

Made in Texas: Wind Projects are Good Neighbors

Wind turbines have long life cycles. A wind turbine belonging to a larger project will contribute to the local economy and help efficiently power our state, and, with new technology and continued investment, these communities can reap the benefits of a renewable energy project well past its originally planned lifespan.

What Happens To A Wind Turbine After it is Retired?

- Wind turbines have long life spans, lasting several decades.
- There are two main options for wind farm owners when a project nears retirement: repowering and decommissioning. Both options require new permits and can bring additional jobs and investment to the local community.
- Repowering is the full or partial replacement of older turbines at existing project sites. Adding state-of-the-art technology, combined with proven wind sources and existing access to transmission, means greater and more efficient electricity production.
- In some instances, project owners may decide to completely remove a wind plant. This is called “decommissioning.” Only a small number of projects have been decommissioned.
- Most of Texas’ [15,359](#) wind turbines are still in the early stages of their life cycle.

Repowering

- When turbines become outdated or reach the end of their useful lives, the story isn’t over. Most wind project owners keep the site in use but replace older equipment with newer, upgraded technology. In some cases, wind turbines and foundations are completely removed and updated through a process known as [repowering](#).
- It makes good business sense to replace or refurbish turbines. Existing sites have the best wind resource areas and already have transmission access. And with new technologies, upgraded wind farms produce more electricity at a lower cost. In fact, the average turbine deployed in the U.S. today can generate more than 27 times more electricity than the typical turbine built in the 1990s.
- Repowering usually leads to cheaper electricity, with savings passed on to consumers.

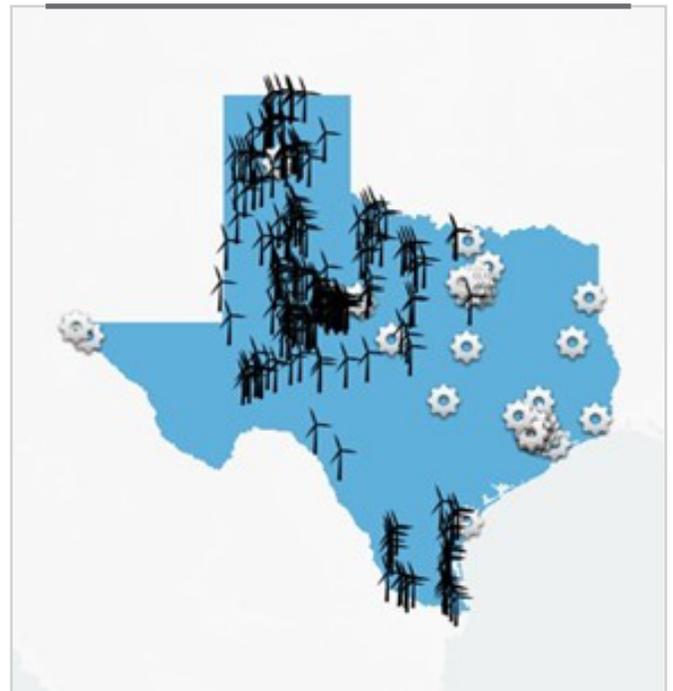
Can Wind Turbines Be Recycled?

- Approximately [85 percent](#) of turbine component materials, such as steel, copper and other metal components that make up the bulk of a turbine have substantial salvage value and can be recycled.
- Companies like Sweetwater’s Global Fiberglass Solutions are finding innovative ways to recycle the rest. The company has discovered a way to recycle more than 99% of a turbine blade into fiberglass pellets that are repurposed into products like barriers, guardrails, flooring, and walls.

Do Project Owners Have Any Responsibility Once The Project Is Over?

- The rigorous, legally-binding contracts signed by project owners with landowners when turbines are installed typically

MAP OF WIND PROJECTS AND MANUFACTURERS



Made in Texas: Wind Projects are Good Neighbors

ensure that companies are fully responsible for removing a turbine and returning the land to its pre-construction state in the event of decommissioning.

- If the developer does not meet the decommissioning obligation in the lease, the landowner has legal recourse against the developer.
- Local governments and individual landowners are not responsible for the cost of removing old turbines.

Maintaining Wind Project Sites

- Wind project owners don't want to see their turbines idle or abandoned. The free market is creating new uses and applications for old turbine components. It's in a company's best interest not to let valuable machines sit abandoned—they can maximize value by reusing materials.
- The site of the project has also high value moving forward. Wind projects are built in the most-wind-rich areas, existing sites have years' worth of valuable wind speed data, and they often have transmission access. That makes them prime locations to develop new projects, rather than being abandoned.

Decommissioning

- Numerous legally-binding agreements already ensure that it is the wind project owner – not the landowner, surrounding community, or any other entity – that is accountable for the responsible management of turbines at the end of their life cycle.
- In 2019, the Texas legislature passed [House Bill 2845](#) mandating decommissioning requirements in wind power facility agreements. The legislation requires that wind agreements include a provision in the lease to remove equipment and restore the surface of the land to its original condition. Project owners are required to post a bond or other financial assurance to cover the cost of removal and restoration.

*The average turbine deployed in the U.S. today
can generate more than 27 times more electricity
than the typical turbine built in the 1990s.*