



OREGON RENEWABLE ENERGY SITING ASSESSMENT (ORESAS) *Procedures Report*

ABSTRACT

This report describes the procedures used for the siting of renewable energy facilities in Oregon at the State and Local level. It also provides an overview of the processes used by the Federal government and the Military to review renewable energy projects.

December 2021

Authors

Wally Adams, Oregon Department of Energy

Jon Jinings, Oregon Department of Land Conservation and Development

Ruchi Sadhir, Oregon Department of Energy

Kaci Radcliffe, Oregon Department of Energy

Acknowledgements

The authors would like to acknowledge the following people for their contributions to this report:

Daniel Zelko and the team at Epsilon Systems Solutions for their contributions to the military section.

Kim Peacher and the Department of Defense Northwest Regional Coordination Team for their knowledge, input and support, especially to the military section and best practices.

Members of the Association of Oregon County Planning Directors for their time to review and provide feedback on the county process maps.

We would also like to thank the following people from Oregon's state agencies for their input:

Andy Lanier and Deanna Caracciolo of the Department of Land Conservation and Development

Andrea Celentano and Patricia Fox of the Department of State Lands

Todd Cornett, Sarah Esterson and Max Woods from the Department of Energy

Table of Contents

Glossary of Terms

Introduction

Section 1: Local Government Procedures

Overview

Conditional Use Permits

Goal Exceptions

HB2329

Best Practices

Section 2A: State Process Review

Overview

Energy Facility Siting Council (EFSC) process

Offshore in Waters of the State

Best Practices

Section 2B: Federal Process Review

Overview

FERC

FAST-41

Offshore on the Outer Continental Shelf

Aviation approvals through the FAA

Section 3: Military Procedures Review

Military Overview

Early Coordination

Informal Consultation

Formal Consultation

Best Practices

Appendix I – Authority and Standards Tables

Appendix II – EFSC Reviewing Agency Permits

Glossary of Terms

ACE	Army Corps of Engineers
AGL	Above Ground Level
AOI	Area of Interest
APA	(Oregon) Administrative Procedures Act
ASC	Application for Site Certificate
BBTU	Billion British Thermal Units (1 Billion BTU's)
BOEM	Bureau of Ocean Energy Management
CFR	Code of Federal Regulations
CTCLUSI	Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians
CTUIR	Confederated Tribes of the Umatilla Indian Reservation
CZMA	Coastal Zone Management Act
DEQ	(Oregon) Department of Environmental Quality
DGMI	(Oregon) Department of Geology and Mineral Industries
DHS	Department of Homeland Security
DNH	Determination of No Hazard
DLCD	Department of Land Conservation and Development
DoD	Department of Defense
DPO	Draft Proposed Order
DSL	Department of State Lands
EFSC	Energy Facility Siting Council
EM	Electromagnetic
FAA	Federal Aviation Administration
FAST	Fixing America's Surface Transportation Act
FERC	Federal Energy Regulatory Commission
GIS	Geographic Information System
IFR	Instrument Flight Rules
ILP	Integrated Licensing Process
INR	Institute for Natural Resources

JART	Joint Agency Review Team
kV	kilovolt (1000 volts)
LUBA	Land Use Board of Appeals
MET	Meteorological tower
MSL	Mean Sea Level
MTR	Military Training Route
MW	Megawatt (1 million watts)
NEPA	National Environmental Policy Act
NGO	Non-government organization
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NW DoD RCT	Northwest Regional Coordination Team
OAR	Oregon Administrative Rules
OCS	Outer Continental Shelf
ODFW	Oregon Department of Fish and Wildlife
ODOE	Oregon Department of Energy
OEA	Office of Economic Adjustment
OE/AAA	Obstruction Evaluation / Airport Airspace Analysis
OLDCC	Office of Local Defense Community Cooperation
OMD	Oregon Military Department
OPRD	Oregon Parks and Recreation Department
ORESA	Oregon Renewable Energy Siting Assessment
ORS	Oregon Revised Statutes
OTEC	Ocean Thermal Energy Conversion
OWRD	Oregon Water Resources Department
pASC	Preliminary Application for Site Certificate
RAI	Request for Additional Information
SHPO	State Historic Preservation Office
SUA	Special Use Airspace

TLP	Traditional Licensing Process
TSP	Territorial Sea Plan
USFW	United States Fish and Wildlife Service
VFR	Visual Flight Rules
WRD	(Oregon) Water Resources Department

Introduction

The Oregon Renewable Energy Siting Assessment (ORESAs) project is funded through a \$1.1 million U.S. Department of Defense Office of Local Defense Community Cooperation (DOD-OLDCC) – formerly the Office of Economic Adjustment (OEA) - grant awarded to the Oregon Department of Energy (ODOE), working with the Department of Land Conservation & Development (DLCD) and Oregon State University's Institute for Natural Resources (INR).

Development of renewable energy resources in Oregon – particularly solar, wind, and associated transmission infrastructure – is expected to grow in the coming decades as the state and region progress toward aggressive clean energy and renewable goals. Developing these energy resources requires careful consideration of issues related to natural resources, land use, environmental impacts, noise concerns, and cultural and archaeological resources (among others) through processes at all levels of government – federal, state, and local.

Additionally, future renewable energy and transmission projects may have effects on current and future military training, testing and operations in Oregon and adjoining states. While there is an existing federal process to include early consultation through which the potential impacts of renewable energy and other energy projects upon military operations are evaluated, this study seeks to gain a better understanding of current and future impacts. This is particularly important for the areas of the state that have substantial renewable energy resources and development potential.

Through assessments and a mapping tool, this project is collecting data and information about current and future renewable energy and transmission development and building an understanding of potential opportunities and constraints. This information can be used to continue to support renewable energy growth and economic development, while minimizing conflict.

DOD-OLCDD's overarching goal is to support military compatibility through coordination with local, regional, and state agencies and raise awareness about the military through the ORESAs project. The ORESAs project supports DOD-OLCDD's goals by creating relevant educational tools for stakeholders, agencies, local governments, and policy makers about renewable energy development, military training, testing and operational areas, economic/community benefits, land use considerations, natural, cultural, and environmental resources, and other regulatory requirements.

Key objectives of the ORESAs project are baselining data, information, and perspectives to create a transparent, consistent collection of trusted, accurate information in Oregon, without recommendations or endorsements, and noting where information may be imprecise or uncertain. There are five major project components:

- 1) Renewable Energy Market & Industry Assessment (Led by ODOE and supported by Consulting Firm – E3: Energy and Environmental Economics) – Collect data and model the future opportunity for development of renewable energy generation and transmission infrastructure in Oregon. Develop cost-optimized, renewable energy build-out scenarios for Oregon over the next 15 years. Build an understanding of the challenges and opportunities that exist in the renewable development community in Oregon and identify gaps that could be addressed for Oregon to meet its long-term energy goals.

- 2) Military Needs & Interests Assessment (Co-led by ODOE and DLCD and supported by Consulting Firm – Epsilon System Services) – Collect data and information about current and future military assets, uses, needs, and case studies. Analyze data, protocols, and policies regarding military training, testing and operating areas, including current and anticipated future uses. Note any constraints and opportunities between renewable energy development and military uses.
- 3) Natural Resources, Environment, and Development: Opportunities & Constraints Assessment (Led by DLCD and supported by Consulting Firm – CBI: Conservation Biology Institute) – Collect data and information regarding the presence of natural, cultural, and environmental resources, as well as jurisdictional protections, development constraints, and commercial interests. Collect data and information regarding community and economic opportunities with renewable energy development. Build an understanding of renewable energy opportunities and constraints, including regulatory structures and protections vested with Tribal governments and local, state, and federal agencies.
- 4) Siting Procedures Review (co-led by ODOE and DLCD) – Review and analysis of siting regulations, permitting, and project review processes as they relate to notification, identification, and evaluation of potential impacts. Develop summary of siting regulations and process review with feedback from stakeholders. Identify best practices in tools and strategies for engagement and improved coordination.
- 5) Mapping and Reporting Tool (led by INR) - Develop a mapping and reporting tool, housed on Oregon Explorer, with data and information about renewable energy; military training, testing and operational areas; economic development opportunities; land use considerations; natural, cultural, and environmental resources; and other regulatory requirements. The tool should build a more comprehensive understanding of renewable energy and transmission development and support proactive coordination with stakeholders, agencies, local governments, and policymakers in the state. Development of the tool will involve stakeholders to help define use cases and reporting functionality.

The Procedures Report summarizes the work conducted under the fourth project component: Siting Procedures Review. The report is arranged into three sections:

- 1) Local (County) Procedures
- 2) State and Federal Procedures
- 3) Military Procedures

A common objective across the three report sections is to describe how and where coordination with the Military occurs. Early identification of potential conflicts between a proposed renewable energy project and military assets such as Special Use Airspace (SUA) can avoid costly delays in permitting and late-stage redesign of project layout and components. Each section closes with a summary of best practices to promote improved coordination with the Military.

It is critical to note that this review does not substitute nor serve as an authoritative source of information regarding procedures or requirements set by other state or federal agencies. Instead, this report is meant to provide explanatory narrative and context of these processes to inform the ORESA project and development of the ORESA Mapping and Reporting Tool. Parties need to maintain responsibility to state and federal agencies directly for up-to-date information and process requirements.

Section 1: Local (County) Procedures

Overview

The majority of renewable energy projects permitted in the State of Oregon are subject to local jurisdiction and have received their approvals from local government. Information available from DLCD shows that photovoltaic solar and wind dominate proposals made to local decision makers. The land intensive nature of these two energy generation types almost always necessitates a location in rural areas outside of urban growth boundaries¹. Furthermore, local level solar and wind projects are nearly always proposed on land protected for exclusive farm use (EFU) under Oregon's Statewide Planning Goal 3 (*Agricultural Lands*)².

Based on the reasons identified above, the local section of this report focuses on the county process for considering renewable energy proposals on lands planned and zoned as EFU, which is based on a structure of Oregon Revised Statutes (ORS), Oregon Administrative Rules (OAR) and local provisions contained in county comprehensive plans and zoning ordinances.

The statutory authority for counties to consider renewable energy proposals on lands protected as EFU is established in Oregon Revised Statutes (ORS) Chapter 215. More specifically, ORS 215.283(2)(g)³ provides, in part "Commercial utility facilities for the purpose of generating power for public use by sale..." It is helpful to recognize that this statute does not limit or apply to non-commercial facilities. In other words, the placement of projects designed for home or farm consumption (i.e., powering an irrigation pump, electric hot-wire, and other domestic or farm related activities) are not regulated by Oregon land use planning laws.

The authority for issuing permits at the county-level is established in Oregon Revised Statutes (ORS) Chapter 215. In addition to the general authority to govern land use that is conferred upon counties, there are specific statutes that apply to renewable energy facilities within ORS Chapter 215.

- ORS 215.446 addresses renewable energy facilities; applications; standards; and notices.
- ORS 215.447 governs the installation of photovoltaic solar power generation facilities on high-value farmland.

The provisions of Oregon Revised Statutes have been incorporated into, and in some cases interpreted or augmented by, OAR Chapter 660, Division 33. This particular division of administrative rule has been promulgated by the Land Conservation and Development Commission (LCDC) and serves in large part to implement Oregon's Agricultural Lands protection program. Uses described in Division 33 are eligible to be processed through the conditional use process.

OAR 660-033-0120 divides energy generation into three (3) categories and designates the relevant review criteria found in OAR 660-033-0130. OAR 660-033-0130(17) and (22) generally apply to energy

¹ Utility scale photovoltaic solar projects have been developed within the cities of Klamath Falls (2), Lakeview and Pendleton.

² Occasionally a project will be proposed on Forest Lands protected under Statewide Planning Goal 4, which are subject to the provisions of OAR 660-006-0025(4), or lands not protected as EFU or Forest (i.e., Rural Industrial, Rural Residential, etc.) that are not subject to administrative rule provisions.

³ Companion provisions are included at ORS 215.213(2), which applies only to Lane and Washington Counties. Uses identified in these two areas of statute are also subject to the provisions of ORS 215.296.

generation facilities and are often collectively referred to as the “12-20 rule.” Neither of these subsections apply to photovoltaic solar or wind energy development. Instead, LCDRC has created two specific rules that apply to these disciplines. Wind energy development is subject to the provisions of OAR 660-033-0130(37) while photovoltaic solar energy development is subject to the provisions of OAR 660-033-0130(38).

Projects that exceed the thresholds established at the various locations of OAR 660-033-0130 require an additional level of review known as an “Exception” which include a comprehensive plan amendment. Exceptions for energy development proposals are governed by OAR 660-004-0020 and 0022. Once projects reach a certain size they are no longer subject to local jurisdiction and, instead, are to be considered by Oregon’s Energy Facility Siting Council (EFSC), as can be seen in Table 1.

Table 1 – Renewable Energy Project Jurisdictional Thresholds

	County process	County - HB 2329 process	Oregon EFSC process
Solar Photovoltaic			
High Value Farmland	≤ 100 acres	> 100 & ≤ 160 acres	> 160 acres
Arable Farmland	≤ 100 acres	> 100 & ≤ 1280 acres	> 1280 acres
Other Land	≤ 320 acres	> 320 & ≤ 1920 acres	> 1920 acres
Wind	N/A	≤ 150 MW Peak	> 150 MW Peak
Geothermal	N/A	≤ 55.5 MW Peak	> 55.5 MW Peak
Biomass	< 6 BBTU/day	N/A	> 6 BBTU/day
Battery Storage	All projects	N/A	N/A*

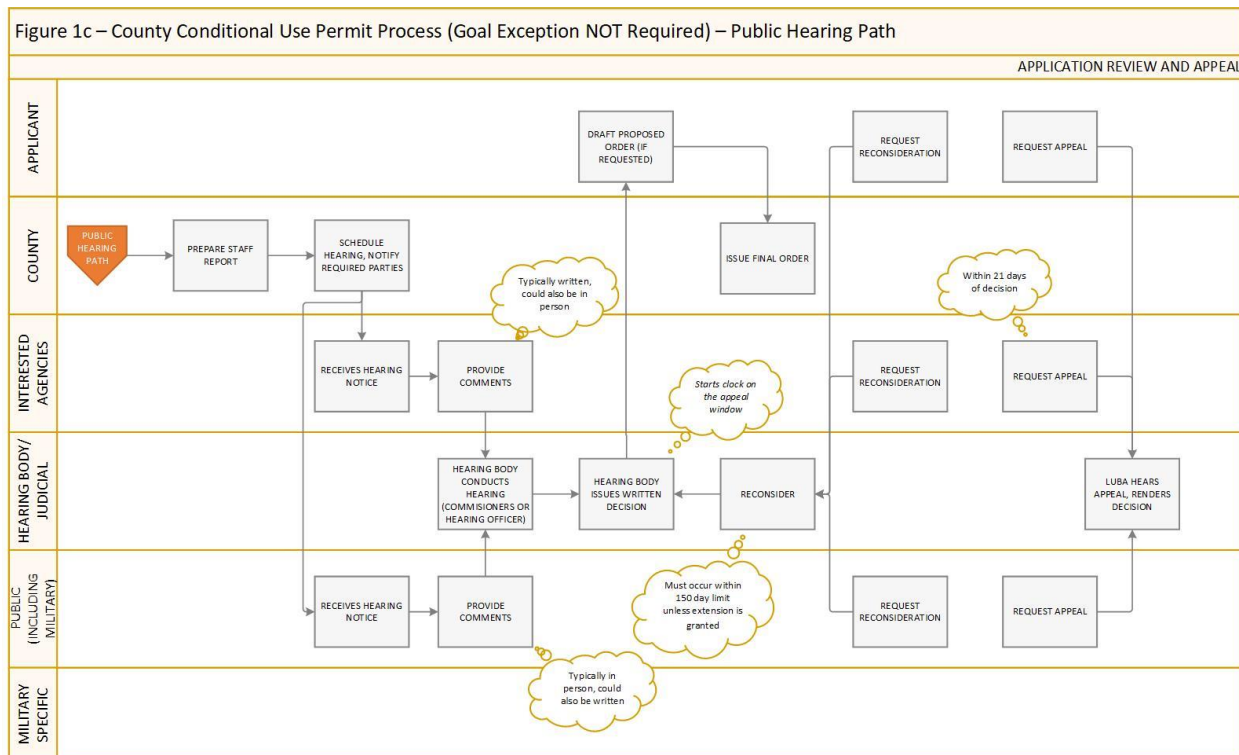
**EFSC reviews battery storage projects only as part of other large-scale energy projects.*

Although the Oregon Revised Statutes and accompanying Oregon Administrative Rules (OAR) will apply to all jurisdictions, each county has its own codes. This report covers the rules that are in place across the state and not the nuances of the differences that may be found in each County’s individual codes.

