.[14]

2) Pilot Project
The state regulating agency may recommend that an applicant conduct a pilot project to obtain adequate information and data and measure the effects. Or, under the CZMA, the State may issue a CZMA "conditional concurrence" under 15 C.F.R. § 930.4 and include a condition that in order to be consistent with the information requirements of the Oregon Territorial Sea Plan that a pilot project must first be conducted, or, if the state regulating agencies object under the CZMA, may recommend a pilot project as an alternative to the proposed project. Pilot projects are renewable energy facility developments which are removable or able to be shut down quickly, are not located in sensitive areas, and are for the purpose of testing new technologies or locating appropriate sites.[15] The agency's decision to allow the use of a pilot project is for the purpose of obtaining the data and information necessary to fulfill the requirements of subsection B.4., and shall be based on the following approval criteria:

B) The applicant shall complete adequate inventories of baseline conditions, as required by paragraph B.4.d (Inventory Content) above, prior to conducting the pilot project.

C) The risk of adverse effects from the pilot project shall be insignificant, because:

1. of low probability of exposure of biological communities and habitats;
2. of low sensitivity of the biological communities and habitats to the exposure; or
3. the effects of exposure to sensitive communities and habitats will be insignificant.

D) The pilot project shall not adversely affect any "important marine habitat" or "critical marine habitat" (see Appendix A: Glossary of Terms).

E) The pilot project will have a term, not to exceed five years, and authorization for the project will include a standard condition requiring project alteration or shutdown in the event that an unacceptable level of environmental effect occurs.

F) The pilot project shall avoid significant or long-term interference with other human uses of marine resources, and will require decommissioning and site restoration at expiration of the authorization period if federal and state authorization for a commercial renewable energy facility is not sought.

G) All data necessary to meet the requirements of Subsection B.4, shall be in the public domain subject to ORS 192.410 *et seq*.

H) Work Plan: The applicant shall provide a written work plan which will include, but not be limited to the following: [16]

1. A list of the information needed to satisfy the requirements of subsection B.4., above.
2. Specific pilot project objectives to obtain the needed information and an explanation of how the study or test design will meet the objectives.
3. Description of study or test methods to meet the objectives, such as:
   (a) Literature review;
   (b) Collection of any needed baseline data;
   (c) Hypotheses to address the study objectives;
   (d) Descriptions of field sampling and data-analyses methods to be used; and
   (e) Use of adequate controls to allow the effects of the proposed action to be separated from natural fluctuations in resources and habitats.
4. Supporting documentation demonstrating that the study design is scientifically appropriate and statistically adequate to address the research objectives.
5. Descriptions of how the data and analyses will be reported and delivered to the regulating agency for review and approval.

I) A pilot project that provides the necessary and sufficient information may become a phased development.

3) Phased Development

The State regulating agency may recommend that an applicant conduct a project as a phased development in order to obtain adequate information and data and to measure the incremental effects of each phase prior to further or complete build-out of the project. Alternatively, the Department of Land Conservation and Development may issue a CZMA "conditional concurrence" under 15 C.F.R. § 930.4 and include a condition that in order to be consistent with the information requirements of the Oregon Territorial Sea Plan that a phased project must first be conducted, or, if the State objects under the CZMA, may recommend a phased project as an alternative to the proposed project. Phased development projects are renewable energy facility developments which are limited in scale and area, but are designed to produce energy for commercial use. The applicant for a phased development project will need to comply with the requirements of subsection B.4. A regulating agency's decision to allow the use of a phased development project is

designed to allow for commercial energy production while obtaining certain data and information that are necessary to fulfill the requirements of subsection B.4., but can only be obtained through the monitoring and study of the effects of the development as it is installed and operated for a discrete period of time.

