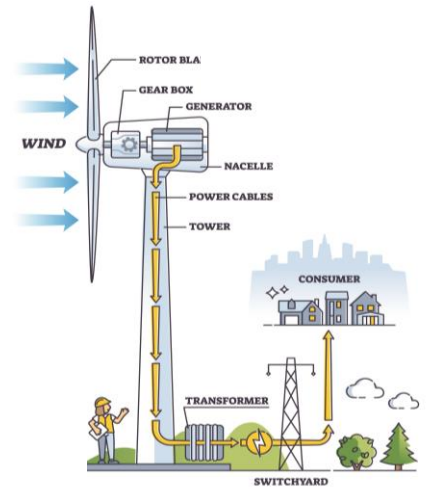


WHAT IS A WIND FARM?

Wind turbines turn kinetic energy from the wind into electricity. The wind pushes the turbine blades, which turn gears that generate the electricity. Collection cables take that electricity to a substation, and then to transmission lines and later distribution lines for electricity use. Wind farms are a collection of wind turbines together that generate a large amount of electricity—typically enough to power between at least 15,000 and 75,000 U.S. homes.



WHY DO PEOPLE SUPPORT WIND FARMS?

Wind farms are good for farmers, good for the local economy, and good for the environment. A wind turbine and access road typically use less than one acre, leaving more than 99% of the land in agricultural production. In exchange, farmers receive a new source of income that will never decrease. That can mean new farm equipment, access to credit, paying medical expenses, setting up trusts for grandchildren, or holding onto land for future generations. Wind farms generate tens of millions of dollars in local public revenue, supporting schools, fire departments, and other county services. Virtually every major environmental organization strongly supports wind energy because it can make our communities healthier, reduce pollution, and protect the environment.

ARE WIND FARMS FINANCIALLY VIABLE IN THE LONG TERM?

Yes! Economic studies consistently show that the cost of onshore wind electric generation is the lowest cost form of electricity, even with recent supply chain constraints and component price increases. This is because the energy input (wind) is free. There is no mining, extraction, or drilling needed. The reliability of wind farms allows companies to commit to lease payments to landowners for 30 years, and often longer if the wind farm is re-powered.

WILL MY PROPERTY TAXES INCREASE?

Property taxes on leased land may increase due to the value of the installed equipment. It is an industry standard that the lease agreements commit the wind farm owner to paying for any increase in taxes related to the wind farm facilities.



WILL PROPERTY VALUES AROUND A WIND FARM DECREASE?

A handful of thorough and comprehensive studies have investigated the relationship between property values and wind farms. Each of them concluded that there is no clear pattern of changes in property values due to wind farm proximity. There are sometimes marginal decreases, and sometimes marginal increases.

CAN THE LAND RETURN TO NORMAL AFTER THE WIND FARM IS REMOVED?

If the decision is made to *not* re-power the wind farm and it is decommissioned at the end of its useful life, the owning company will remove all above-ground equipment and the concrete foundations down to five feet. The lease terms should state that the company will commit to soil reclamation so the land may return to how it was used prior to hosting wind farm facilities.

HOW WILL MY LAND AND CROPS BE AFFECTED BY THE WIND FARM?

Land that hosts wind farm equipment or is accessed as part of the construction will take some time to return normal. Construction is messy, and the machinery and turbine components are heavy. However, RWE takes care of landowners in several ways. First, compensation for leased land increases during construction. Second, following construction, RWE commits to soil replacement and reclamation. Third, RWE records the routes of all equipment and machinery to assist with tracking crop and tile damage. Finally, RWE compensates landowners for crop damage, changes in yield, and tile damaged as a result of the wind farm.

HOW BIG ARE THE TURBINE FOUNDATIONS?

A wind turbine foundation is typically 10–12 feet in depth, and 67–80 feet in diameter, tapering up to the base of the turbine, where it is about 16–20 feet in diameter.

HOW SPACED OUT WILL THE WIND TURBINES BE?