Conditional Use Permits

A developer who is interested in building a renewable energy facility would typically begin the permitting process by requesting a pre-application conference with the local county planning department. This conference is intended to help local officials to learn about the developer’s intentions, and for the developer to understand the state and local rules and procedures that will apply to the proposed project. State agencies, such as the Oregon Department of Fish & Wildlife (ODFW) or the Oregon Department of State Lands (DSL), that are likely to be involved in the review of the project are often invited to participate. One outcome of the meeting should be a determination of whether an exception to statewide planning goals will be required. If an exception to the statewide planning goals would be needed, the resulting permitting process will be lengthier and more complex.

published and reviewed at the public hearing. The reviewing body may be a hearings officer, or it could be the County Commissioners. Regardless of the make-up of the hearing body, the public – as well as reviewing agencies – will be invited to provide their comments on the proposal, either by submitting them in writing before the hearing, or in person at the hearing. In some cases, interested parties may choose to do both, especially if they have concerns about a proposed project that they want to encourage the county to address.



After hearing comments, the hearing body will render a decision based on the applicable county codes. The written decision may also be followed by a final order which includes any conditions that must be met by the applicant in order to proceed: for example, they may need to observe a noxious weed control plan, erosion control plan, and wildlife monitoring plan, as part of the conditions of their land use approval.

Regardless of whether the decision is rendered via an Administrative Decision or through a Public Hearing, the decision is still subject to a potential appeal made to the county elected officials. The first option is a request the county reconsider their decision; this would usually be based on the belief that an administrative error had been made, or perhaps that there was an error in either the application materials or the subsequent review. Statute requires that the county must allow parties a minimum of 7 days to file an appeal after the decision is delivered, and the actual length of time allowed should be specified in the county's ordinances.⁶ The county is still constrained to make a decision, including resolution of the appeal, within the 150-day time limit from when the application was deemed complete unless an extension of time is granted.⁷

⁶ ORS 215.422(1)(a)

⁷ ORS 215.427(1)

Once the final local decision is made by the county elected officials a party with standing, including the applicant, is entitled to file a challenge to the Land Use Board of Appeals (LUBA).⁸ An appeal to LUBA must be filed within 21 days of the final local decision.⁹ Although uncommon, it is also possible to appeal a LUBA decision, which is considered by the Court of Appeals.¹⁰

Conditional Use with Goal Exception

If a proposed project might be in conflict with statewide planning goals, the process will also include evaluation of a potential goal exception. Statewide planning goals 3 and 4 are the most likely candidates for a goal exception due to the acreage thresholds in the applicable administrative rules.

The process would begin in an identical fashion as described above, but there are additional steps necessary for application review and approval. The goal exception process is not subject to the 150-day time clock and also precludes the possibility of an administrative decision; public hearings are required for a potential goal exception to be approved.

In these instances, conditional use applications and exception proposals are often bundled together for purposes of efficiency. However, they remain separate and distinct. A conditional use application may not receive a local decision until and unless the exception has been approved.

Generating Capacity, Defined

Oregon Revised Statutes (ORS) Chapter 469 use two different terms when referring to the generating capacity of a facility:

- 1) Nominal Generating Capacity is defined as “the maximum net electric power output of an energy facility based on the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate.” (469.300(17))
- 2) Average Generating Capacity “means the peak generating capacity of the facility divided by one of the following factors: (a) For wind facilities, 3.00; (b) For geothermal energy facilities, 1.11; or (c) For all other energy facilities, 1.00.” (ORS 469.300(4))

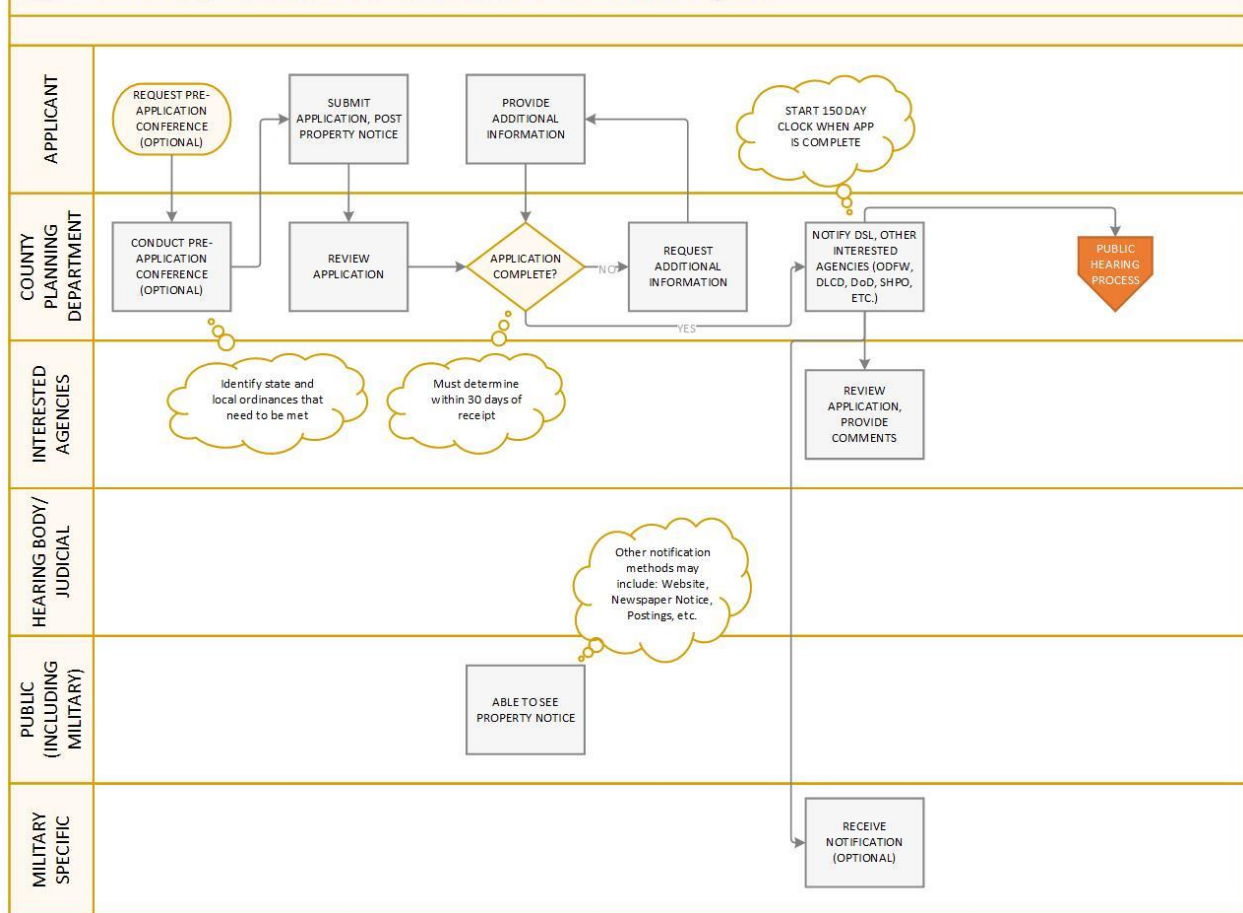
Jurisdictional thresholds within ORS are set based on nominal generating capacity for thermal, combustion turbine, solar thermal and nuclear power plants. Average generating capacity is used for wind and geothermal facilities. Solar PV facilities use land area and type instead of power for determining permitting thresholds.

⁸ ORS 215.422(2)

⁹ ORS 197.830; see statute for specific language and conditions regarding the 21-day clock

¹⁰ ORS 197.850(3)(a)

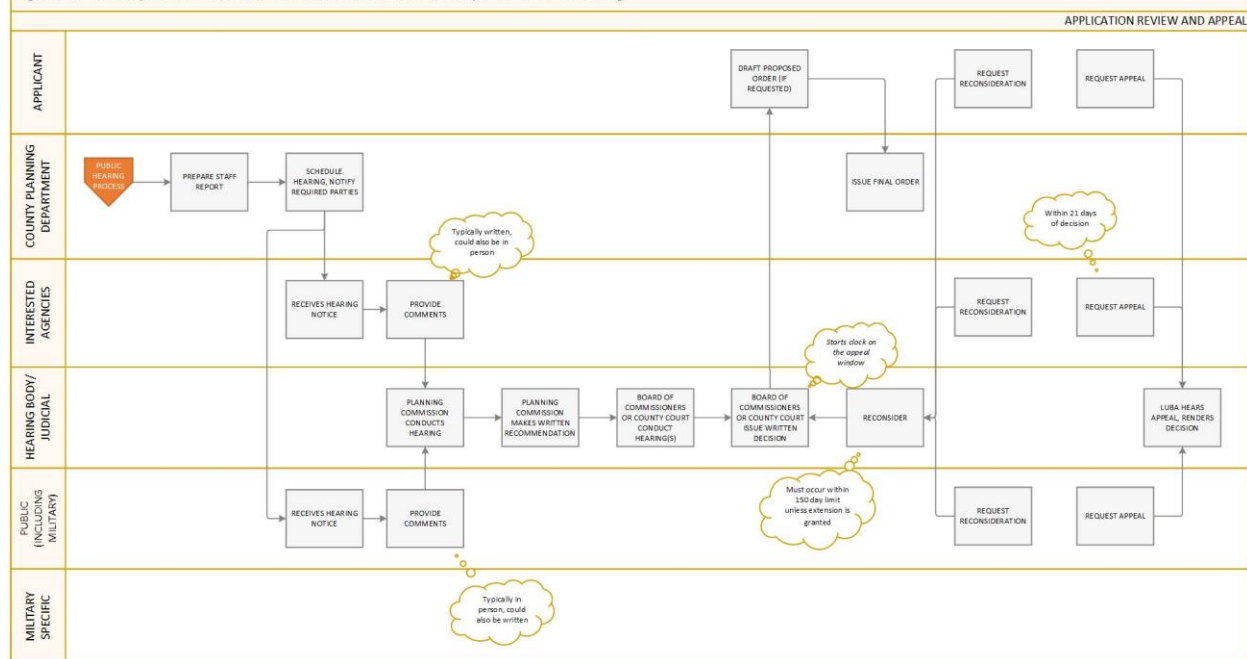
Figure 2a – County Conditional Use Permit Process with Goal Exception



The steps described here may vary slightly depending upon how the particular County government is organized, but a typical process would begin with the Planning Commission holding an evidentiary hearing on the proposed application and goal exception. At this time the public and any other interested parties – for example, Tribes, state agencies, or NGO’s – could provide testimony. Because an exception involves a comprehensive plan amendment the final local decision must be made by the county elected officials. Upon completing their public hearing process the Planning Commission would make a written recommendation and submit it for consideration by the County Board of Commissioners.¹¹ Should the Planning Commission recommend the exception be approved they may be inclined to make a tentative decision to approve the conditional use application. The tentative decision would then become operative, or not, based on the action taken by the County Commissioners regarding the exception.

¹¹ Most counties operate with a Board of Commissioners, but a few still retain the County Court structure with a Judge and two commissioners.

Figure 2b – County Conditional Use Permit Process with Goal Exception – Public Hearing



After the Planning Commission has forwarded a recommendation the Board of Commissioners would then conduct their own public hearing – possibly more than one – to review the proposed goal exception. Their final action is to issue a written decision, usually in the form of a local ordinance, which starts the clock on the appeal window.

Agrivoltaics

Developing renewable energy projects in conjunction with agricultural activities is sometimes called “agrivoltaics”. LCDRC’s solar rules have defined this situation as “Dual-use development” (see OAR 660-033-0130(38)(c)). Dual-use development means developing the same area of land for both a photovoltaic solar power generation facility and for farm use.

Normally solar developments on high-value farmland are limited to 12 acres; however, LCDRC’s solar rules include a carve-out that would allow counties to adopt dual-use provisions that could reward developers with a larger project size of up to 20 acres during a conditional use proceeding (OAR 660-033-0130(38)(g)(B)). This provision is set to expire January 1, 2022 unless action is taken to renew or extend it.

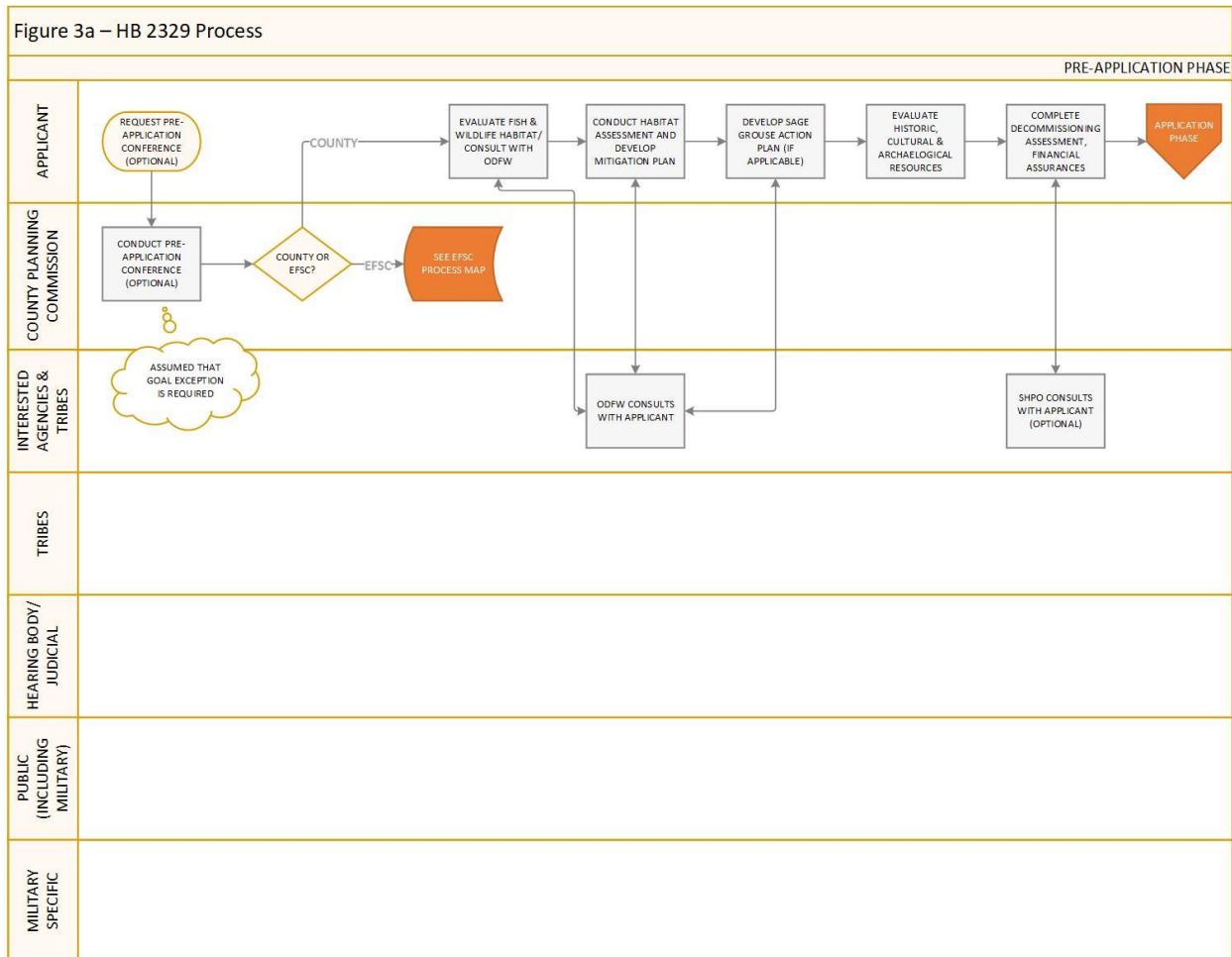
HB 2329 (2019)

During the 2019 legislative session, Oregon passed House Bill 2329. This bill, which went into effect on January 1, 2020, made two major changes to the permitting of renewable energy projects:

- 1) Provided developers the option to seek approval at the County level for many projects that previously would have required review by EFSC; and,
- 2) Required larger projects that are reviewed at the County level to incorporate some of the review criteria that are part of the EFSC process.