**g. Special Resources and Use Standards**

In addition to the resource and use inventory and effects evaluation requirements listed above, special resource and use standards will apply to specific areas within the territorial sea, based on the delineation and definition of those areas in the map located in appendix C. The marine resources and uses addressed in this subsection are not intended to represent the exclusive subject matter of state agency regulatory review process. In applying the special resource and use standards, the regulating agencies shall use the best available maps and data. A regulating agency may consider new information that it deems sufficient and applicable to the review. Application of each standard will result in decisions regarding the potential adverse effects of the proposed project based on best available science and professional judgment, as determined by the regulating agency. When significant uncertainty exists regarding the potential adverse effects of the proposed project, the regulating agency shall apply the precautionary approach in decision-making.

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 the 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.

2) Fisheries Use Protection Standards

The State 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.

A) Definition of Terms

1. Adverse effect: a significant reduction in the access of commercial and recreational fishers to an area that has been spatially delineated as an area important to a single fishing sector, multiple combined sectors, or to the fishing community of a particular port.
2. Presumptive exclusion: the assumption that the distribution and importance of fisheries use within an area would preclude the siting a

renewable marine energy facility based on the potential adverse effects of that development on those identified resources and uses. The presumptive exclusion may be overcome by a clear demonstration by the applicant, with State concurrence, that the proposed project meets all applicable standards for protecting the fisheries use subject to potential adverse effects.

B) General Fisheries Use Protection Standard
The following impacts 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 areas unless otherwise designated by the plan:

1. 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;

2. Minimize the compaction of fishing effort caused by the reduction in the areas normally accessible to fishers;

3. Minimize the economic impact resulting from the reduction in area available for commercial and recreational fishing for the effected sectors and ports.

4. Mitigate possible hazards to navigation and, provide practicable opportunities for vessel transit, at the project location.

5. 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 (a) through (e) above.

C) Area Designation Fisheries Use Protection Standard
The following standards apply to specific plan areas as delineated and described in the map located in appendix C.

1. Resource and Use Conservation Areas (RUCA) Standard
The following standards apply to the protection of areas important to fisheries within Marine Resource and Use Conservation Areas.
   (a) Renewable energy facilities within RUCA are presumptively excluded from areas important to fisheries.
   (b) The presumptive exclusion may be overcome by a clear demonstration by the applicant with State concurrence that the project will have no reasonably foreseeable adverse effect on areas important to fisheries and there is no practicable alternative site.

2. Marine Resource and Use Management Areas (RUMA) Standard
   The following standards apply to the protection of areas important to fisheries within Resource and Use Management Areas.
   Renewable energy facilities within RUMA may be permitted within areas important to fisheries of high catch; high value fish in low abundance or low fishing effort; important on a seasonal basis, or; important to individual ports or particular fleet, based on by a clear demonstration by the applicant with State concurrence that the project will have no significant adverse effect on areas important to fisheries.

3. Resource and Use Development Area (RUDA) Standard
   The following standards apply to the protection of areas important to fisheries within Marine Resource and Use Development Areas.
   Renewable energy facilities within RUDA may be permitted based on a resource and use inventory evaluation of recreational and commercial fisheries, and the application of the standards listed under A.3 and A.4 above, if applicable.

3) Ecological Resource 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 renewable energy project proposals.

A) Definition of Terms

1. 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).
2. Presumptive exclusion: the assumption that the distribution and importance of ecological resources within an area would preclude the siting of a renewable marine energy facility based on the potential adverse effects of that development on those identified resources.
3. Important, Sensitive, or Unique (ISU) Area: The State has identified ecological resources that are particularly important, sensitive and unique resources (ISUs), with the intention of providing them the highest level of protection. The ISU areas include the discrete locations of the ISU resources plus bounding polygons (i.e. buffers) that ensure adequate room for species foraging or other activities, or that ensure protection from disturbance of the ISU resource. Currently delineated ISU areas are located within MRUCA. The resources included as ISUs are known to be especially vulnerable to development impacts due to high concentration of the resource in a small area or the nature of the resource. The State may change the list of ISUs in the future (through addition or deletion of ISU from list or through updating the distribution

of an ISU), as new data become available. Where ISUs are discovered outside the MRUCA, the ISU standard will apply. Currently, ISUs include:

(a) Rock habitat (including kelp beds, seagrass beds, subtidal reefs, and rocky intertidal),
(b) Pinniped haulout areas; and,
(c) Seabird nesting colonies.

