DECOMMISSIONING FUNDS FOR RENEWABLE ENERGY FACILITIES

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With the development of state-mandated renewable portfolio standards, heightened concerns of global climate change, advancements in technology and significant economic stimulus, the United States has seen an increased need for the development of renewable electricity generation facilities across the nation. Accordingly, state and federal governments must develop procedures that facilitate not only the siting, construction, and operation of these facilities, but also the their decommissioning. Decommissioning entails a range of considerations to restore a site to its original environment, including removal of all structures, foundations, wires and hazardous materials, as well as restoration of site vegetation. Decommissioning procedures must also be executed while avoiding environmental disturbances like noise, dust, water quality and impact on local wildlife and vegetation.[1] Review of decommissioning regulations at the state, local and federal level demonstrate that current decommissioning procedures for renewable facilitates are inconsistent and, in many cases, nonexistent. Although some states have comprehensive procedures to govern decommissioning, many states fail to impose requirements at the level necessary to ensure the effective site remediation necessary for the large-scale adoption of renewable electricity.

Decommissioning is a controlled process used to safely retire an electric generation facility, whether partially completed, fully operational, or at the end of its lifecycle. This process encompasses all phases from deactivation and defueling to dismantling and site remediation.[2] The extent to which a facility must be decommissioned varies from state to state. But the goal for decommissioning is clear: to remediate safety and environmental hazards and to reduce the footprint of the facility and its infrastructure.[3]

States require decommissioning in many different forms. Some states have dedicated funds that require contribution before building or operating a generation facility. Other states require a site-specific bond or letter of credit to be in place that effectively provides funds for decommissioning. Some states simply have regulations in place that require a facility owner to decommission but do not require contributions to existing funds or a site-specific security fund. Other states allow for local zoning boards to pass ordinances which may require dedicated funds held by the municipality. And, of course, there are states like Texas which have no decommissioning requirements at all.

Among the states that do impose decommissioning regulations and funds, there are various legislative and regulatory mechanisms by which states implement decommissioning requirements. In Minnesota, state statute requires the state public utility commission (PUC) to adopt rules governing site restoration considerations of large wind

[1] Sosi N. Biricki & Noreen A. Haround, Latham & Watkins LLP, *The Importance of Decommissioning Security,* Energy Law360/Environmental Law360, April 12, 2010.
[2] *See* U.S. Department of Energy, FACILITY DEACTIVATION & DECOMMISSION (2009), *http://www.em.doe.gov/EM20Pages/PDFs/DD_MappingBasics_Appdx_B_2-11-2009.pdf.*
[3] *Id.*

energy conversion system (LWECS).[4] Under this legislative directive, the Minnesota PUC promulgated regulations specifying decommissioning and restoration requirements. The regulations include a method which mandates that funds be available for the costs of decommissioning and restoration.[5]

States also impose decommissioning rules and funds through utility commission approval processes, agency orders, and siting processes. In Vermont, the state public utility commission, the Vermont Public Service Board (PSB), conditions approval of renewable facilities on the establishment of a decommissioning fund.[6] The Indiana Utility Regulatory Commission similarly requires facilities to establish a decommissioning plan through their review and approval of renewable energy projects. The decommissioning plan requires a financial assurance that must be equal to the estimated amount for demolition and removal costs and secured through the form of a bond, letter of credit, or other acceptable guarantees.[7]

Energy facility siting evaluation commissions (EFSECs) take many different forms through many enabling statutes, but the purpose of each is to create a state-sponsored centralized evaluation and oversight of large energy facilities and infrastructure.[8] EFSECs typically review conventional thermal power plants, pipelines and storage facilities, transmission lines, and renewable generation projects which meet a certain capacity rating.

Some EFSECs—like the Oregon Energy Facility Siting Council (OREFSC)—have broad public interest authority, including the ability to impose decommissioning standards through their site certification process. Using this authority, the OREFSC developed general standards for retirement and financial assurance for decommissioning for any facility under its jurisdiction.[9] To issue a site certificate and allow construction of a facility, the OREFSC must find that a site "can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the

[4] MINN. STAT. ANN. § 216F.05 (2008).

[5] MINN. R. 7854.0500, Subpart 13—Neither the statute or regulations specify what method must be employed to ensure adequate funds for decommissioning, just that the developer ensure that adequate funds be available. In Commission review, the commission only requires "[t]he owner will be responsible for costs to decommission the project and associated facilities." *In the Matter of the Site Permit Application for a 20 Megawatt Large Wind Energy Conversion System in Stevens County, Minnesota,* NO. IP-6824, 2010 WL 750957 (Minn. PUC 2010).