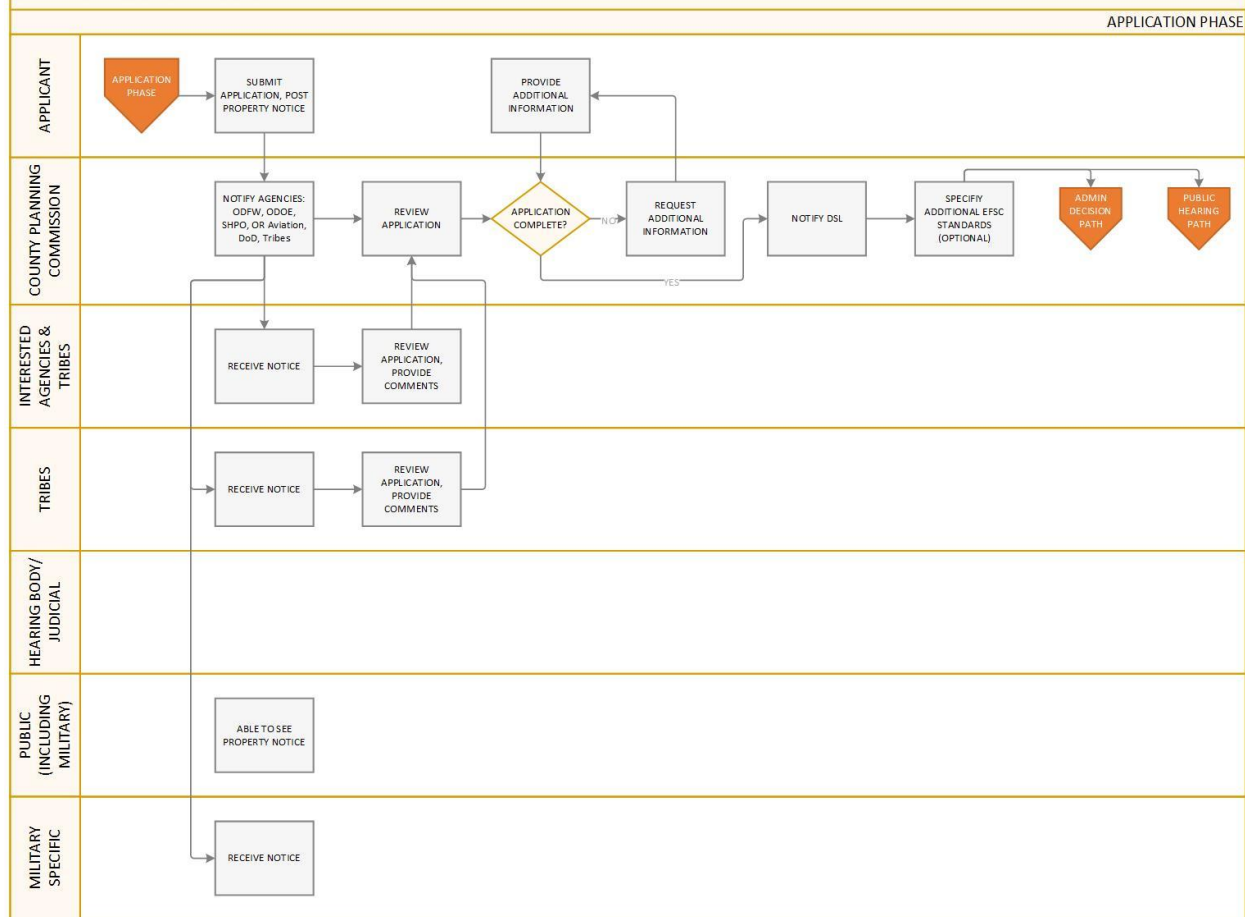
It is also noteworthy in the context of this report that projects electing to use the HB 2329 County process require notification to the Department of Defense. This is currently the only place in Oregon's statutes that requires DoD notification of a potential renewable energy project.

Table 1 includes the jurisdictional thresholds for renewable energy projects that fall under HB 2329. For example, if a potential developer is interested in building a new wind energy facility in Oregon that is under 150 MW of peak generating capacity, they now have the option to apply for land use approval with the County following the process outlined in ORS 215.446 (see Figures 3a, 3b and 3c). Note that the developer, or the county in consultation with the developer, does have the option to defer authority to EFSC if they choose.¹²



¹² ORS 469.320(8)(a)

Figure 3b – HB 2329 Process



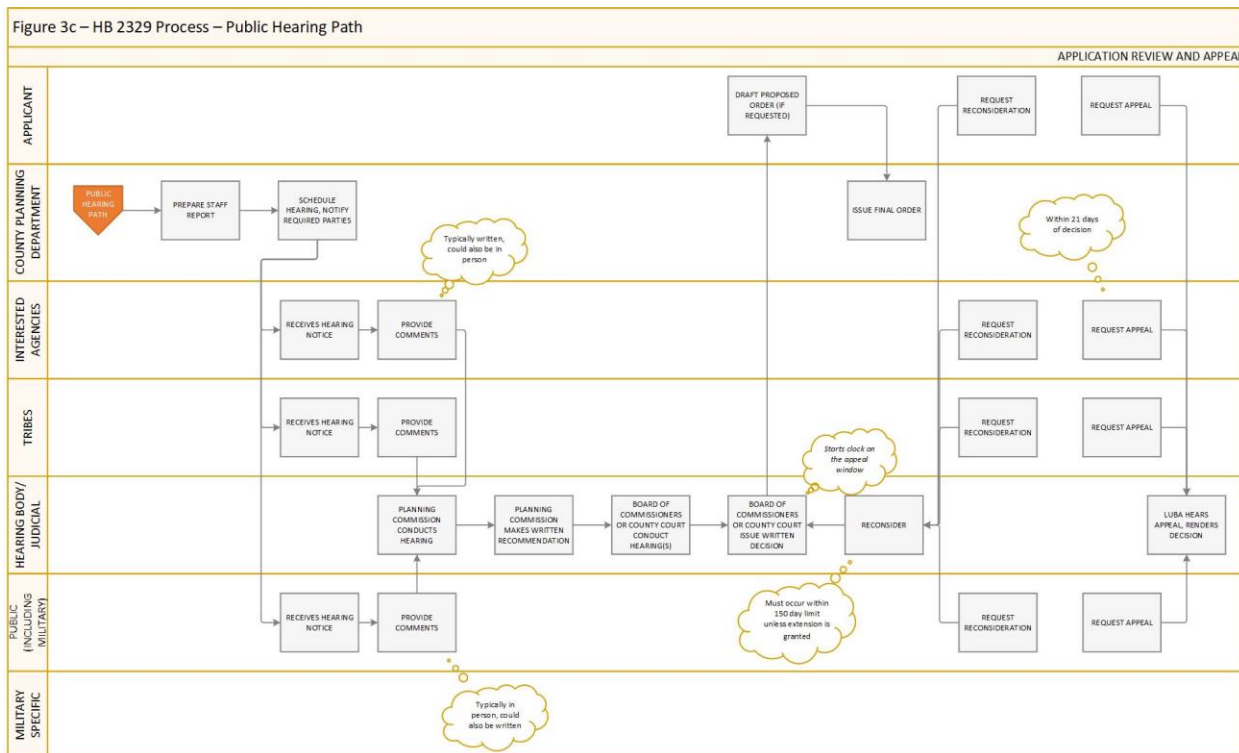
There are several ways in which the new process required by HB 2329 differs from previous requirements for a county process. The county must require the developer to:

- Consult with ODFW, conduct a habitat assessment of the proposed site, and develop a habitat mitigation plan.
- Follow the Oregon Sage-Grouse Action Plan and Executive Order 15-18, if applicable.
- Evaluate the potential impacts to historic, cultural and archaeological resources.
- Provide financial assurances that the site can be restored to a useful, nonhazardous condition when it ceases operations.

Once the application is submitted, the county is also compelled to notify a number of entities:

- ODFW
- ODOE
- SHPO
- Oregon Department of Aviation
- U.S. Department of Defense
- Federally recognized tribes that may be impacted

Similar to other projects, a goal exception may or may not be required depending on the location. If a goal exception is required, at least one public hearing will be necessary. Even if a goal exception is not required, it is unlikely that the County would choose to follow the administrative decision path for the evaluation of a larger renewable energy facility, but Oregon statutes do not preclude this possibility. In this case, it is possible to process the application without a public hearing so long as notice and an opportunity for a hearing is provided to adjacent and nearby landowners.



Best Practices

Notice to DoD. HB 2329 codified in statute at ORS 215.446 requires notification to the United States Department of Defense when an application for a new renewable energy facility is submitted to a county for consideration. Please see ORS 215.446(6)(e). This is a best practice designed to ensure that DoD is aware of any new renewable energy projects that could impact military training, testing and operations. Some counties choose to notify DoD of all renewable energy projects.

Pre-application Conference. While not required as a matter of state law, holding a pre-application conference is a best practice to ensure that there is good communication from the project's inception between local government entities and the developer. This type of meeting is also an opportunity for the Planning Department to identify exactly which state and local ordinances are applicable to the project. Finally, if an exception to state planning goals is required, it would most likely be identified at this time.

Section 2A: State Process Review

Overview

Certain energy projects in Oregon must receive permits from the State of Oregon. Most large energy projects subject to state jurisdiction are permitted through the Energy Facility Siting Council (EFSC), whose approval process is described in detail below. EFSC jurisdiction, however, does not include hydropower or energy projects located in Oregon's territorial sea. Hydropower projects, including pumped-storage hydropower projects, are subject to permitting through the Oregon Water Resources Commission, Oregon Water Resources Department, and the Federal Energy Regulatory Commission (FERC). Energy projects proposed in Oregon's territorial sea are subject to permitting processes at multiple agencies including the Oregon Department of State Lands (DSL) and the Oregon Department of Land Conservation and Development (DLCD).

Some transmission projects also fall within EFSC's jurisdiction. Unless they qualify for an exclusion, lines over 10 miles in length with a capacity of 230 kV or more to be constructed in more than one city or county require a site certificate from EFSC.¹³

It is important to note that certain energy projects may also require specific permits from multiple state agencies. For example, natural gas power plants are typically subject to EFSC jurisdiction for siting permits and would also be subject to Oregon Department of Environmental Quality (DEQ) jurisdiction for air quality permits. A list of the permits typically required from reviewing agencies can be found in Appendix II.

Energy Facility Siting Council (EFSC) Process

In the State of Oregon, the authority to oversee the development of large-scale energy projects is delegated to the Energy Facility Siting Council. This seven-member body, whose members are appointed by the Governor and confirmed by the Oregon Senate, issues "site certificates" for large electric generating facilities, high voltage transmission lines, gas pipelines, radioactive waste disposal sites, and other projects.

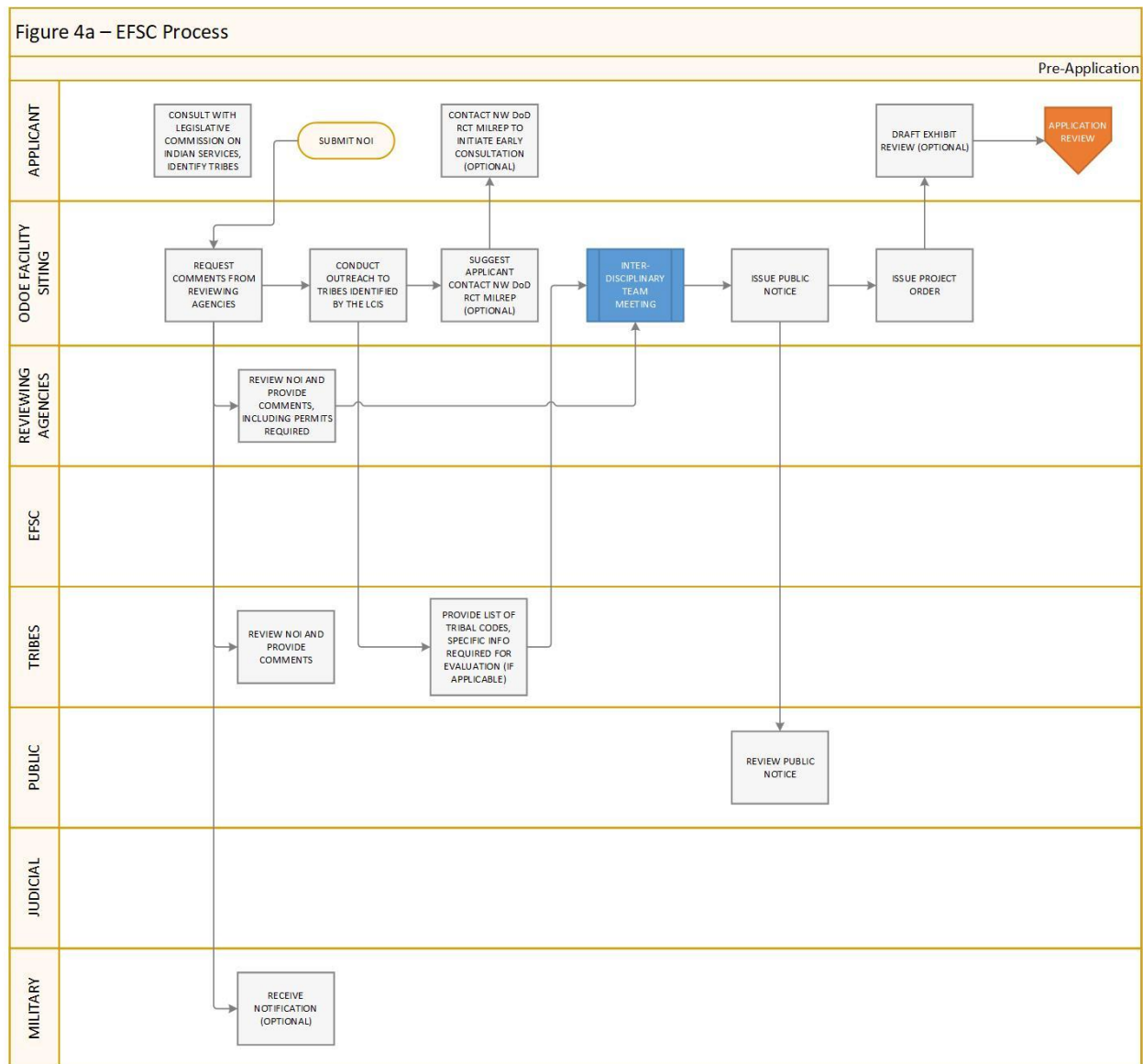
The process employed by EFSC to issue a site certificate is shown in Figure 4. The process begins with an applicant submitting a Notice of Intent (NOI) to the Oregon Department of Energy's Facility Siting group. The NOI will include the basic facts about the proposed project, including the type of facility, size, location, and footprint. While the NOI is typically scant on certain details, it is nevertheless provided to reviewing agencies with a request for review and comments. Simultaneously, a public notice is issued, with a formal comment period for the general public to provide their initial input on the proposal.