4. Ecological Resources of Concern:
   (a) Critical marine habitats (including but not limited to critical habitats as defined in the Endangered Species Act, and high-use areas),
   (b) Other important marine habitats,
   (c) Fish and shellfish stocks and other biologically important species (including but not limited to seabirds and mammals),
   (d) Recreationally or commercially important finfish or shellfish species,
   (e) Planktonic and benthic flora and fauna,
   (f) Other elements important to the marine ecosystem, including but not limited to:
      1. ecosystem structure,
      2. biological productivity,
      3. species density,
      4. biological diversity,
      5. representative species assemblages, and,
   (g) Marine species migration routes.

B) Area Designation Ecological Resources Protection Standard
The following standards apply to specific plan areas as delineated and described in the map located in appendix C.

1. Resource and Use Conservation Areas (RUCA) Standards:
   Renewable energy facilities are presumptively excluded from ISU areas delineated within a RUCA.
   (a) The presumptive exclusion may be overcome by a demonstration by the applicant, with the regulating agency's concurrence, that:
      1) there is no practicable alternative site outside an ISU area that is less environmentally damaging (when evaluating the project proposal, the regulating agencies shall not consider project cost as a factor when determining whether practicable alternatives exist), and;
      2) the project will have no reasonably foreseeable adverse effect on the ISUs located at the project site and off-site ISUs potentially affected by the project.

(b) Renewable energy facilities shall have no significant adverse effect on areas of intense foraging for several important species.
(c) Renewable energy facilities shall have no significant adverse effect on ecological resources of concern.

2. Resource and Use Management Areas (RUMA) Standards:
   (a) Renewable energy facilities shall have no significant adverse effect on areas that provide intense foraging for several important species.
   (b) Renewable energy facilities shall have no significant adverse effect on ecological resources of concern.

   c) The ISU standard, as applied within a RUCA, shall apply to ISU resources that are delineated within a RUMA.

3. Marine Resource and Use Development Area (RUDA) Standards: These areas have been identified as having the lowest potential for conflict between renewable energy facilities and ecological resources.
   (a) Ecological Resources of Concern: Renewable energy facilities shall have no significant adverse effect on ecological resources of concern.
   (b) The ISU standard, as applied within a RUCA, shall apply to ISU resources that are delineated within a RUDA.

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 marine energy 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 (appendix C).

A) Renewable energy may not have a significant adverse effect on areas of high or important use for recreational activities. A significant adverse effect occurs when:
   1. Access is denied or unreasonably impeded.
   2. The project creates reasonably foreseeable health or safety impacts.
   3. The project would have reasonably foreseeable significant impacts on the natural environment that the recreational community depends on.

B) Areas of high or important use for recreational activity occur where there is
   1. Community of historical users;
   2. High intensity of use, or
   3. Uniqueness or a special quality associated with the recreational use relative to the state or region.

**5) Visual Resource Protection Standards**

The state regulating agencies shall protect visual resources, i.e. view sheds of the territorial sea, by applying the following visual resource protection standards to evaluate the impact of renewable energy project proposals on the effected view sheds. The following standards rely on a map overlay that has been incorporated into the map (appendix C), which locates and classifies ocean view sheds. The visual resource protection standards apply equally throughout the territorial sea, and are based on the visual subordination standards for the view shed class of the specific view sheds that a proposed renewable energy develop would impact.. Each view shed that has been delineated and located in the map overlay has been assigned a classification. The specific visual subordination review standards, listed below, will be applied to determine the impact of project may effect.

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**A) Classification of View Sheds**

The State has identified classes for delineating the view shed locations a proposed renewable energy project on each view shed based on its individual classification. A single project will impact multiple view sheds, each with its own classification and visual subordination standard. *(this section is incomplete pending the inclusion of standards for evaluating the contrast for each class)*

1. **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 management activity. The level of change to the characteristic seascape should be very low and must not attract attention.