[6] In order to be approved by the Vermont PSB, energy facilities, pursuant to 30 V.S.A §248, must receive a certificate of public good. The PSB conditions a certificate of public good on a facility's decommissioning plan which must include a detailed cost estimate of decommissioning as well as a mechanism for a secured fund to be available when decommissioning is triggered. (*UPC Vermont Wind Project Order Re Lease Language, Decommissioning Plan, and Request for Hearing,* Docket No. 7156 (VT PSB 2007).

[7] Docket No. 43602 (Indiana URC 2008); Docket No. 43759 (Indiana URC 2009); Docket No. 43678 (Indiana URC 2009).

[8] Although they vary, EFSECs are typically one-stop licensing committees consisting of representatives from various regulatory agencies, public citizens and governor appointees.

[9] *See* OR. ADMIN. R. 345-022-0050; OREFSC jurisdiction for renewables includes any geothermal, solar, or wind project of 35 MW or more.

facility."[10] The applicant must explain its proposal for site restoration and estimate the cost of such restoration procedures. OREFSC then reviews the proposal and estimate, sets a required amount of funds for decommissioning, and includes a mandatory condition in every site certificate that requires a bond or letter of credit to be in place before construction begins. Other states, such as Washington, use EFSECs to impose decommissioning requirements as well.

In some states, local ordinances regulate the majority of decommissioning requirements. For example, South Dakota does not have specific rules for decommissioning of all renewable projects but the Public Utilities Commission does require decommissioning plans, cost estimates, and may require a bond or other guarantee for wind farms over 100 MW. If a wind project does not meet SDPUC jurisdiction, city and county ordinances have been passed to impose permitting requirements. The SDPUC has issued a draft model ordinance as guidance to local municipalities for siting of wind energy systems. The model ordinance is quite thorough in its treatment of decommissioning, and encourages local governments to impose requirements for dismantling of turbines, removal of all infrastructure, and site restoration. Like the PUC's requirements, it encourages local governments to require wind farm project applicants to submit a plan for decommissioning and financial assurance through bonds or other financial guarantees after the tenth year of operation. Other states, such as New York, use local ordinances for renewable projects which do not meet the nameplate capacity to invoke PUC jurisdiction as well.

The development of renewable energy facilities on public lands is regulated at the national level by federal agencies, including the Department of Interior Bureau of Ocean Energy Management, Regulation and Enforcement, the Federal Energy Regulatory Commission and the Bureau of Land Management. These federal agencies have enacted comprehensive decommissioning rules and funds to govern the decommissioning of renewable energy facilities. The Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE),[11] which regulates the development of non-hydrokinetic energy facilities in the outer continental shelf (OCS), requires specific decommissioning obligations for renewable energy facilities.[12] The regulations include the establishment of a decommissioning fund on a case-by-case basis at an amount determined by the anticipated costs of decommissioning.[13] The funds are secured through financial assurances such as a bond or other financial security, including demonstration of financial strength or an account in a federally insured institution.[14] Although the Federal Energy Regulatory Commission (FERC) retains licensing authority over offshore

[10] OR. ADMIN. R. 345-022-0050(1); The OREFSC's determination is a case-by-case factual evaluation.
[11] The Department of Interior granted authority to the former Mineral Management Service (MMS) to develop the renewable energy program and regulations on the outer continental shelf. However, on June 21, 2010, the Mineral Management Service was restructured and the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) was created. BOEMRE is the current federal agency with authority to regulate natural gas, oil and other mineral resources in the outer continental shelf.
[12] 30 CFR §285.900-908.
[13] 30 CFR §285.517(b).
[14] 30 CFR §285.515; §285.527; §285.517(b).

hydrokinetic projects, the DOI maintains permitting authority prior to the FERC licensing approval.[15] Therefore, hydrokinetic facilities in the OCS are subject to the same DOI regulations for decommissioning rules and funds as offshore non-hydrokinetic renewable facilities. For approval of offshore hydrokinetic pilot projects, the FERC requires the development of a decommissioning plan, as well as the purchase and maintenance of a bond or equivalent financial assurance to cover the entire costs of the pilot project.[16] The Bureau of Land Management (BLM), the federal agency responsible for renewable energy development on public lands,[17] requires a decommissioning plan to be developed and approved before right-of-way authorization for wind energy projects.[18] The BLM also requires a $10,000 bond for each turbine placed on public lands.[19] The bonds are reviewed periodically to ensure the funds are adequate for project decommissioning.[20]

Analysis of decommissioning regulations demonstrates no apparent correlation between whether a state has decommissioning rules and funds for renewable and non-renewable generation resources. Some states govern decommissioning of facilities irrespective of the resource, while others impose regulations contingent on the facility type.