Battery Storage

As more of our electric generating capacity moves to renewable energy sources, there is a need for additional battery storage to offset the inherent variability associated with most renewable generation. It is worth noting that the most common type of storage project – battery storage – is not regulated by EFSC or FERC. Battery storage projects in Oregon are permitted exclusively at the County level; however, if battery storage is included in an application for site certificate to EFSC as a related and supporting facility to a renewable energy project, its impacts will be evaluated along with other components of the project.

¹³ {1} ORS 469.300(11)(a)(C)

Property owners within up to 500 feet of the project area must also be notified.¹⁴ At this point, while not required by statute or rule, it is customary for ODOE to contact the DoD NW RCT military representative to notify them that a new project has been proposed.



Oregon statutes require that EFSC “designate as a special advisory group the governing body of any local government within whose jurisdiction the facility is proposed to be located.”¹⁵ Special advisory groups (SAG’s) ensure that local governments are fully aware of the details surrounding projects being reviewed by EFSC, and also provide expert knowledge and input regarding the applicable land use standards, should the applicant choose to obtain land use approval through EFSC.

After the NOI has been reviewed and comments from reviewing agencies and others have been considered, ODOE will issue a Project Order. This document establishes the state and local standards or

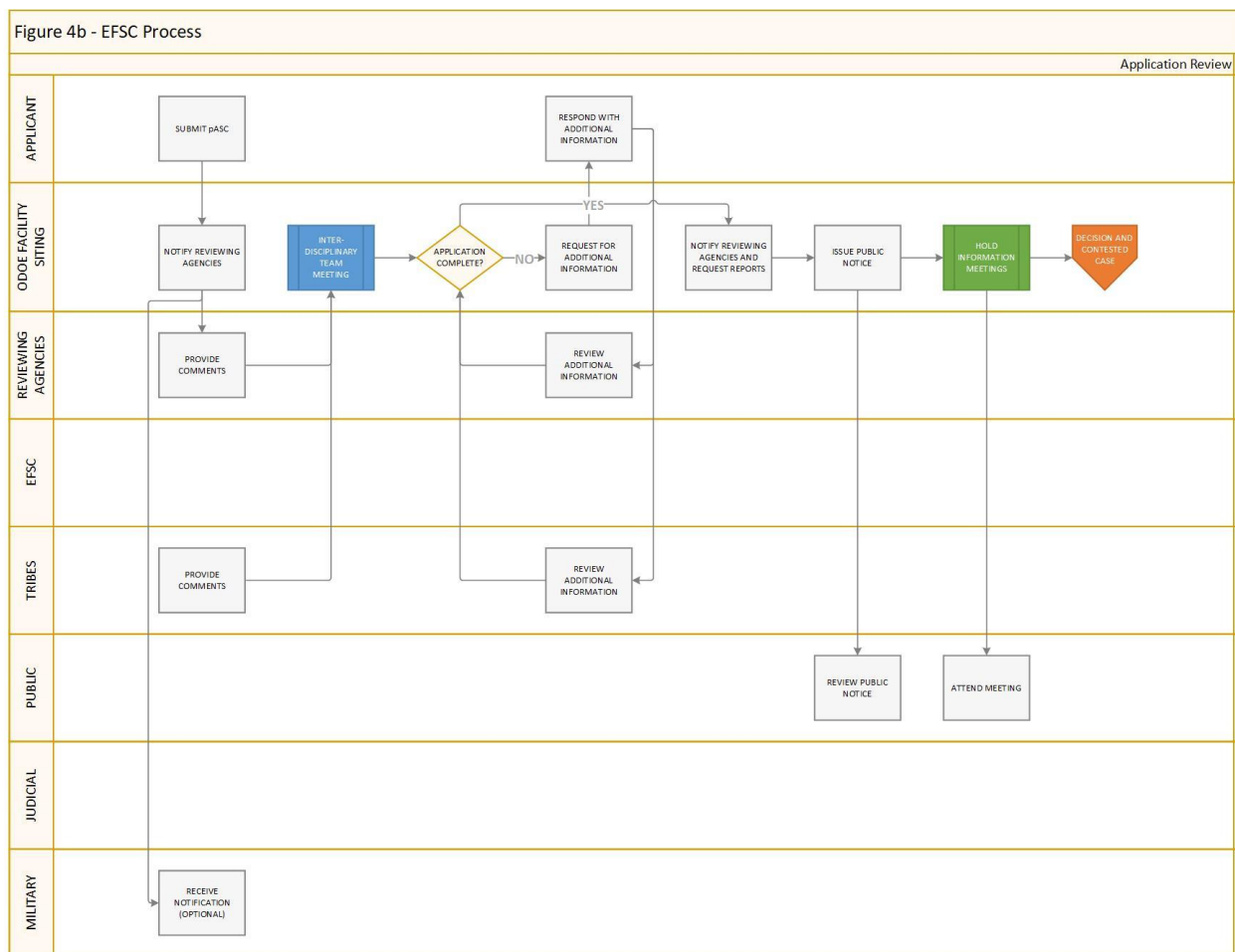
¹⁴ See OAR 345-020-0011 for property owner notification requirements

¹⁵ ORS 469.480(1)

criteria which must be met for EFSC to issue a site certificate. It provides important guidance to the applicant on the information, studies, etc., that must be included in the application for it to be considered complete.

The next step is for the applicant to submit a preliminary Application for Site Certificate (pASC). The pASC must contain all of the information required in the full Application for Site Certificate (ASC). The purpose of the pASC is to provide ODOE with the opportunity to first evaluate the application for completeness, before proceeding to determine if it meets the Council's standards. It is typical at this stage for ODOE to issue one or more Requests for Additional Information (RAI's). Once the application requirements have been satisfied, ODOE will provide notification of completeness to the applicant, and the applicant may file a complete ASC.

The pASC also includes one very important choice by the developer: whether they wish to obtain land use approval through local authorities, or through EFSC. This choice is irrevocable once the application has been submitted.¹⁶

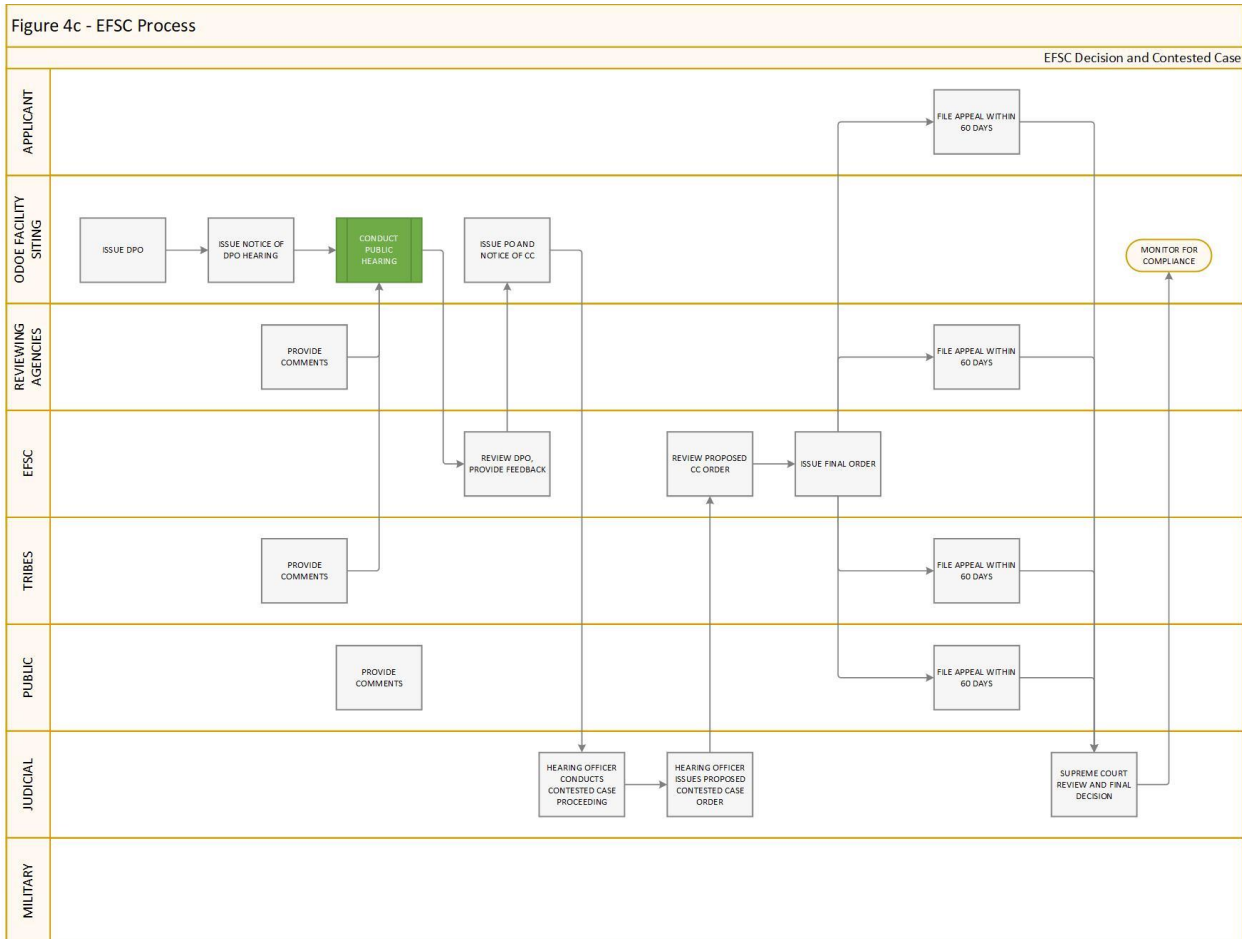


With submission of the ASC comes another opportunity for reviewing agencies, the military, and members of the public to comment on the proposed project. DoD will assess potential adverse impacts

¹⁶ OAR 345-021-0010(1)(k)

to military operations. If potential adverse impacts are identified, DoD will advise ODOE of any concerns so that they can be addressed during the application review process.

After reviewing the application and considering all of the comments, ODOE staff will prepare a Draft Proposed Order (DPO). The DPO will include an evaluation and initial recommendation to EFSC of whether the application meets applicable standards, and conditions that should be applied if the facility is to be granted a site certificate. EFSC then conducts a public hearing to solicit testimony on the DPO. Providing comments related to Council standards during the DPO hearing comment timeframe is necessary for someone to later challenge staff's recommendations as well as EFSC's decision.



After the close of the public record on the Draft Proposed Order the Energy Facility Siting Council reviews the staff recommendations in the Draft Proposed Order and all of the submitted comments and provides their comments to ODOE. Taking into consideration all of the public comments as well as those of EFSC, ODOE issues a Proposed Order which is the second recommendation to EFSC on whether the application meets applicable standards, and conditions that should be applied if the facility is to be granted a site certificate. At the same time, it is automatic that a Notice of Contested Case is issued. The Contested Case proceeding is an administrative judicial process presided over by a hearing officer; however, the hearing officer is not a decision maker on the application or the issues presented. Only those who raised issues during the Draft Proposed Order public comment timeframe are eligible to request those same issues be evaluated as part of the Contested Case proceeding. At the conclusion of

the Contested Case proceeding, the hearing officer will make a recommendation to EFSC on the issues raised in the form of a Contested Case order. Parties to the Contested Case may also file exceptions to the Contested Case order. EFSC will evaluate the Contested Case order and any exceptions filed and decide whether to adopt, modify, or reject it.

Following the conclusion of the Contested Case, and assuming that EFSC finds that the facility complies with all applicable standards, the Council will issue a Final Order and the Site Certificate. The Site Certificate is a binding agreement between the State of Oregon and the applicant to construct, operate, and eventually retire the facility, subject to the conditions found in the certificate. It is not uncommon for a site certificate to contain 100 conditions or more, pertaining to the various standards which were used to evaluate the application. For example, a site certificate for a wind power facility will invariably include a condition to monitor avian mortality rates in the surrounding area which must be periodically reviewed by ODOE and ODFW.

Once EFSC has made the decision to issue a Site Certificate, parties to the Contested Case proceeding may file a petition for judicial review of any issues they raised in the Contested Case proceeding within 60 days of the date of the Final Order. Petitions for judicial review of EFSC decisions go directly to the Oregon Supreme Court.

State Territorial Sea

Offshore¹⁷ projects, whether they are powered by wind or wave, will fall into one of two jurisdictions:

- 1) State Waters: The Oregon Department of State Lands (DSL) has authority over projects within the waters of the state, which means within three nautical miles of the coast, if they are anchored to the seafloor.¹⁸
- 2) Federal Waters: The Department of the Interior's Bureau of Ocean Energy Management (BOEM), sometimes in combination with FERC, oversees projects outside of the three-mile limit, up to 200 miles from the U.S. coast. See section 2B of this report for further information.

This section will discuss the processes for permitting projects within the state's jurisdiction.