2. **Class II:** The objective of this class is to retain the existing character of the seascape. The level of change to the characteristic seascape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic seascape.

3. **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 should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic seascape.

4. **Class IV:** The objective of this class is to provide for management activities which require major modifications of the existing character of the seascape. The level of change to the characteristic seascape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

**B) Project Review Considerations**

The following factors must be considered when applying the contrast criteria to the portion of the proposed marine renewable energy project that is visible.

1. Distance from viewpoint. The contrast created by a project usually is less as viewing distance increases.

2. Angle of Observation. The apparent size of a project is directly related to the angle between the viewer's line-of-sight and the slope upon which the project is to take place.

3. Length of Time the Project Is In View. If the viewer has only a brief glimpse of the project, the contrast may not be of great concern. If, however, the project is subject to view for a long period, as from an overlook, the contrast may be very significant.

4. Relative Size or Scale. The contrast created by the project is directly related to its size and scale as compared to the surroundings in which it is place. This should include consideration of size of the development (e.g., number of devices) along with size of the individual devices and associated structures along with layout and spacing. For example, minimizing horizontal spread of the layout may reduce contrast.

5. Season of Use. Contrast ratings should consider the physical conditions that exist during the heaviest or most critical visitor use season.

6. Light Conditions. The amount of contrast can be substantially affected by the light conditions. The direction and angle of lighting can affect color intensity, reflection, shadow, from, texture, and many other visual aspects of the seascape. Light conditions during heavy use periods must be a consideration in contrast ratings.

7. Spatial Relationships. The spatial relationship within a seascape is a major factor in determining the degree of contrast. For example, projects in areas that are the “focus of key views” like a headland or large offshore rocks could have a higher contrast.

8. Atmospheric Conditions. The visibility of projects due to atmospheric conditions such as fog or natural haze should be considered.

9. Motion, lights and color. Movement and lighting draw attention to a project and vary depending on conditions and time of day and night. Surface treatment (e.g., color) may increase or decrease visibility.

10. Shore-based facilities. Associated shore-based facilities (e.g., buildings, cables etc.) should also be considered in the visual impact analysis

## C. Operation Plan Development

The State regulating agency shall require the applicant to submit an operation plan as a condition of approval for a state permit, license, lease or other authorization for renewable energy facility development. The operation plan must explain the procedures and mechanisms that the operator will employ so that the facility will comply with regulatory standards and other conditions of permit or license approval related to water and air quality, adverse environmental effects, maintenance and safety, operational failure and incident reporting. The operation plan shall be designed to prevent or mitigate harm or damage to the marine and coastal environment and at a minimum shall include the following information:

**1. Phased Development Plan**

A State regulating agency may require that a facility be developed in phases in order to determine whether the environmental effects of the structures and the operation of the facility are consistent with the inventory and effects evaluation conducted under subsection B.4. The requirements for an operation plan listed in this section would apply to each stage of the phased development so as to account for any changes in design, technology or operation that may result from monitoring the initial phase of the operation. The joint agency review team (JART), as discussed in section B.3 will assist the developer in assessing the environmental effects of the initial phase and in determining what, if any, changes in the development and operation of future phases of the facility might be necessary to mitigate or prevent harm or damage to the marine ecosystem.

A facility that has been developed to the full extent of its design and operating capacity may, during the lifetime of its authorization, require systematic improvements to the technology, structures and operational procedures that were originally authorized. The regulating agency shall require a new facility development plan, as appropriate and necessary, to provide the data and information for the redevelopment and operation of the new facility components.

**2. Facility Development Plan**

A plan is required that describes the physical and operational components of the proposed facility and must contain, at minimum, detailed technical information, data, protocols and references for:

**a.** Structural and project design, materials used, anchoring and installation information;
**b.** All cables and pipelines, including lines on project easements;
**c.** A description of the deployment activities;
**d.** A listing of chemical products used;
**e.** A description of vessels, vehicles, aircraft and the transit lanes that will be used;
**f.** A general description of the operating procedures and systems;
**g.** Construction schedule; and
**h.** Other information as required by the Department of State Lands.

