

Wind Project Decommissioning: Industry Recommendations

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American wind power provides significant benefits to the United States and host communities, with over 120,000 jobs spread across all 50 states and more than \$1.6 billion paid in state and local taxes and landowner lease payments each year. Wind project developers prioritize being good neighbors and long-term partners with host communities. Since wind farms operate for 30 years or more, developers recognize and understand the need to address concerns about what happens to wind turbines once they reach the end of their useful life.

It's crucial to know that landowners and host communities are never responsible for the costs associated with removing wind turbines once they've reached their end of life cycle.

Before a project is built, developers create a plan for removing equipment and restoring landowners' property to its previous condition when the project is no longer operational. This process is called decommissioning. Many local municipalities and state governments require decommissioning plans as a permitting condition.

The following are wind industry recommendations for key provisions of decommissioning plans or rules and specific measures that reasonably balance community and industry interests.

Core Elements of Decommissioning:

Decommissioning Plan Development

- Prior to the construction of a new project, during the land lease negotiations or permitting phase of a new project, a developer prepares a Decommissioning Plan that becomes part of the lease agreement or condition of the project permit.
- A Decommissioning Plan is typically updated within 10 years after the project begins operating. After that initial update, the plan is subsequently updated every five years.

Decommissioning Requirements

- The Decommissioning Plan describes the removal of a wind farm's above-surface facilities and infrastructure that have no ongoing purpose or value, and underground facilities to a minimum depth of three feet from a landowner's property at the end of the wind farm's operational life.
- The Decommissioning Plan includes a detailed blueprint to return the property to its preconstruction condition.
- In some cases, instead of removing all wind project equipment, a property owner and wind farm owner may also reach an agreement concerning alternative restoration of buildings, roads, or any other associated facilities, such as transmission or collection lines.

Costs

- The Decommissioning Plan typically includes an estimated cost for decommissioning the project and restoring the landowner's property, which is paid for by the wind farm owner/operator (refer to Financial Assurance below).
- Costs include disassembly, removal, and disposal of the wind facility components and restoration of the land.
- The cost should also include a credit for the salvage value of wind turbine components. Most of its material, like steel, has

substantial salvage value and is recyclable. Other components, like the blades, require different strategies.

Financial Assurance

- Financial assurance for decommissioning a wind farm is typically equal to the estimated decommissioning cost minus salvage value and provided to the beneficiary by year 10 of a wind farm's operation. However, alternative submittal timing may be negotiated during project permitting or lease agreement negotiations.
- Financial assurance may be in the form of a performance bond either as, or in combination with, a surety bond, irrevocable letter of credit, self-guarantee, or parent company guarantee.



Decommissioning Implementation Timeframe

- If a wind farm has not produced electricity for a specific amount of time as defined in the lease agreement, or for a maximum period of 24 consecutive months, the wind farm is considered to be at its end-of-life and will be decommissioned as outlined in the Decommissioning Plan.
- Decommissioning typically begins within 12 months of the wind farm's end-of-life determination and is completed within 24 months from the beginning of removal.
- Alternative strategies for end-of-life wind farm planning may include updating wind turbines by either replacing older equipment with new, more productive turbines or replacing the original turbine parts with new, more efficient technologies

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