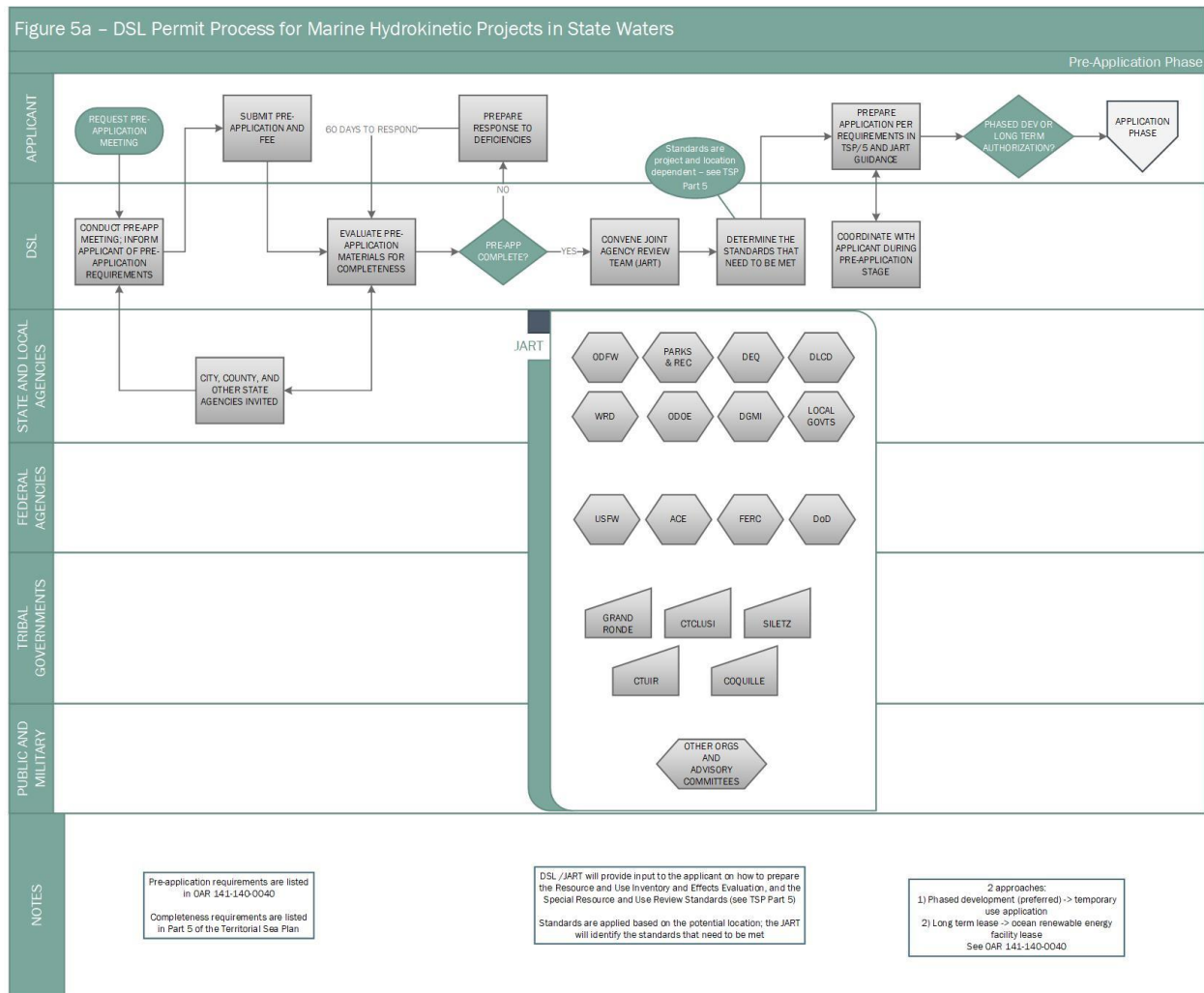
Figures 5a and 5b depict the process for obtaining a permit from DSL for a marine hydrokinetic project.¹⁹ While the focus of this process map is wave power, in principle the same process would also apply to a wind project.

¹⁷ Technically speaking, 3 nautical miles seaward of the state boundary (on the West Coast) is referred to as "offshore". This is where the Outer Continental (OCS) shelf begins. For our purposes in this report, we use the term to include projects in the state's territorial sea in addition to those on the OCS.

¹⁸ This does not mean that FERC would not have a role to play in offshore projects in state waters. For marine hydrokinetic, a FERC license would still be required in addition to the applicable state permits.

¹⁹ Permits or authorizations from other agencies in addition to DSL will also be required.

Figure 5a – DSL Permit Process for Marine Hydrokinetic Projects in State Waters



The Territorial Sea Plan (TSP) establishes the framework for managing resources in the waters within three nautical miles of the Oregon coast. Part V of the TSP specifically addresses the development of renewable energy facilities off the Oregon coast and charges DSL with coordinating the review of applications for renewable energy facilities.

The cornerstone of this review is the Joint Agency Review Team (JART). The JART is intended to serve as the vehicle to consolidate input from all key stakeholders, including:

- State and local government: ODFW, DEQ, DLCD, WRD, ODOE, DGMI, Parks and Recreation, and local government representatives
- Federal agencies: USFW, ACE, FERC, DoD
- Oregon's federal recognized coastal tribes: Grande Ronde, CTCLUSI, Siletz, CTUIR, Coquille
- Other interested organizations and advisory committees

It is worth noting that DoD's participation is not specifically included in the TSP. It is spelled out in a separate guidance memo that was issued in August 2019 that directs DSL staff to invite DoD to participate in all JARTs.²⁰

Prior to formation of the JART, the applicant is required to complete a pre-application and remit a small fee.²¹ Once the pre-application requirements have been met, the JART is convened and determines what standards will need to be met. The applicant may then proceed to prepare their full project application.

TSP Part V requires a developer to address cumulative effects of a project, including the shoreland component, when submitting their application. As most offshore renewable energy technologies are still in their infancy, it can be a difficult hurdle to supply the required data to satisfy the requirements of the standard. To address this, TSP Part V offers some alternative project approaches:

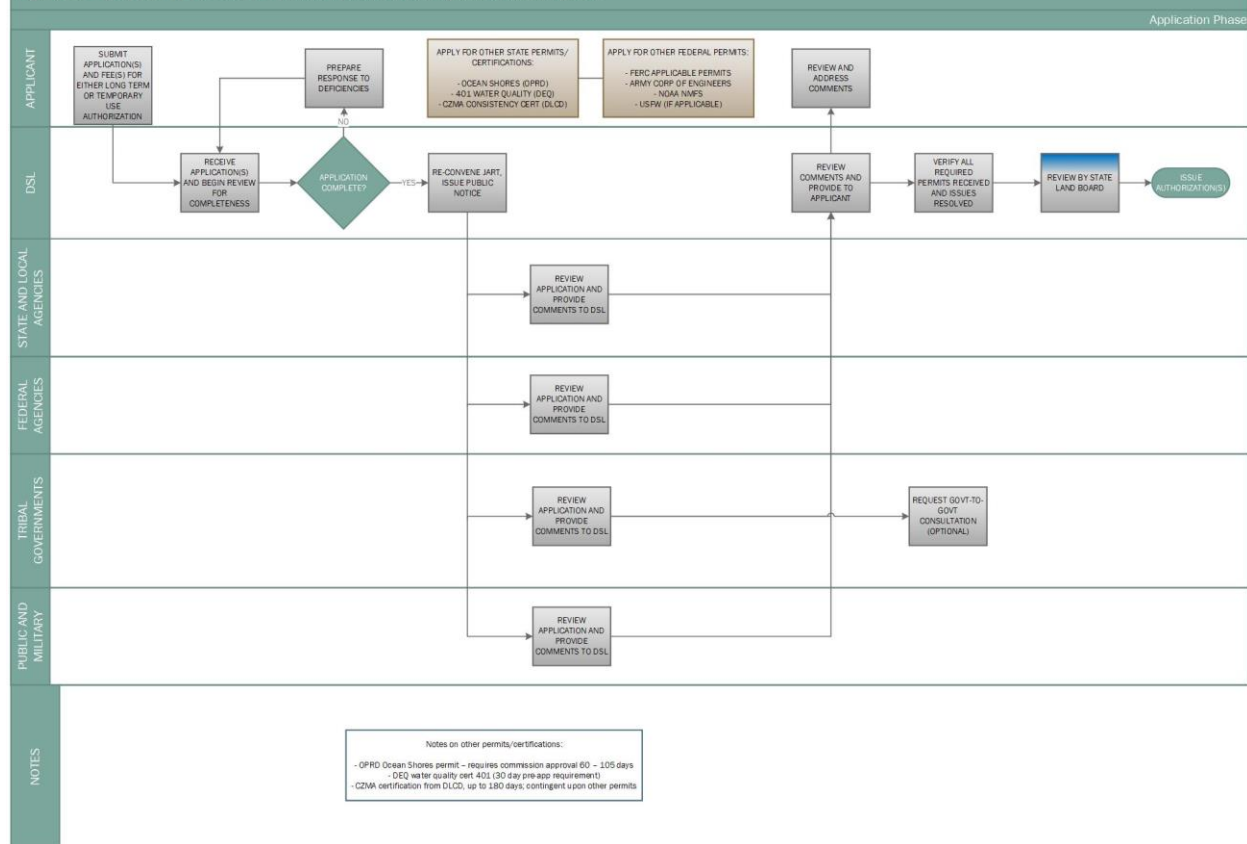
- 1) Pilot Projects, whose purpose is to provide information on the performance, structural integrity, design and environmental effects of a technology. They are typically constructed in a way that they can be shut down or removed when the pilot is complete and are not located in sensitive areas.
- 2) Phased Developments, which are initially limited in scale. They provide an opportunity to obtain information and data on each phase before expanding to a broader area. In some cases, this may be the only way to obtain the necessary data to study the effects of a development.

After the applicant submits their full application, DSL will review it for completeness. Once complete, DSL reconvenes the JART to initiate the application review and a public notice is issued.

²⁰ DSL memorandum, "RE: Siting of Ocean Renewable Energy Facilities in the Territorial Sea. Implementing Part 5 of the Territorial Sea Plan – JART Composition", August 13, 2019.

²¹ Pre-application requirements can be found in OAR 141-140-0040

Figure 5b – DSL Permit Process for Marine Hydrokinetic Projects in State Waters



Ultimately, the full application and comments received will be reviewed by the State Land Board, who will issue the required authorizations when all requirements have been met. The applicant must apply for and receive any other state and federal permits or certifications that are required. This list may include:

- 1) State
 - Ocean shores (OPRD)
 - 401 Water Quality Certification (DEQ)
 - CZMA Consistency Certification (DLCD)
- 2) Federal
 - Army Corps of Engineers
 - NOAA NMFS
 - USFW
 - FERC applicable permits

The State Land Board consists of the Governor, Secretary of State and State Treasurer. Their final decisions may be appealed, but the process will depend upon the rule under which the decision is made. In most cases, the appeal will be via a contested case process under the Oregon Administrative Procedures Act (APA). If the decision is not covered by a rule, the State Land Board usually states what the appeals process is in the decision notice. That could either be a contested case or in an “other than contested case” process, the appeal would be to a circuit court. In the absence of direction by rule or

the decision notice, the default is the other than contested case process via circuit court, which is defined in the APA.

Best Practices

Early notification to the military reduces the likelihood of adverse impacts and possible delays to the project due to conflicts with DoD's mission. With that in mind, a potential best practice would be to formalize the notification requirement to DoD that typically occurs when a new project is presented to EFSC. This could be done through a policy directive from EFSC to ODOE staff to notify DoD of new renewable energy projects as soon as credible information on the project is available.

Section 2B: Federal Process Review

Overview

The Federal Energy Regulatory Commission (FERC), through Part I of the Federal Power Act, has authority over hydroelectric facilities on navigable waters of the United States. This authority includes marine hydrokinetic projects, which are defined as facilities which "generate electricity from waves or directly from the flow of water in ocean currents, tides, or inland waterways without the need for a dam."²² The Bureau of Ocean Energy Management (BOEM) manages the development of U.S. Outer Continental Shelf (OCS) energy and mineral resources.

The processes used to permit hydroelectric, marine hydrokinetic, and other projects under federal jurisdiction can be very complex. This section provides an overview of FERC and BOEM's authority for these projects and provides links to additional resources that contain more detailed information.

FERC

FERC's default process for the licensing of hydropower facilities is the Integrated Licensing Process (ILP). In addition to the ILP, there are two other options that an applicant may use: the Traditional Licensing Process (TLP) or the Alternative Licensing Process (ALP). All three processes are discussed in detail on

²² "FERC Regulatory Perspective" presentation, BOEM Offshore Renewable Energy Workshop, July 29-30, 2014, slide 5.

Pumped Hydropower

As part of its authority over projects in the navigable waters of the United States, FERC controls the licenses for pumped hydropower projects. While there are currently no pumped hydro facilities operating in the State of Oregon as of this writing, there are several projects that have been proposed.

- The Swan Lake North Pumped Storage Project in Klamath County is the furthest along of any pumped hydro project in the state. FERC issued an original license for the 393 MW project on April 28, 2019, and the developer is actively working to fulfill its pre-construction requirements. The current deadline for project completion is April 30, 2026.
- The Goldendale Energy Storage Project would be located in Klickitat County, Washington, at the John Day Dam on the Columbia river. Approximately 12% of the 649 acres within the project boundary are in the BPA-Oregon right of way. FERC is currently evaluating the final license application for this 1200 MW project.
- The 600 MW Owyhee Pumped Storage project would be located adjacent to Lake Owyhee, 11 miles southwest of Adrian. As of this writing, no application has been submitted to FERC for the project.

FERC's website.²³ FERC also provides additional guidance for the licensing of specific technologies, such as marine hydrokinetic²⁴, pumped hydropower storage²⁵, and small hydropower²⁶ projects.

FERC is not usually involved in the licensing of transmission lines. The Energy Policy Act of 2005 gave FERC federal backstop authority for certain electric transmission facilities²⁷, but this authority is limited in scope and rarely, if ever, used.

FAST-41

On December 4, 2015, the Fixing America's Surface Transportation (FAST) Act was signed into law. Title 41 of the Act quickly became known as FAST-41 and is the moniker for a new process that can be used to provide enhanced coordination, accountability, and tracking of infrastructure projects.²⁸

Included under the umbrella of FAST-41 are renewable energy and electricity transmission projects. If a project qualifies, one of the benefits is an online permitting dashboard that will display the status of each federal permit with a timeline for completion. A lead agency is also designated for all FAST-41 projects to provide coordination and oversight.

The Boardman to Hemingway Transmission Line is an example of a FAST-41 project. The status of the project and each applicable federal permit can be viewed at the online dashboard.²⁹

Outer Continental Shelf Offshore Oregon

As described above, within approximately three nautical miles of shore, the State of Oregon has regulatory authority for renewable energy projects. Beyond this three-mile limit lies the Outer Continental Shelf (OCS) where development is regulated by the federal government (see Table 2).

²³ <https://www.ferc.gov/industries-data/hydropower/licensing/licensing-processes>

²⁴ <https://www.ferc.gov/licensing/hydrokinetic-projects>

²⁵ <https://www.ferc.gov/industries-data/hydropower/licensing/pumped-storage-projects>

²⁶ <https://www.ferc.gov/licensing/small-low-impact-hydropower-projects>

²⁷ "Coordinating Interstate Electric Transmission Siting: An Introduction to the Debate", The National Council on Electric Policy, pg. 5

²⁸ https://www.permits.performance.gov/sites/permits.dot.gov/files/2020-05/FAST_41_FS_20200325.pdf

²⁹ <https://www.permits.performance.gov/permitting-projects/boardman-hemingway-transmission-line>

Table 2 – Jurisdictional Thresholds for Offshore Renewable Energy Projects

	OWRD	DSL	FERC	BOEM
Wind	N/A	In the territorial sea	N/A	On the outer continental shelf
Wave (Marine Hydrokinetic)	N/A	In the territorial sea	Licenses for all projects: in waters of the state, the territorial sea and the outer continental shelf	Leases for developments on the outer continental shelf
Solar	N/A	N/A	N/A	On the outer continental shelf
Hydroelectric	In waters of the state	N/A	All projects	N/A
Pumped Hydroelectric	N/A	N/A	All projects	N/A

On April 9, 2009, the Chairman of the Federal Energy Regulatory Commission (FERC) and the Secretary of the Department of the Interior (DOI) signed a Memorandum of Understanding (MOU) that clarified the responsibilities of each department with respect to renewable energy projects on the Outer Continental Shelf (OCS)³⁰. This memo committed both agencies to the following agreements:

- 1) DOI would have exclusive jurisdiction over all wind and solar developments on the OCS. The MOU specified that this would be through its Minerals Management Service (MMS), but the MMS was later dissolved and the authority was delegated to the Bureau of Ocean Energy Management (BOEM).
- 2) BOEM³¹ would issue all leases, easements, and rights of way for marine hydrokinetic projects on the OCS. BOEM would also conduct any NEPA reviews related to those actions.
- 3) FERC would issue licenses for marine hydrokinetic projects on the OCS. They are also responsible for NEPA reviews for the construction and operation of those facilities.

In the years following the original MOU, FERC and BOEM issued several guidance documents to explain the process of obtaining permits for renewable energy projects on the OCS. The first such document was issued by FERC and MMS on August 4, 2009; the second was issued by FERC and BOEM on July 19, 2012; and the most recent version (as of this writing) was issued on May 27, 2020³². This most recent version replaces the guidance provided in the prior versions.