Wind farm layout depends on so many factors, including setbacks from residences, roads, wetlands, bird migratory paths, communications paths, and more. Roughly though, there are between two and four wind turbines per section of land (one square mile)

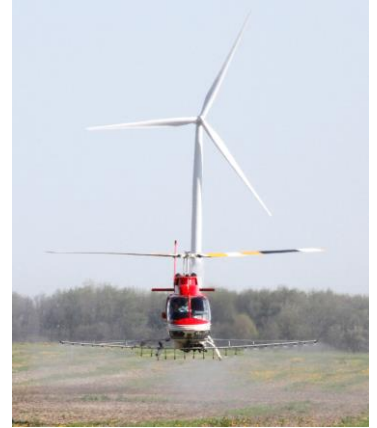


Wind Farms

Frequently asked questions

CAN EMS FLIGHTS OR AERIAL APPLICATORS OPERATE IN A WIND FARM?

Operations staff coordinate with landowners and local flight operations to help flights within wind farms operate normally. During wind farm development, the developer will meet with first responder teams, and the turbine layout will be available to them in the permitting process. For aerial spraying, RWE asks to be contacted by landowners in advance of planned applications. However, the operations team can also stop the turbine blades if needed quickly. Spraying typically happens when wind speeds are low, so the turbines may not be operating anyway. The developer must also receive FAA approval prior to construction.



HOW DO WIND FARMS AFFECT BIRDS?

The American Bird Conservancy and the Audubon Society both support wind energy and the transition away from fossil fuels. Wind farms built today go through rigorous studies and an extensive environmental permitting process that help minimize the impact to birds and wildlife. While some birds do collide with wind turbines, far more suffer fatalities from cats, building collisions, car collisions, power line entanglements, and more. Habitat loss as a result of the changing climate and urban development also have a much greater impact on bird populations than wind farms.

WHO TAKES THE TURBINES DOWN?

If/when the wind farm is decommissioned, the lease contract commits the wind farm owner to removing all above-ground equipment and below-ground equipment down to five feet below grade. At any time in the project's life, RWE may decide to repower the wind farm, which consists of switching out turbine parts for a more powerful machine. This can extend the life of the wind farm. If the wind farm is to be decommissioned, the process will begin 12 months after the end of the project life (even in any early termination, which is unlikely) and conclude within 1.5 years. RWE will commit to demonstrating financial security to the county per the permitting requirements.



Wind Farms

Frequently asked questions

HOW TALL ARE WIND TURBINES?

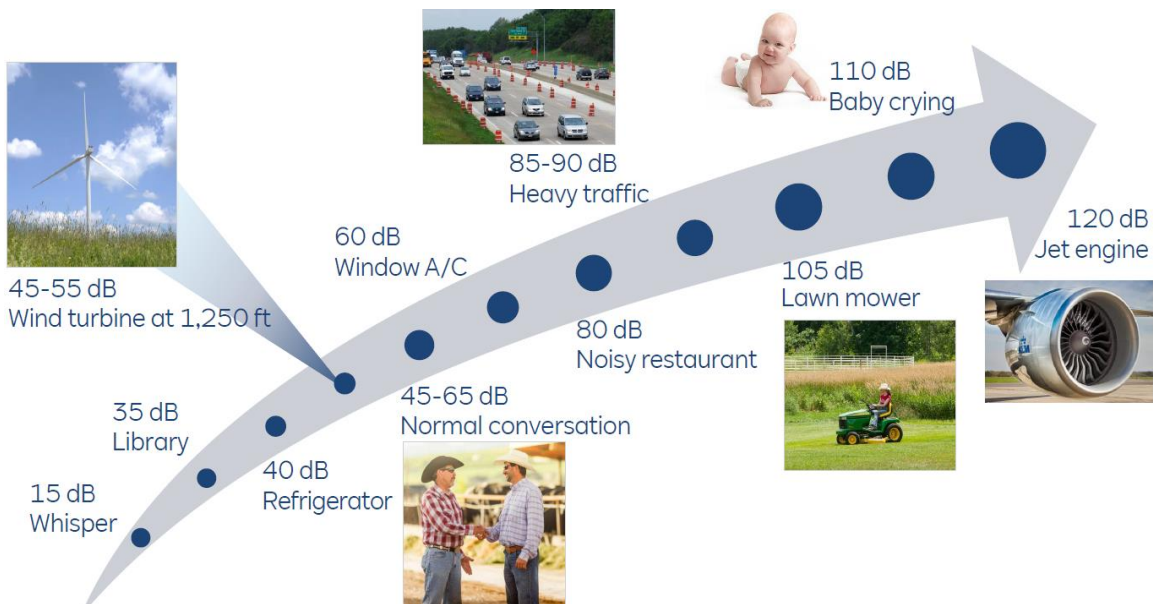
Modern wind turbines are typically between 490 feet and 650 feet tall at the tip height, or the height at the top of the blade at the 12 o'clock position. While that is taller than many other buildings in a rural landscape, the hub height, or tower height, is typically between 250 feet and 360 feet—so a lot of the height can be attributed to longer blades, which generate more power per turn. Taller turbines can also reach higher altitudes where the wind speeds are higher. Many modern buildings are much taller. The Trump Tower in Chicago is 1,388 ft tall, and the One World Trade Center in New York is 1,776 feet tall. In Des Moines, Iowa the 801 Grand Building is 630 feet tall. Height is nothing new and nothing to be afraid of.

