



550 Capitol St. NE Salem, OR 97301 Phone: 503-378-4040 Toll Free: 1-800-221-8035 FAX: 503-373-7806 www.oregon.gov/energy

MEMORANDUM

То:	Members of the House Committee on Climate, Energy, and the Environment
From:	Sarah Esterson, Senior Siting Policy Analyst
Date:	April 26, 2023
Re:	Waste Minimization, Maintenance, and Decommissioning Standards for EFSC- Jurisdictional Renewable Energy Facilities

The Energy Facility Siting Council (Council) issues permits, generally referred to as site certificates, and regulates utility-scale renewable energy facilities including wind facilities, solar photovoltaic energy generation facilities, geothermal facilities, and biomass conversion facilities.

Renewable energy facilities Under the Council's jurisdictional authority include:

- Those that are in operation include 12 wind, 2 solar and 1 biomass
- Those that are under construction include 2 solar
- Approved but not yet built include 1 wind and 7 solar
- Under review include 1 wind and 4 solar

Please note that the waste minimization, maintenance, and decommissioning standards shared in this memo are specific to the Energy Facility Siting Council (Council) and Oregon Department of Energy Siting Division's permitting process for renewable energy facilities. Many renewable energy projects are subject to county jurisdiction instead and each county may have its own rules and regulations on these topics.

The Energy Facility Siting Council has statutory authority to adopt standards for the siting, construction, operation, and retirement of energy facilities. Through the requirements of the standards, the Council evaluates facts and evidence and then imposes conditions within issued site certificates intended to ensure ongoing compliance with the standards.

The siting process for developers includes several phases – starting with the permitting phase. The permitting phase has 7 steps and includes multiple opportunities for public and governmental agency review. The permit application is required to include specific information about construction, operation, and retirement of the proposed facility – which is then evaluated against regulatory requirements to determine compliance – and conditioned in a manner intended to reduce and minimize potential

environmental impacts. Compliance is an ongoing process between site certificate holders, ODOE staff, and the Council.

Waste Minimization

One of the regulatory requirements that is evaluated during the permitting process is a waste minimization requirement. This requirement includes an evaluation of the type and amount of waste and wastewater that would be generated during construction and operation of an energy facility – and requires that a plan be developed that demonstrates how these waste streams would be minimized to the greatest extent practicable.

For wind facilities, the Council has recently processed and approved four requests for repowering (or replacement of blades and nacelles). As part of this review, the Council has required that there be a plan in place for recycling of the removed turbine parts – including a preconstruction requirement that the developer identify recycling facilities that could legally receive and recycle the parts, and then ongoing documentation of material quantities sent to the identified recycling facility.

For solar facilities, based on the potential frequency of panel replacement during routine O&M, the Council has typically required that nonfunctional or retired panels be recycled through an established program, such as the Solar Energy Industries Association National PV Recycling Program.

Infrastructure Maintenance

Infrastructure maintenance is considered part of routine operations. The Council has adopted many standards that require minimizing environmental impacts during operations including the organizational expertise, structural, soils and public services standards, as well as public health and safety standards for wind facilities.

The Organizational Expertise standard requires compliance with site certificate conditions, all applicable regulatory requirements and maintenance of the site in a manner that allows the site to be restored to a useful, non-hazardous condition at the conclusion of facility operations. Under this standard, the Council has imposed numerous conditions such as requiring developers to hire qualified contractors and onsite managers and contractually requiring contractors to adhere to the applicable requirements of the site certificate.

The Structural standard requires that the facility be designed, constructed, and operated in a manner that protects public health and safety from seismic and non-seismic hazards. The Public Health and Safety standard for wind facilities similarly requires that wind towers and electrical equipment be designed in a manner that protects public health and safety. Both standards result in conditions that require infrastructure monitoring and maintenance/repair. For example, for wind and solar facilities, supervisory control and data acquisition systems are required and must be properly operating – and are evaluated by the Department based on system operability and system repairs. These standards prompt requirements for Safety Monitoring Programs, requiring that developers have inspection and maintenance programs adequate given the specifics of the site and the equipment.

The Public Services standard requires that impacts of facility waste streams not significantly impact the capacity or ability of waste service providers to meet their ongoing/forecasted demand. This allows the Council and Department to evaluate the abilities and any limitations of waste haul and receiving facility capacity and waste type limitations and to ensure that the facility's impacts are limited to the greatest extent.

Decommissioning and Site Certificate Termination

Because EFSC-jurisdictional renewable energy projects are large and can have a big impact on the landscape, site certificates require that the developer plan for how they will remove the facility from the landscape when has reached the end of its life.

If a facility is planning to cease operations or discontinues construction, they must notify the Department and the Council 2 years in advance and provide a proposed retirement plan for review and approval. The developer must demonstrate that they have adequate funds to complete the tasks and actions included in the final approved retirement plan. Once this plan is approved, the facility must be retired in accordance with the plan and any additional requirements identified by the Council during their review.

As a backstop to this process, during the permitting phase, a developer is required to propose an initial retirement plan – this is also reviewed by Department staff and the Council for adequacy/accuracy and consistency. Once approved, the amount of money identified as necessary to implement the initial retirement plan is included as a conditional requirement to be provided in a bond or letter of credit, using a template and financial institution approved by the Council. This bond or LOC must be maintained as effective/valid for the life of the facility – this is held by ODOE for the life of the facility. It is intended to provide ODOE/EFSC coverage in the event the developer is unable to fulfil its decommissioning obligation.

To date, no renewable facilities have been decommissioned. The closest activity has been that associated with the 4 wind facilities that were repowered, resulting in take down/replacement of all blades and nacelles.

The Council has recently been imposing enhanced requirements applicable to the amount referenced in a bond or letter of credit – including ongoing review of the compliance history of the developer to determine if the bond or letter of credit needs to be increased given potential risks demonstrated by the developer.

Further Information

For more information, please visit the Energy Facility Siting Council <u>webpage</u> or contact Sarah Esterson, Senior Siting Policy Analyst, at sarah.esterson@energy.oregon.gov.