³⁰ "Memorandum of Understanding Between the U.S. Department of the Interior and the Federal Energy Regulatory Commission," April 9, 2009.

³¹ In the original memo, this was DOI's MMS.

³² "BOEM/FERC Guidelines on the Regulation of marine Hydrokinetic Energy Projects on the OCS", Version 3, May 27, 2020

Information on BOEM’s process for issuing leases for wind energy projects on the OCS can be found on their website,³³ as well as in several guidance documents that are available to the public.^{34 35}

BOEM and the State of Oregon are working together to coordinate the planning of renewable energy leasing and development activities on the OCS through the BOEM Oregon Intergovernmental Renewable Energy Task Force.³⁶ At the Task Force meeting held on June 4, 2020, a Data Gathering and Engagement Plan for Offshore Wind Energy in Oregon³⁷ was introduced. The purpose of the plan is “to gather data and information to inform potential offshore wind energy leasing decisions offshore Oregon”.³⁸

Although BOEM and FERC have jurisdiction over renewable energy projects on the OCS, there is a nexus to the State through the Coastal Zone Management Act (CZMA). Part Five of Oregon’s Territorial Sea Plan (TSP) contains the following statement:

“The Department of Land Conservation and Development will review federal decisions to permit, license, or otherwise authorize renewable energy facilities within the waters and seafloor of the outer continental shelf adjacent to the Oregon Territorial Sea that have reasonably foreseeable effects on coastal resources or uses for consistency with the Territorial Sea Plan and the applicable enforceable policies of the Oregon Coastal Management Program pursuant to NOAA’s CZMA federal consistency regulations at 15 CFR Part 930. Federal actions, including the issuance of any federal authorizations that are subject to Oregon CZMA review, shall be supported by the information required in NOAA’s regulations at either 15 CFR §§ 930.39, 930.58 or 930.76.”³⁹

It should be noted that there is one exception to BOEM and FERC’s authority over renewable energy projects on the OCS, and that is for Ocean Thermal Energy Conversion (OTEC) projects. NOAA is responsible for the licensing of OTEC facilities; however, since this technology is currently viewed as viable only in tropical seas, it is not relevant off the Oregon coast.

Aviation approvals through the FAA

The Federal Aviation Administration (FAA) requires hazard evaluations to be conducted for tall structures including wind turbines. All FAA requirements and processes should be reviewed directly at their website here: <https://oeaaa.faa.gov/oeaaa/external/portal.jsp>. A partial summary of FAA’s process is included in the Military section of this report under Formal Consultation.

³³ www.boem.gov/Oregon and <https://www.boem.gov/renewable-energy>

³⁴ <https://www.boem.gov/sites/default/files/oil-and-gas-energy-program/Leasing/Five-Year-Program/2019-2024/DPP/NP-Wind-Energy-Comm-Leasing-Process.pdf> and <https://www.boem.gov/Commercial-Leasing-Process-Fact-Sheet/>

³⁵ <https://www.boem.gov/KW-CG-Broch/>

³⁶ <https://www.boem.gov/regions/pacific-ocs-region/renewable-energy/oregon-intergovernmental-renewable-energy-task-force-0>

³⁷ <https://www.boem.gov/BOEM-OR-OSW-Engagement-Plan>

³⁸ “Data Gathering and Engagement Plan for Offshore Wind Energy in Oregon,” prepared by Kearns & West for BOEM/DLCD, October, 2020, pg. 6

³⁹ 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, page 5, section B.1.b.

Section 3: Military Procedures Review

Military Overview

The Oregon Military Department (OMD) was the first state agency created in Oregon. The department manages and trains the Oregon Army and Air National Guard and responds to the governor's orders during peacetime and during natural disasters. The Oregon Army and Air National Guard can be nationalized in support of federal orders, as directed by the U.S. president.

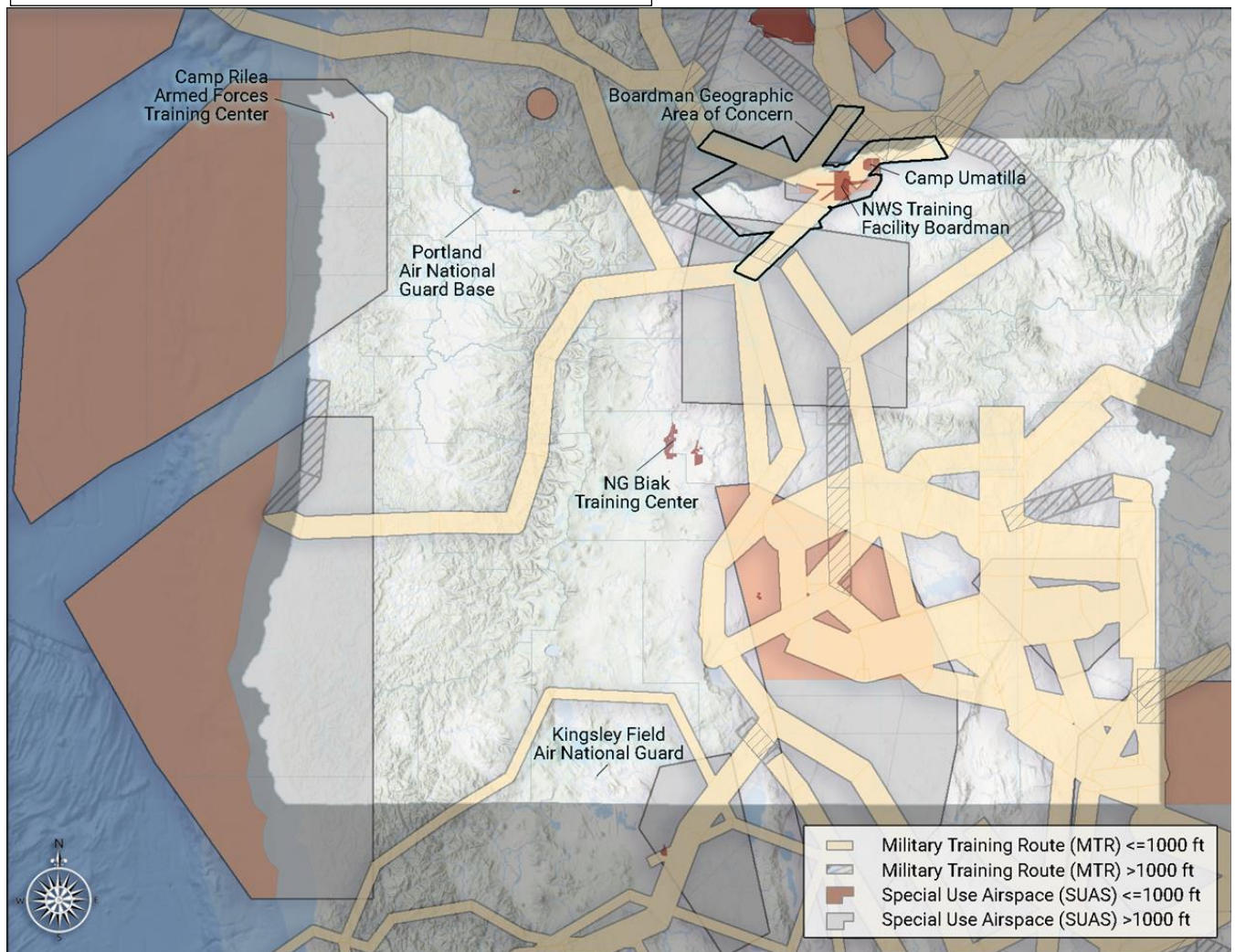
DoD installations and ranges in Oregon include:

- Kingsley Field Air National Guard Base in Klamath Falls;
- Portland Air National Guard Base;
- Camp Rilea Armed Forces Training Center in Warrenton;
- Camp Umatilla Training Center near Hermiston;
- Biak Training Center near Redmond;
- Najaf Training Center near Corvallis;
- Naval Weapons Systems Training Facility (NWSTF) Boardman; and
- The U.S. Navy Northwest Training Range Complex located onshore and offshore along the Oregon and Washington coast.

In addition to physical facilities, the military also makes considerable use of the airspace above Oregon. Military Operating Areas (MOAs) are airspaces designated outside of Class A airspace, to separate or segregate certain nonhazardous military activities from Instrument Flight Rules (IFR) traffic and to identify for Visual Flight Rules (VFR) traffic where these activities are conducted. MOAs are designated to contain nonhazardous, military flight activities including, but not limited to, air combat maneuvers, air intercepts, and low-altitude tactics training. Many MOAs extend from ground level up to a defined ceiling (often 60,000 feet above mean sea level [MSL]).

Military Training Routes (MTRs) were developed cooperatively by the FAA and the military for the purpose of conducting low-altitude, high speed training. The MTR program was established for flights below 10,000 Mean Sea Level (MSL) for operations more than 250 knots. Of the 28.4 million acres overlain by military airspace in Oregon, approximately 17.4 million acres (removing overlap) are designated as low-level training routes (i.e., military aircraft operating at altitudes of 1,000 feet AGL or lower).

Figure 6 – Military Land Assets and Airspace in Oregon



Construction and operation of renewable energy generation facilities and transmission infrastructure pose two main categories of conflict with the military mission: physical issues and electromagnetic (EM) spectrum interference. Physical issues arise when renewable energy facilities or infrastructure pose the potential for adverse impacts to military training, testing and operations.

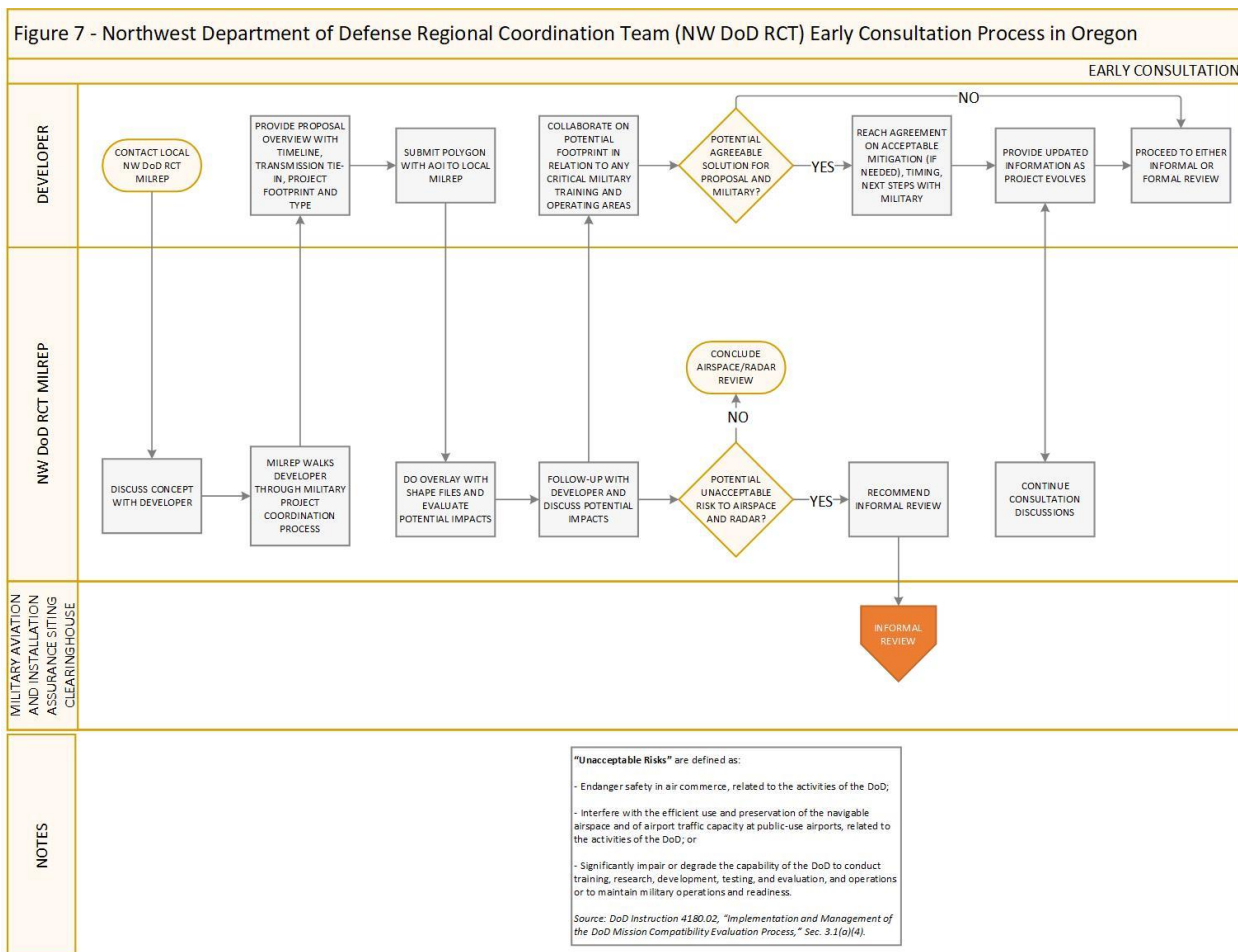
EM spectrum interference occurs whenever renewable energy projects disrupt military equipment that utilize radio frequency, infrared, or visual spectra. Such military equipment includes:

- Sensors including optical, telescoping sights, electro-optical imaging, threat warning, laser tracking, global positioning systems, and others;
- Weapons components such as missile guidance, fuzing, infrared passive guidance, high energy lasers, high-power microwave systems, electronic attack systems, and anti-radiation missiles; and
- Communications systems including data link, light signals, navigation lights, infrared beacons, voice communications, and other radio systems.

Early Coordination

Due to the potential for conflicts with the military's mission that are created by renewable energy development, the military seeks to establish contact with developers as early as possible. The Northwest Department of Defense Regional Coordination Team (NW DoD RCT) was established in May 2018 to facilitate discussions in support of compatibility of air, land and sea spaces with local, regional, state, and federal stakeholders. The goals of the NW DoD RCT include: coordinating the review of projects in and around military training, testing and operating areas; address local, regional, state, and federal challenges and initiatives; and to share information regarding current and future coordination opportunities.

The process established by the NW DoD RCT to engage with developers regarding renewable energy projects is known as Early Coordination (see Figure 7). Developers are asked to contact the NW DoD RCT military representative at the earliest stage when contemplating a new renewable energy or transmission project. The military representative will review the project coordination process with the developer with the goal of achieving a mutual understanding of how the project can co-exist with the military's mission.



Following the initial discussions and when ready, the developer is asked to provide a high-level overview of the proposed project which includes a polygon (map with GIS coordinates) of the project's area of

interest (AOI). The military representative will then coordinate an initial review to determine if there are potential conflicts with airspace, radar, or critical military training, testing or operating areas. There are several possible outcomes of the review and subsequent discussions:

- 1) The military may determine that there are unlikely to be any unacceptable risks as a result of the project. No further action is needed other than to stay in contact in case of changes as the project develops.
- 2) Potential risks are identified, and discussions begin regarding the types of impacts and potential ways to address them. As part of the discussions the developer and the military representative will also coordinate on the appropriate next steps, which may include informal consultation with the Military Aviation and Installation Assurance Siting Clearinghouse (Clearinghouse).
- 3) Potential unacceptable risks to airspace and/or radar are identified and appear to initially be unmitigable. In this case, the military representative will recommend that the developer engage in an informal review process with the Clearinghouse.

Note that Early Consultation does not replace, but rather precedes, other reviews, and in particular the FAA's OE/AAA review that is required for structures over 199 feet tall or near an airport. That process is described in further detail in the formal consultation section of this report.