**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.

**b. Inspection Plan:**
A plan to provide for the implementation of a routine inspection program to ensure the mechanical, structural and operational integrity of renewable energy facilities and other related structures, equipment or facilities. In addition, unscheduled inspections shall be required after any major geologic or meteorologic event to ensure continued operational safety and environmental protection.

**c. Monitoring Plan:**
A plan to provide for the implementation of a routine standardized monitoring program for potential impacts on specific resources as specified by the resource inventory and effects evaluation. The operator shall monitor activities related to the operation of the facility and demonstrate that its performance satisfies specified standards in its approved plans. Monitoring shall be sufficient to accurately document and quantify the short-term and long-term effects of the actions on the affected resources and uses. Plans for monitoring shall include, at a minimum:

1) A list of the information needed to satisfy an effects evaluation.

2) Specific study objectives to obtain the needed information and explanation of how the study design will meet the objectives.

3) Description of study methods to meet the objectives, such as:

   A) Literature review;
   B) Collection of needed baseline data;
   C) Hypotheses to address the study objectives;
   D) Descriptions of field sampling and data-analyses methods to be used; and
   E) Use of adequate controls, such as control sites, to allow the effects of the proposed action to be separated from natural fluctuations in resources and habitats.

4) The monitoring plan shall include supporting documentation demonstrating that the study design is scientifically appropriate and statistically adequate to address the research objectives.[17]

5) The monitoring plan shall include a description of the method that will be used to report and deliver data and analyses information to the authorizing state agency for review in a timely and efficient manner.[18]

**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), above. The plan shall explain the processes for how adaptation measures are applied to the operation of the project. When the monitoring results show that the performance standards are not being met due to the operation of the facility, adaptation measures designed to bring the operation into compliance with the performance standard will be applied to the operation of the project. The adaptive management plan will explain processes for how adaptation measures will be applied to the operation and management of the project. The adaptive management plan should account for:

1) Variable conditions in the marine environment;
2) Change in the status of resources;
3) New information provided by monitoring of the project;
4) Data and information provided by research and from other sources;
5) New technologies that would provide for greater protection of ocean resources;
6) Ocean fisheries, or other ocean uses to be protected from adverse effects and operational conflicts; and
7) Unanticipated cumulative effects.

**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.[19] The plan should include; a proposed decommissioning schedule; a description of removal and containment methods; description of site clearance activities; plans for transporting and recycling, reusing, or disposing of the removed facilities; a description of those resources, conditions, and activities that could be affected by or could affect the proposed decommissioning activities; results of any recent biological surveys conducted in the vicinity of the structure and recent observations of marine mammals at the structure site; mitigation measures to protect archaeological and sensitive biological features during removal activities; and a statement as to the methods that will be used to survey the area after removal to determine any effects on marine life. A decommissioning plan should identify how the project owner will restore the site to the natural condition that existed prior to the development of the site, to the extent practicable.

5. **Financial Assurance Plan:**
The applicant shall provide a financial assurance compliance plan that describes their ability to comply with the state regulating agency requirements for financial assurance instruments to guarantee performance, and any other financial terms and conditions that may be applied. Wave energy facilities or devices shall comply with the requirements of ORS 274.867,[20] and the implementing administrative rules of the Department of State Lands, OAR chapter 141, division 140.

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.[21] Applicants are encouraged to memorialize agreements with those ocean users and stakeholders on the specific actions that the applicant will take to address their issues of concern.

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## D. Northwest National Renewable marine Energy Center Ocean Energy Test Sites: Newport Mobile Ocean Test Berth and Pacific Marine Energy Center

The Northwest National Renewable Marine Energy Center (NNMREC) Ocean Test Sites are established to conduct experimental renewable energy device testing. A primary function of the NNMREC Ocean Test Sites is to understand the environmental effects of various marine devices, in addition to the amount of energy produced by the various technologies.