Regardless of how states chose to impose renewable energy facility decommissioning procedures, decommissioning regulations should be promulgated at the state-level to ensure consistency in state-wide decommissioning, and adopt regulations that encompass both decommissioning plans and adequate financial assurances. Explicit and consistent decommissioning procedures may alleviate many of the environmental and aesthetic considerations which hinder the development of large scale renewable energy projects. Moreover, it would be particularly effective to develop decommissioning procedures and financial assurances in states with ambitious renewable portfolio standards and significant capacity for renewable energy development.

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[15] *Memorandum of Understanding Between the U.S. Department of the Interior and the Federal Energy Regulatory Commission,* April 9, 2009.

[16] Makah Bay Offshore Wave Energy Pilot Project, 122 FERC ¶ 61,248 (2007).

[17] The BLM manages 23 million acres of public land with solar potential, 20.6 million acres of public land with wind potential, and 249 million acres of land with geothermal potential. *Renewable Energy and the BLM,* Department of the Interior Bureau of Land Management, July 2010, *available at* http://www.blm.gov/wo/st/en/prog/energy/renewable_energy.html.

[18] Development of renewable energy projects on public lands is administered by the BLM under right-of-way (ROW) authorizations pursuant to the Federal Land Policy and Management Act of 1976 (43 U.S.C. §1701). *Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States,* U.S. Department of the Interior Bureau of Land Management, June 2005, *available at* http://windeis.anl.gov/documents/fpeis/index.cfm.

[19] Testimony of Mr. Craig Mataczynski, House Committee on Natural Resources, Filly Committee Legislative Hearing on H.R. 3534, the CLEAR Act,, September 17, 2009, *available at*: http://seia.org/galleries/pdf/Mataczynski%20testimony%209.17.09.pdf.

[20] Bonds are reviewed at least every 5 years. Montana State Legislatire, *Energy and Telecommunications Interim Committee,* December 30, 2009, *available at:* http://leg.mt.gov/content/Committees/Interim/2009_2010/Energy_Telecommunications/Meeting_Documents/January10/wind-bonding-decommissioning.pdf.

APPENDIX

Table 1. State Decommissioning Regulations

	Renewable Facility Decommissioning Rules/Fund	Type/Notes
Alabama	No	—
Arizona	No	—
Arkansas	No	—
California	No	Have general facility closure requirements for energy facility licensing, but no bond. CAL. PUB. RES. CODE § 25532 (2010).
Colorado	No	—
Delaware	No	—
Florida	No	—
Georgia	No	—
Hawaii	Yes	Decommissioning rules, but no fund requirements. Hawaii State Law §269-1(G).
Idaho	No	—
Iowa	No	—
Indiana	Yes	Decommissioning rules and funds for wind projects. Indiana Utility Regulation Commission, Order No. 43602; Order No. 43759; Order No. 43678.
Kansas	No	Only local ordinances.
Massachusetts	No	Generally decommissioning procedures are established within specific agreements between developers and site owners.
Maine	No	—
Michigan	No	—
Minnesota	Yes	M.S.A. 216F.05; MN ADC 7854.0500, Subpart 13
Montana	No	—
New Mexico	No	—
New York	Yes, if over 80MW nameplate capacity.	Municipal ordinances if below 80 MW; otherwise under Public Service Law Article X certification requirements (expired 2003).
North Dakota	Yes	Decommissioning of commercial wind energy facilities.
Ohio	Yes, if over 5 MW nameplate	Public Utility Commission of Ohio

	capacity.	requires plan for decommissioning and discussion of financial arrangements designed to assure requisite financials to carry out the plan. OAC Chapter 4906-17.
Oregon	Yes	Under jurisdiction of Energy Facility Siting Board which estimates costs of restoration and mandates bond or letter of credit as financial security for site restoration.
South Dakota	Yes, if over 100 MW nameplate capacity.	PUC encourages use of local ordinances based on draft model id rated under 100 MW.
Texas	No	—
Virginia	No	DEQ regulations may apply.
Vermont	Yes	Condition for Public Service Board approval of Certificate of Public Good under 30 V.S.A §248 which establishes requirements for in-state electric transmission and generation construction projects. See *Order Re Lease Language, Decommissioning Plan, and Request for Hearing,* Docket No. 7156 (2007).

* States not listed did not have accessible information regarding decommissioning rules and funds.

Table 2. Federal Agency Decommissioning Regulations

	Renewable Facility Decommissioning Rules/Fund	Type/Notes
DOI (MMS/BOEMRE)	Yes	30 CFR §285 impose decommissioning obligations on offshore non-hydrokinetic facilities, including establishing a decommissioning fund though a bond or other financial assurance.
FERC	Yes	Must have MMS permit before FERC can license offshore hydrokinetic projects (MMS regulations apply); FERC requires decommissioning plan and financial assurance for pilot projects.
BLM	Yes	Before a right-of-way authorization can be permitted, a decommissioning plan must be established. BLM imposes a $10,000 bond per turbine.