Informal Consultation

The second type of DoD review is known as an informal consultation. This type of review may be recommended by the MILREP during the early coordination phase if initial findings suggest that there could be unacceptable risks to airspace or radar operations posed by a project. A project proponent also has the option of initiating an informal review

Is an OE/AAA Review Required?

If you plan to build a structure that exceeds 199 feet AGL, an OE/AAA review is always required. There are, however, other cases in which an OE/AAA review is necessary, depending upon location. The FAA's website, <https://oeaaa.faa.gov/oeaaa/external/portal.jsp>, can be very helpful in making this determination.

The website has a number of links on the left side of the page. One of those is a "Notice Criteria Tool". After entering a latitude and longitude, elevation and structure height, the tool will return results telling you the proximity to nearby areas of concern such as airport runways and advise you to file an FAA notice if required.

Another tool is the "DoD Preliminary Screening Tool" that allows the user to enter coordinates for either a single point or polygon. The tool will then return one of three results:

Green: No anticipated impact to Air Defense and Homeland Security radars.

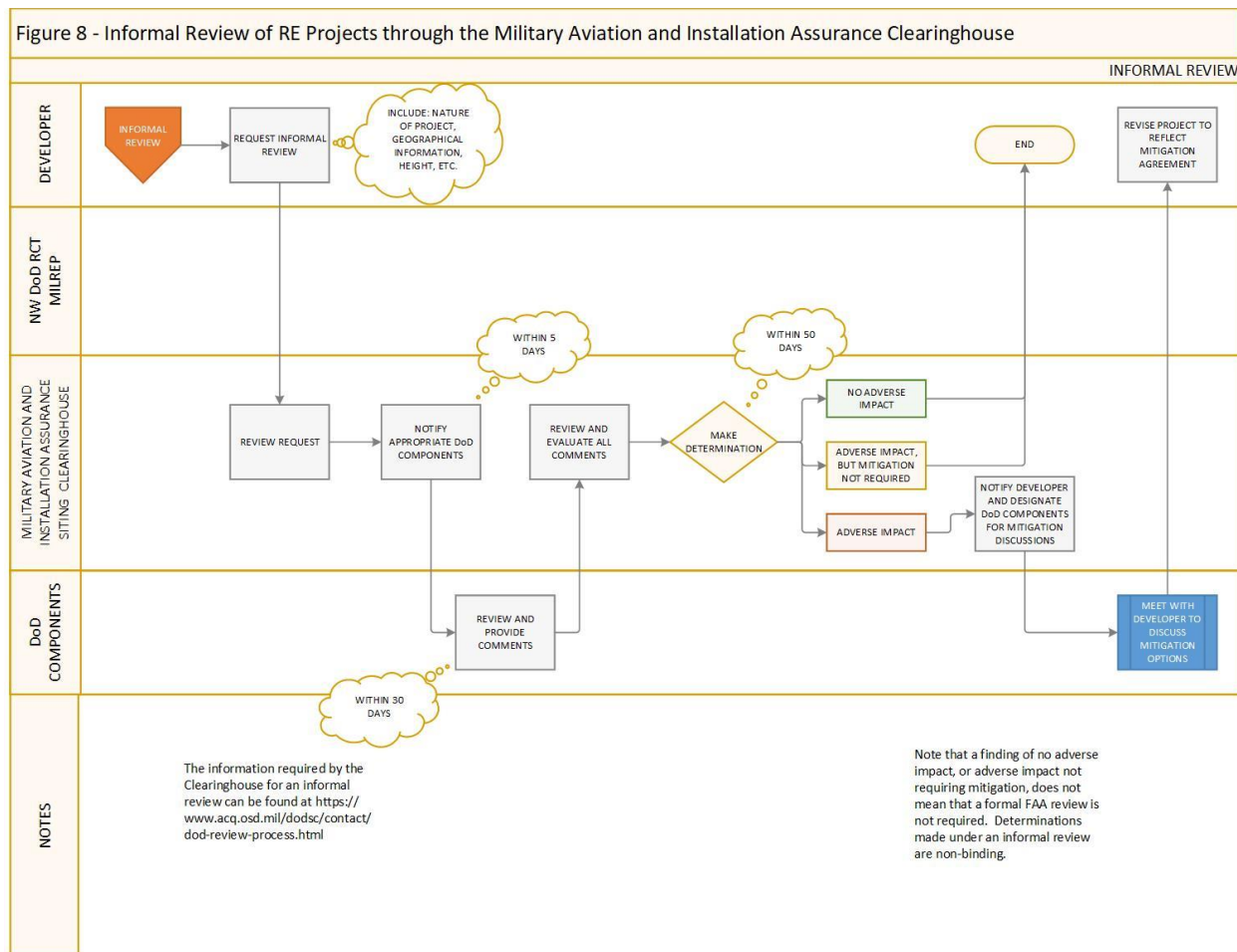
Yellow: Impact likely to Air Defense and Homeland Security radars.

Red: Impact highly likely to Air Defense and Homeland Security radars.

A third tool is the "Wind Turbine Build Out". After the user enters latitude/longitude coordinates, the tool will generate a map of existing and proposed wind turbine and Met Tower projects within the continental United States. The map will display the wind turbine build out within a 48 nautical mile radius of the specified location. The website states that "This display is provided to assist developers during the planning phase and to identify areas where cumulative impact may become a factor in the aeronautical study process."

directly by contacting the Military Aviation and Installation Assurance Siting Clearinghouse (Clearinghouse)⁴⁰.

The informal review is actually a very formal process - the mechanics of which are described in 32 CFR Part 211.7 and are illustrated in Figure 8. The process begins with the project proponent submitting the request for the review, along with relevant information regarding the project: what it is, where it is located, and the height of any structures are required at a minimum. Additional information and details are also requested if available, and these vary depending upon the type of project. A list of the requested additional information can be found on the Clearinghouse website⁴¹.



Within 5 days of receiving the request, the Clearinghouse is required to forward the project information to the appropriate DoD service components for review. Those service components will have 30 days to evaluate the information and make a recommendation back to the Clearinghouse. Once all of the responses are received, the Clearinghouse will compile them and make a determination that falls into one of three categories:

- 1) The project will have no adverse impact,

⁴⁰ Website: <https://www.acq.osd.mil/dodsc/index.html>

⁴¹ Website: <https://www.acq.osd.mil/dodsc/contact/dod-review-process.html>

- 2) The project will have an adverse impact on military operations and readiness, but the impact is sufficiently attenuated as to not require mitigation, or
- 3) The project will have an adverse impact on military operations and readiness.

For the first two cases, the Clearinghouse will notify the requestor of the review of the determination. This does not replace the FAA's formal review process, nor is it binding on the DoD or the Secretary of Transportation. It is, however, a written opinion, and this is reason enough in some cases for a developer to request an informal review.

In the third case where an adverse impact requiring mitigation is found, the Clearinghouse will designate one or more DoD service components to enter into mitigation discussions with the project proponent. It is assumed that since the proponent has voluntarily chosen to engage in the informal review process that they will wish to enter into the negotiations and attempt to reach an acceptable mitigation agreement.

32 CFR Part 211.9 describes the types of mitigation options that DoD may consider. They will generally fall into one of two categories: actions that can be taken by the military, or those that can be taken by the developer.

The mitigation options that DoD will consider are:

- Modifications to military operations.
- Modifications to radars or other items of military equipment.
- Modifications to military test and evaluation activities, military training routes, or military training procedures.
- Providing upgrades or modifications to existing systems or procedures.
- The acquisition of new systems by the DoD and other departments and agencies of the Federal Government.

Mitigation options that DoD may ask the developer to consider include:

- Modification of the proposed structure, operating characteristics, or the equipment in the proposed project.
- Changing the location of the proposed project.
- Limiting daily operating hours or the number of days the equipment in the proposed structure is in use in order to avoid interference with military activities.
- Providing a voluntary contribution of funds to offset the cost of measures undertaken by the Secretary of Defense to mitigate adverse impacts of the project on military operations and readiness.

Informal consultation is not a substitute for Early Consultation; rather, it may be a recommended outcome or logical next step following Early Consultation.

Formal Consultation⁴²

Terrestrial wind turbines used to generate electricity are tall structures that can exceed 500 feet in height above ground level (AGL) at the top of the rotor. These structures are easily tall enough to pose a hazard to aircraft and as such are regulated by the Federal Aviation Administration (FAA). The process used to evaluate potential hazards to airspace from tall structures is known as Obstruction Evaluation/Airport Airspace Analysis (OE/AAA). FAA's authority and the standards by which it evaluates obstructions are described in 14 CFR Part 77. Please refer directly to the FAA's website for information on the OE/AAA process here:

<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>

The Early Consultation process will help identify potential adverse effects and appropriate actions taken to mitigate them. Nevertheless, neither Early Consultation nor Informal Review by the Clearinghouse replaces a formal review by the FAA.

A partial summary and review of the FAA is shown in Figures 9a and 9b. The FAA's formal review process begins with the project proponent ("applicant") filing a form 7460-1 at least 45 days prior to the start of construction.⁴³ Filing the form initiates several actions:

- 1) The FAA conducts an initial aeronautical study to determine if the proposed structure would exceed any of the obstruction standards found at 14 CFR Part 77.23, and
- 2) The FAA will forward the application to the DoD Clearinghouse.

MET Towers

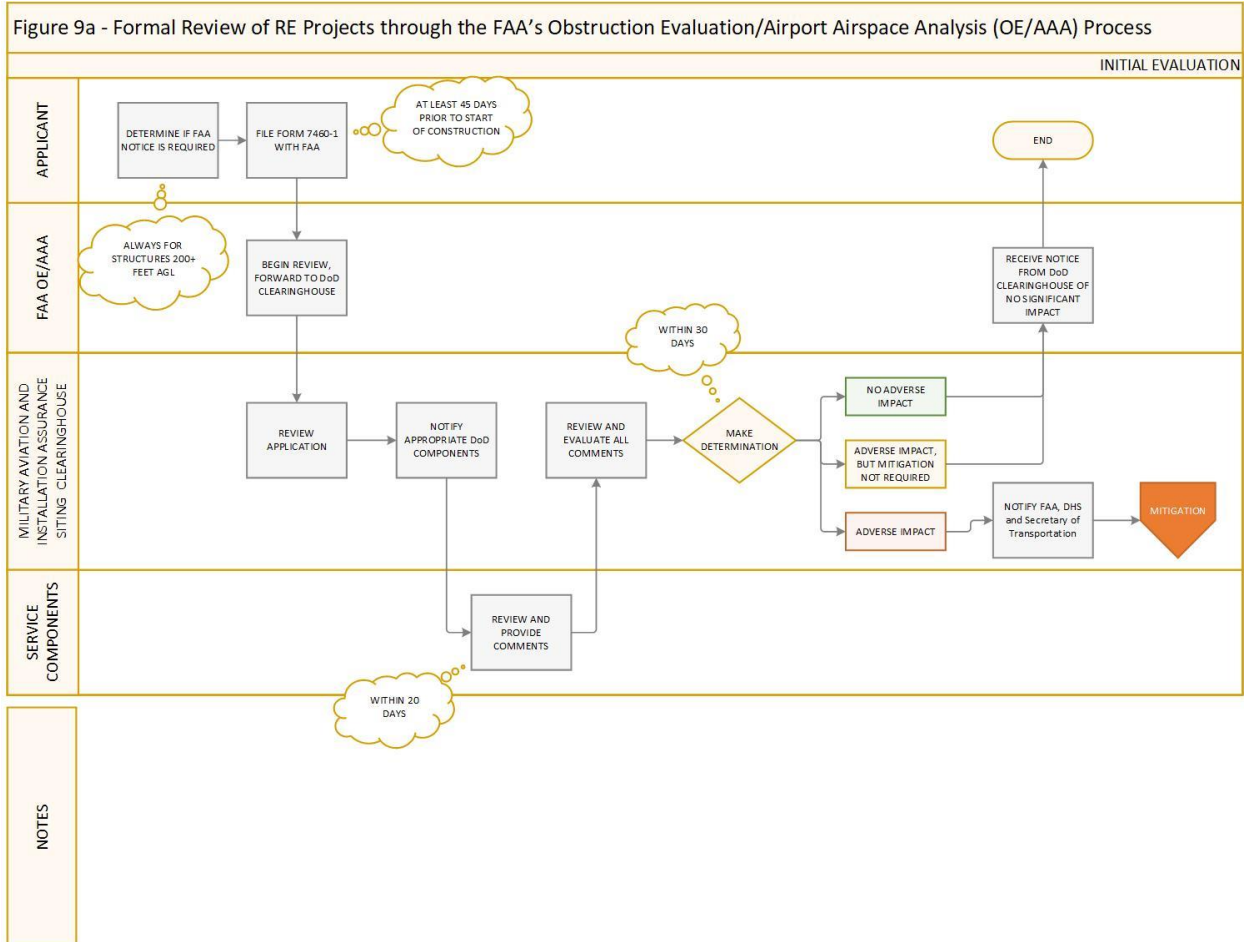
Before a wind farm is constructed, a developer will typically install MET (meteorological) towers as part of their due diligence. MET towers can be equipped with sensors to measure wind speed, velocity, and direction; temperature; and rainfall at the potential project location.

Although sophisticated models are available to extrapolate data collected at lower heights to the typical height of a wind turbine, the closer the height of the MET tower to the actual height of the turbine, the more useful the data will be at predicting actual performance. With that in mind, it should come as no surprise that a very popular height for MET towers is 60 meters, or approximately 197 feet. This height falls just below the threshold that would trigger a formal FAA review.

That MET towers are built at this height and often with no notice can be a point of frustration for local airports, aviation planning authorities, and especially the military. Military Training Route (MTR) airspace may extend to 100 feet AGL or even zero AGL, which means that although a formal review was not required, the tower can still be a hazard to military operations. The installation of MET towers is seen as a signal by the military that a potential wind energy project is coming.

⁴² NOTE: DoD does NOT acknowledge this text as being a full and complete description of the FAA's process. For purposes of the ORESA project's objectives to baseline data, information, and perspectives about renewable energy siting and permitting, the project team is including this partial summary of the FAA's process as it a part of every wind project and some transmission line projects in Oregon.

⁴³ https://www.faa.gov/documentLibrary/media/Form/FAA_Form_7460-1_042023.pdf



The Clearinghouse will then conduct a review similar to the one described under the Informal Consultation section. The information will be distributed to the DoD Components who may have an interest in reviewing the application. Those Components will evaluate the application and provide their comments to the Clearinghouse within 20 days of their receipt of the application.

Once all of the comments have been received, and within 30 days of the initial receipt of the application, the Clearinghouse must make a determination:

- 1) The project will have no adverse impact,
- 2) The project will have an adverse impact on military operations and readiness, but the impact is sufficiently attenuated as to not require mitigation, or
- 3) The project may have an adverse impact on military operations and readiness.

In the case of the third option, the Clearinghouse must notify the applicant and offer to engage in mitigation discussions. The Clearinghouse must also notify the FAA, DHS and Secretary of Transportation of the finding, along with the specifics of which standard would be exceeded, and how.

The applicant has only five days to respond to the offer to participate in mitigation discussions. If they decide to accept the invitation, they will participate in discussions with representatives of the DoD Components designated by the Clearinghouse, as well as representatives of the FAA and DHS if they choose to participate. It is also possible for other federal agencies to participate if they are invited by

the Clearinghouse. Mitigation discussions must conclude within 90 days of the initial notification to the applicant, unless an extension of time is agreed to by both the designated DoD Components and the applicant.