1. **The Mobile Ocean Test Berth Site**
The NNMREC Mobile Ocean Test Berth (MOTB) site at Newport OR is established to conduct short-term experimental testing of marine energy devices. This site will be used for short-term deployments of individual wave energy devices in conjunction with or independently of The Ocean Sentinel, a mobile ocean test berth. This site is not grid-connected.

2. **Regulating Agency Authorizations for MOTB Site Use**
An application for a permit, license, or other authorization for installation and operation at the NNMREC MOTB site is not subject to the requirements of sections B or C, above. An experimental or test device or other structure that seeks permission to use the NNMREC MOTB site, is required to obtain any applicable licenses, permits or authorizations from the Department of State Lands.

## Appendix A: Definitions and Terms

**As used in Part Five, unless the context requires otherwise, the following definitions shall apply:**

**Adverse effect:** a significant reduction in the access of commercial and recreational fishers to an area that has been spatially delineated as an area important to a single fishing sector, multiple combined sectors, or to the fishing community of a particular port.

**Applicant:** An applicant for a state permit, license, lease or other authorization for renewable energy facilities development or other related structures, equipment or facilities will be referred to as “the applicant” or “project developer”

**Areas important to fisheries**: (Goal 19)

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.

**Conservation:** a principle of action guiding Oregon's ocean-resources management, which seeks to protect the integrity of marine ecosystems while giving priority to the protection and wise use of renewable resources over nonrenewable; as used in the Oregon Ocean Resources Management Plan, the act of conservation means "that the integrity, diversity, stability, complexity, and the productivity of marine biological communities and their habitats are maintained or, where necessary, restored" and "accommodat(ing) the needs for economic development while avoiding wasteful uses and maintaining future availability.” (Territorial Sea Plan Appendix A: Glossary of Terms)

**Critical marine habitat:** means one or more of the following land and water areas:
a.) areas designated as "critical habitat" in accordance with federal laws governing threatened and endangered species; or
b.) areas designated in the Territorial Sea Plan as either:

1.) as needed for the survival of animal or plant species listed by state or federal laws as "threatened", "endangered", or "sensitive". Such areas might include special areas used for feeding, mating, breeding/spawning, nurseries, parental foraging, overwintering, or haul out or resting. This designation does not limit the application of federal law regarding threatened and endangered species; or

2.) "unique" (i.e. one of a kind in Oregon) habitat for scientific research or education within the territorial sea. (Territorial Sea Plan, Part Two)

**Ecosystem:** the living and non-living components of the environment which interact or function together, including plant and animal organisms, the physical environment, and the

energy systems in which they exist. All the components of an ecosystem are interrelated. (Oregon Statewide Planning Goals)

**Habitat:** the environment in which an organism, species, or community lives. Just as humans live in houses, within neighborhoods, within a town or geographic area, within a certain region, and so on, marine organisms live in habitats which may be referred to at different scales. (see also "critical marine habitat", "important marine habitat") (Territorial Sea Plan Appendix A: Glossary of Terms)

**Important marine habitat:** (Goal 19) 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.

Important marine habitats must be specifically considered when an inventory-and-effects evaluation is conducted pursuant to Goal 19: including but not limited to: habitat necessary for the survival and conservation of Oregon renewable resources (*e.g.* areas for spawning, rearing, or feeding), kelp and other algae beds, seagrass beds, seafloor gravel beds, rock reef areas and areas of important fish, shellfish and invertebrate concentration. (Oregon Statewide Planning Goal 19).

Impact: is the severity, intensity, or duration of the effect, and can be either or both positive or negative outcomes.

Mitigate: is the avoidance or minimization of a direct or indirect ecological effect or Impact on a receptor through engineering or operational modification of the project. Mitigation does not refer herein to so-called "offsite" mitigation or to compensatory mitigation (i.e., paying or compensating for environmental damage).

**Phased development projects**: Renewable energy facility developments which are limited in scale and area, but are designed to produce energy for commercial use.

Presumptive exclusion: the assumption that the distribution and importance of resources and uses within an area would preclude the siting a renewable energy facility based on the potential adverse effects of that development on those identified resources and uses. The presumptive exclusion may be overcome by a clear demonstration by the applicant, with State concurrence, that the proposed project meets all applicable standards for protecting the resources and uses subject to potential adverse effects.

**Project Developer:** see "applicant" above.

**Regulating agency or regulating agencies**: State agencies making decisions to authorize the siting, development and operation of renewable energy facilities development or other related structures, equipment or facilities within the Territorial Sea.

**Renewable Energy Facility or Facilities:** The term "renewable energy facilities development or other related structures, equipment or facilities," means energy conversion technologies and devices that convert the energy or natural properties of the water, waves, wind, current or thermal to electrical energy, including all associated buoys, anchors, energy collectors, cables, control and transmission lines and other equipment that are a necessary component of an energy conversion device research project, demonstration project or commercial operation. The terms "renewable energy facility" or "renewable energy facilities" are used to describe any and all components of these developments.

## Appendix B: Endnotes

[1] See Part One C for the Oregon Territorial Sea and Territorial Sea Plan description
[2]

[2] It is the goal of Oregon to develop permanently sustainable energy resources, and the policy of the state to encourage the development and use of these resources. ORS 469.010 Policy states that;

> (2) It is the goal of Oregon to promote the efficient use of energy resources and to develop permanently sustainable energy resources. The need exists for comprehensive state leadership in energy production, distribution and utilization. It is, therefore, the policy of Oregon:
>
> (a) That development and use of a diverse array of permanently sustainable energy resources be encouraged utilizing to the highest degree possible the private sector of our free enterprise system.
>
> […]
>
> (g) That state government shall provide a source of impartial and objective information in order that this energy policy may be enhanced.

[3] Part One, subsections E.1 and E.2 of the Territorial Sea Plan provide a brief description of programs of certain state and federal agencies with regulatory, consultation or other authority or responsibility for management of ocean resources.

[4] State agencies making decisions to authorize the siting, development and operation of renewable energy facilities development or other related structures, equipment or facilities within the Territorial Sea, will be referred to as "the regulating agency" or "regulating agencies".

[5] In its "Rules Governing the Placement of Ocean Energy Conversion Devices On, In or Over State-Owned-Land within the Territorial Sea", the Department of State Lands requires applicants to meet with the agency, as well as affected ocean users and other government agencies having jurisdiction in the Territorial Sea, prior to applying for a lease or temporary authorization. OAR 141-140-0040.

[6] The manner in which federal agencies comply with the enforceable policies and information requirements contained in Goal 19 is governed by NOAA's CZMA Federal Consistency regulations at 15 CFR Part 930. Thus, any reference to "federal agencies" in the Territorial Sea Plan do not impose obligations on federal agencies that are in addition to those described in the CZMA and NOAA's regulations.

[7] ORS 196.471, entitled "Territorial Sea Plan review requirements, provides in part:

> "(1) The Land Conservation and Development Commission shall review the Territorial Sea Plan and any subsequent amendments recommended by the Ocean Policy Advisory Council to either the Territorial Sea Plan or the Oregon Ocean Resources Management Plan and make findings that the plan or amendments:
>
> "(a) Carry out the policies of ORS 196.405 to 196.515; and
>
> "(b) Are consistent with applicable statewide planning goals, with emphasis on the four coastal goals.
>
> "(2) After making the findings required by subsection (1) of this section, the commission shall adopt the Territorial Sea Plan or proposed amendments as part of the Oregon Coastal Management Program."

[8] Whether a particular federal license or permit activity proposed in federal waters is subject to Oregon review depends on whether the State has, pursuant to 15 C.F.R. § 930.53, (1) listed the federal authorization in the Oregon Coastal Management Program, and (2) the proposed listed activity falls within a NOAA-approved "Geographic Location Description" (GLD). If Oregon has not listed the activity and does not have a NOAA-approved GLD, the State can seek NOAA approval to review a project on a case-by-case basis as an "unlisted activity" pursuant to 15

C.F.R. § 930.54. If a federal action, including the issuance of any federal authorizations, is subject to Oregon CZMA review, it shall be supported by the information required in NOAA's regulations at either 15 C.F.R. §§ 930.39, 930.58 or 930.76.