If the mitigation discussions are successful, the participating DoD Components will notify the Clearinghouse. The applicant must revise their project to reflect the mitigation agreement and submit a revised application to the FAA for an OE/AAA review of the modified proposal.

In the end, if the senior officer concludes that the project as proposed would result in an unacceptable risk to national security, the senior officer will notify the FAA and specify which of the criteria under 32 CFR Part 211.3 creates the unacceptable risk to national security. The criteria are:

In addition to the notification to the FAA, the Clearinghouse is also required under 32 CFR Part 211.10 to report the findings to the congressional defense committees within 30 days of the date of the determination.

Once FAA has received the input from the Clearinghouse and concluded their own aeronautical study, they will make a determination: Determination of No Hazard (DNH), or Determination of Hazard. A Determination of No Hazard is good for 18 months. An applicant can request an extension of time for one additional 18-month period; after that, a new application would need to be filed.

As noted earlier in the report, this review does not substitute nor serve as an authoritative source of information on FAA's process or Formal Consultation. Please refer directly to the FAA's website for information on the OE/AAA process here: <https://oeaaa.faa.gov/oeaaa/external/portal.jsp>

Best Practices

Early Consultation is not only the military's current process for working with developers of renewable energy and transmission projects in the State of Oregon, it is a best practice and highly recommended by the military. The earlier mitigation options are identified in the lifecycle of a project, the more opportunity there is to make adjustments so that the project is less costly in terms of both time and money. Professional renewable energy development firms also follow this practice by contacting the NW DoD RCT MILREP at an early stage in project development, well before any permit applications are submitted.

MET towers even below 200 feet can still be a concern to the Military, which may have training routes with ceilings of 100 feet or even down to ground level in some areas. Contacting the NW DoD RCT MILREP to inform them of new MET tower placement projects is a best practice that is highly recommended. The installation of MET towers is seen as a signal by the military that a potential wind energy project is coming.

END OF REPORT

Appendix I: Authority and Standards Tables

The authority to regulate land use and the siting of renewable energy facilities is derived predominantly from Oregon Revised Statutes (ORS) and Oregon Administrative Rules (OAR). While the body of this report contains references to statutes and rules where appropriate, this section is intended to provide a more comprehensive reference as to where the various government entities involved in the siting of renewable facilities derive their authority.

Table I-1 - County Authority and Standards			
Application Process Step	Applicable Standards		Comments
	ORS	OAR	
Pre-Application Conference			Not required by state statute; County codes vary, but typically optional or at applicant's request.
Application submitted	215.416(1)		
Application reviewed for completeness	215.427(2)		
Request for additional information			If necessary
Application complete	215.427(1)		Start of the 150 day clock
Post property notice	197.763(3)		In addition to mailed notice, County may require the notice to be posted at or near the property in question
Notification of DSL	215.418		
Evidence and Staff Report	197.763(4)(b)		
Administrative Decision without Hearing; right to Hearing if requested	215.416(11)		
Hearing with appeal to governing body, -OR-	215.422(1)(a)		
One Hearing with appeal to LUBA	215.422(1)(b)		ORS 197.830 - 197.845 describes LUBA process
	215.422(2)		
Evidentiary Hearing	215.406 215.416(3) 197.763(7)		
Final Decision	215.416(8) 215.416(9)	661-010-0010	
	215.416(10)		
Appeal	215.422(1)		

Table I-2 - HB 2329 Authority and Standards

Application Process Step	Applicable Standards		Comments
	ORS	OAR	
Pre-Application Conference	Optional		Not required by state statute; County codes vary, but typically optional or at applicant's request.
Evaluate Fish and Wildlife habitat; consult with ODFW; conduct habitat assessment and develop mitigation plan	215.446(3)(a)		
Develop Sage Grouse action plan	215.446(3)(a)(D)		
Evaluate Historic, Cultural, and Archaeological resources. Consult with SHPO (optional).	215.446(3)(b)		
Complete decommissioning assessment, financial assurances	215.446(3)(c)		
Application submitted	215.416(1)		
Notify agencies: ODFW, ODOE, SHPO, OR Aviation, DoD, Tribes	215.446(5) + (6)		
Application reviewed for completeness	215.427(2)		
Request for additional information			If necessary
Application complete	215.427(1)		Start of the 150 day clock
Post property notice	197.763(3)		In addition to mailed notice, County may require the notice to be posted at or near the property in question
Notification of DSL	215.418		
Evidence and Staff Report	197.763(4)(b)		
Administrative Decision without Hearing; right to Hearing if requested	215.416(11)		
Hearing with appeal to governing body, -OR-	215.422(1)(a)		
One Hearing with appeal to LUBA	215.422(1)(b)		
	215.422(2)		ORS 197.830 - 197.845 describes LUBA process
Evidentiary Hearing	215.406		
	215.416(3)		
	197.763(7)		
Final Decision	215.416(8)	661-010-0010	
	215.416(9)		
	215.416(10)		
Appeal	215.422(1)		

Table I-3 - EFSC Authority and Standards

Application Process Step	Applicable Standards		Comments
	ORS	OAR	
Notice of Intent (NOI)	469.330(1)	345-015-0110	
		345-015-0120	
		345-015-0140	
		345-020-0006	
		345-020-0011	
Request comments from reviewing agencies	469.350(2)+(3)	345-015-0120	
Interdisciplinary team meeting	469.330(3)	345-021-0080	
Public Notice	469.330(2)	345-015-0110	
NOI Informational Meeting		345-015-0110(2)(f)	
		345-015-0120(3)	
		345-015-0130	
Project Order	469.330(3)+(4)	345-015-0160	Within 140 days of the submission of the NOI
Preliminary Application for Site Certificate	469.350(1)	345-021-0000	
		345-021-0010	
Request for additional information		345-015-0190(1)+(9)	Optional
			RAI or completeness determination required within 60 days of pASC submittal
Application complete	469.350(4)	345-015-0190	
Public Notice	469.350(4)	345-015-0190(7)+(8)	
Draft Proposed Order	469.370(1)	345-015-0210	
DPO Hearing Notice		345-015-0220(2)+(3)	At least 20 days before the public hearing
DPO Public Hearing	469.370(2)	345-015-0220	
Proposed Order	469.370(4)	345-015-0230	
Notice of Contested Case	469.370(4)	345-015-0014	
Contested Case Hearing	469.370(5)	345-015-0023	
Proposed Contested Case Order		345-015-0085(3)+(4)	
Final Order	469.370(7)	345-015-0085(7)+(8)	
Appeal	469.403(1)+(2)		Within 60 days of Final Order
Supreme Court Review	469.403(3)		
Monitor for Compliance	469.410(3)+(4)	345-026-0048	
	469.430	345-026-0050	

Table I-4 - Offshore in State Waters Authority and Standards

Application Process Step	Applicable Standards		
	ORS	OAR	Other
Pre-Application Meeting		141-140-0040(1)	
Pre-Application Requirements		141-140-0040	
Joint Agency Review Team		141-140-0040(8)-(11)	TSP Part 5 (B)(3)
Pre-Application Review	274.873, 274.876	141-140-0040	TSP Part 5 (C)(1)
Application Requirements		141-140-0050	TSP Part 5 (C)
Joint Agency Review Team		141-140-0060(6)-(9)	TSP Part 5 (B)(3)
Application Review	274.873, 274.876	141-140-0060	
Public Comments		141-140-0060(5)	
Land Board Review	273.051	141-140-0080	
Issue Lease Authorization or Temporary Use Permit		141-140-0080	

Table I-5 - Military Authority and Standards

Application Process Step	Applicable Standards		
	CFR	USC	Other
Mission Compatibility Evaluation Process	32 CFR Part 211	10 USC §183a	Public Law 111 - 383
Early Coordination			
Informal Consultation	32 CFR Part 211.7		
Formal Consultation	32 CFR Part 211.6		
- FAA Review	14 CFR Part 77	49 USC §44718	
- Mitigation	32 CFR Part 211.9		
- Reporting to Congress	32 CFR Part 211.10		

Appendix II: EFSC Reviewing Agency Permits

To construct and operate proposed facilities that require a site certificate from the Energy Facility Siting Council (EFSC), applicants are required to obtain local, state and federal permits. Pursuant to ORS 469.401(3), the site certificate binds:

“the state and all counties and cities and political subdivisions in this state as to the approval of the site and the construction and operation of the facility. After issuance of the site certificate or amended site certificate, any affected state agency, county, city and political subdivision shall, upon submission by the applicant of the proper applications and payment of the proper fees, but without hearings or other proceedings, promptly issue the permits, licenses and certificates addressed in the site certificate or amended site certificate, subject only to conditions set forth in the site certificate or amended site certificate.”

The Council reviews, and approves conditions related to many different permits for state and local governments. In addition to land use approvals, local permits may vary greatly. Permits with requirements that are regularly part of application review are included below. Each facility, however, may require permits that are not listed below because of the project’s requirements.

Permits fall into three categories:

- 1) **FEDERAL PERMITS**: EFSC has no jurisdiction over these permits. If they are required for a project, the applicant must list the required permits in Exhibit E of the application.
- 2) **STATE AND LOCAL PERMITS**: All requirements and conditions for these permits are included in the site certificate. State and local agencies are required to promptly issue these permits, after payment of required fees, without hearings or any requirements in addition to those included in the site certificate.

DEQ-Air Quality: Air Contaminant Discharge Permit (ACDP)

ORS 468A: Air Quality

OAR 340, Division 216: Air Contaminant

OAR 340, Division 222: Stationary Plant Site Emission Limits

Primarily used to regulate minor sources of air contaminant emissions, but are also required for any new major source or major modification at a major source. Energy generation facilities such as natural gas plants and bioenergy facilities may require an ACDP, as do some related and supporting facilities such as concrete batch plants (frequently used during construction of the facility).

DEQ-Water: Water Pollution Control Facility Permit (WPCF)

ORS 468B: Water Quality

OAR 340, Division 045: Regulations Pertaining to NPDES and WPCF Permits

OAR 340, Division 052: Review Plans and Specifications

OAR 340, Division 071: Onsite Systems

Permit for the disposal of domestic wastewater onto or beneath the ground surface when there is no direct discharge to surface waters. May also be needed for permits to dispose of water used to perform hydrostatic testing on tanks and piping. **Whether it is under EFSC jurisdiction or not depends on what the waste stream is and where it goes. DEQ will provide guidance.**

DEQ-Land Quality: Solid Waste Letter of Authorization (SWLA)

ORS 459: Solid Waste Management
OAR 340, Division 093: Solid Waste

An applicant may need a temporary disposal site (less than 6 months) during construction activities. If DEQ determines that the site is not likely to create a public nuisance, health hazard, air or water pollution or other environmental problem, DEQ may issue a Solid Waste Letter of Authorization Permit.

DEQ-Land: Solid Waste Disposal Site Permit

ORS 459: Solid Waste Management
OAR 340, Division 095: Solid Waste: Land Disposal Sites

Some energy projects may generate wastes that are managed in an industrial landfill. DEQ issues a solid waste disposal site permit for management of industrial landfill on-site.

Department of State Lands: Removal-Fill Permit

ORS 196.795-990: Removal of Material, Filling
OAR 141, Division 85: Administrative Rules Governing the Issuance and Enforcement of Removal-Fill Authorizations Within Waters of Oregon Including Wetlands

Required if removal or fill activities occur in streams designated as Essential Indigenous Anadromous Salmonid Habitat or 50 cubic yards or more of material is removed, filled or altered within a jurisdictional water of the State. Applicants file a joint application for DSL (state permit) and the US Army Corps of Engineers (federal permit) If there is discharge or fill material in Oregon's waters.

Water Resources Department: Water Rights Limited License

ORS 536-540: Water Resources/Water Rights
OAR 690, Division 310: Water Right Application Processing
OAR 690, Division 380: Water Right Transfers

Applicants must identify sources of water to be used during construction and operation of a facility. If a new water right, or transferred water right, is identified, the applicant must provide the information that would support the appropriate limited license.

Local Jurisdictions: Conditional Use Permits
and other Required Land Use approvals
Local code requirements

EFSC must find that a proposed facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission. If Applicant's choose to obtain local land use approvals (Path "A"), Council will depend on those approvals when making its findings. If the applicant chooses Path "B", the Council has the authority to issue land use approvals based on the applicable substantive land use criteria.

- 3) **FEDERALLY-DELEGATED STATE PERMITS:** These are state permits that are issued by a state agency under a federally-delegated authority. EFSC may rely on the determinations of compliance and the conditions in these permits in determining compliance with standards and requirements under Council jurisdiction. If these permits are required, the ODOE Siting Analyst cannot determine the EFSC application complete until ODOE has received a copy of the submitted federal permit application, and a copy of the response from the issuing state agency.

DEQ-Air Quality: Air Contaminant Discharge Permit (ACDP)

ORS 468A: Air Quality
 OAR 340, Division 216: Air Contaminant
 OAR 340, Division 222: Stationary Plant Site Emission Limits

Regulates the discharge of criteria and hazardous air pollutants. An ACDP is required for any new major discharge source which requires a Title V Air Permit. Discharges of criteria and hazardous air pollutants and greenhouse gases are regulated under the ACDP until issuance of the Title V Air Permit.

DEQ-Air Quality: Title V Operating Permit

Clean Air Act, Title V (42 USC §7661)
 ORS 468A: Air Quality
 OAR 340, Division 218: OR Title V Operating Permit

Required for all facilities designated as a “major” source of air emissions by rule. Large natural gas generation facilities may require a Title V permit. Initially the facility is constructed and operated under the requirements of an ACDP based upon its estimated emissions. Major sources must apply for a Title V permit within one year of commencing operations. The Title V permit is based on the facility’s actual emissions as measured during the first year of operations and includes additional monitoring and recordkeeping requirements.

DEQ-Water Quality: Section 401 Water Quality Certification

Clean Water Act, Section 401 (33 USC §1341 and 1344)
 ORS 468B: Water Quality
 OAR 340, Division 048: Water Quality Certifications

The Clean Water Act provides states with a mechanism to ensure that actions which result in a discharge to waters of the state which require a federal permit or license will comply with state water quality standards. Section 401 authorizes the states to condition the certificate in a manner deemed necessary to achieve water quality compliance, and to deny actions which they believe will not meet applicable water quality standards. If a project requires a Section 404 permit from the US Army Corps of Engineers (federal jurisdiction), they will also require a Section 401.

DEQ-Water Quality: National Pollution Discharge Elimination System (NPDES) Permits

Clean Water Act, Section 402 (33 USC §1251)
 ORS 468B: Water Quality
 OAR 340, Division 045: Regulations Pertaining to NPDES Permits

NPDES 1200-C General
 Construction Stormwater Permit

NPDES 1200-Z General
 Industrial Stormwater Permit

NPDES Individual
 Industrial Wastewater or Stormwater Permits

NPDES permits regulate the discharge of stormwater to the waters of the state. Different forms, and therefore form numbers, are used for different sets of requirements. Permits for two different requirements that may be required by many EFSC projects are included here.

Permit regulates the discharge of stormwater from sites greater than one-acre during temporary construction activities.

General permit regulating industrial sources which discharge stormwater from **point-sources** (i.e., pipes and man-made ditches) to waters of the state.

Some facilities may require an Individual, instead of a General permit. DEQ will provide guidance.

**DEQ-Land Quality: Underground Storage Tank (UST)
System Permit**

ORS 466: Hazardous Waste and Hazardous Materials
OAR 340, Division 150: Underground Storage Tank
Rules

UST systems used to store regulated substances must be registered with DEQ. Some facilities may have underground storage tanks for petroleum or washwater from such activities like cleaning combustion turbine generator compressor blades.