[9] The regulations for federal consistency with approved state coastal programs are prescribed in 15 C.F.R. Part 930. "Energy projects" are defined under 15 C.F.R. § 930.123(c) to mean "projects related to the siting, construction, expansion, or operation of any facility designed to explore, develop, produce, transmit or transport energy or energy resources that are subject to review by a coastal State under subparts D, E, F or I of this part."

[10] The Department of State Land OAR 141-140 establishes and prescribes the pre-application process for renewable marine energy development within the territorial sea.

[11] For purposes of CZMA federal consistency reviews in accordance withNOAA's regulations at 15 C.F.R. part 930 and ORS 196.435, the Department of Land Conservation and Development is the designated state agency for conducting the federal consistency review.

[12] Under the National Environmental Policy Act (NEPA), "cumulative impacts" means "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7.

[14] For purposes of CZMA federal consistency reviews, NOAA's regulations at 15 C.F.R. part 930 determine when the CZMA review periods start and ends; a state cannot start, terminate or suspend the CZMA review independent of NOAA's requirements.

[15] Pilot Project has the same meaning as "Demonstration Project" under the Department of State Lands rules governing the placement of ocean energy conversion devices on, in, or over state-owned land within the Territorial Sea. OAR 141-140-0020(7) defines "Demonstration Project" as "a limited duration, non-commercial activity authorized under a temporary use authorization granted by the Department to a person for the construction, installation, operation, or removal of an ocean energy facility on, in or over state-owned submerged and submersible land in the Territorial Sea to test the economic and/or technological viability of establishing a commercial operation. A demonstration project may be temporarily connected to the regional power grid for testing purposes without being a commercial operation."

[16] Pilot projects that are authorized under the standards and conditions of this subparagraph f.2 are not required to fulfill the requirements of section C below. The standards and requirements of section C will apply to an application for authorization to expand the pilot project from a short-term limited scope facility to a commercial operation scale facility.

[17] Standardized monitoring protocols would result in data sets that are comparable and transferable among sites and technologies. The protocols would include a Before, After, Control, Impact (BACI) experimental study design.

[18] Example: the data and analysis will be applied to determine if conditions meet the standard established under the Oregon Department of Environmental Quality rule for "Biocriteria" at OAR 340-041-0011, which provides "Waters of the State must be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities."

[19] The requirement for a decommissioning plan is based upon, and will be applied by, the Department of State Lands under OAR 141-140-0080. Under subsection (5)(e) of that rule, the holder of a temporary use authorization or 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."

The decommissioning of the transmission cable is required under OAR 141-083-0850(6), which provides:

> "If determined necessary by [DSL] 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."

[20] ORS 274.867 provides in part:

> "(2) Unless exempted under rules adopted by the director under this section, an owner or operator of a facility or device sited within Oregon's territorial sea, as defined in ORS 196.405, that converts the kinetic energy of waves into electricity shall maintain cost estimates of the amount of financial assurance that is necessary, and demonstrate evidence of financial assurance, for:
> "(a) The costs of closure and post-closure maintenance, excluding the removal of anchors that lie beneath submerged lands in Oregon's territorial sea, of the facility or device; and
> "(b) Any corrective action required to be taken at the site of the facility or device.
> "(3) The financial assurance requirements established by subsection (2) of this section may be satisfied by any one or a combination of the following:
> "(a) Insurance;
> "(b) Establishment of a trust fund;
> "(c) A surety bond;
> "(d) A letter of credit;
> "(e) Qualification as a self-insurer; or
> "(f) Any other method set forth in rules adopted by the director."

[21] The Department of State Lands rule on Pre-Application Requirements, OAR 141-140-0040, provides:

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