WHAT IS SHADOW FLICKER?

Shadow flicker occurs when the sun is at the right angle for the turbine blades to cast a revolving shadow. It is a brief occurrence that is based on angles. It is not constant. Most ordinances guide wind developers to design the project for 30 hours per year of shadow flicker for homes that experience it. This is 5-7 min/day in ideal conditions. A National Academy of Sciences panel found that shadow flicker is “harmless to humans.”

I HEARD WIND TURBINES ARE NOISY. ARE THEY?

Wind turbines do produce some sound—mainly a “whoosh” as the blades cut through the air—but the volume is generally low and can blend in with other background noises, including the blowing wind. Modern wind turbines typically produce sound levels of around 45-55 decibels measured at a residence, typically at a distance of 1,250 feet (though this can vary by wind turbine model). This is a sound level similar to that of a quiet conversation or running refrigerator. Numerous studies have shown that the sound from properly sited wind turbines is not loud enough to cause adverse health effects.



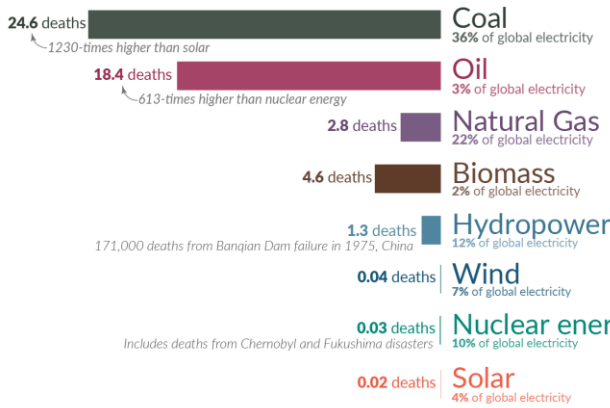
ARE WIND FARMS SAFE?

With over 71,000 wind turbines operating in the U.S., any health effects caused by their operation have been thoroughly studied. The scientific, peer-reviewed research to date has found no link between wind farms and adverse health effects. And, compared with other forms of electricity generation, wind energy is among the safest, cleanest sources.

What are the **safest** and **cleanest** sources of energy?

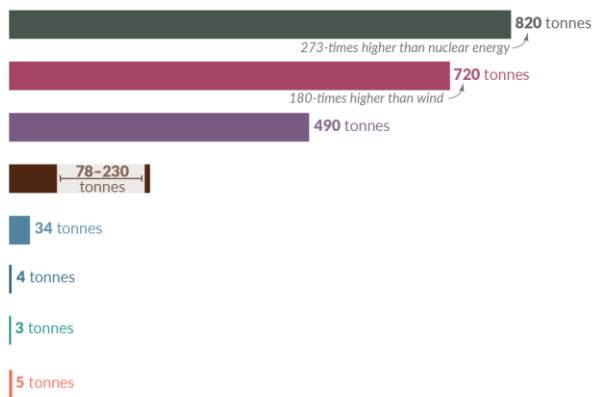
Death rate from accidents and air pollution

Measured as deaths per terawatt-hour of electricity production. 1 terawatt-hour is the annual electricity consumption of 150,000 people in the EU.



Greenhouse gas emissions

Measured in emissions of CO₂-equivalents per gigawatt-hour of electricity over the lifecycle of the power plant. 1 gigawatt-hour is the annual electricity consumption of 150 people in the EU.



DO WIND FARMS GET GOVERNMENT SUBSIDIES?

Wind energy doesn't receive subsidies but does receive federal tax credits. There is the Production Tax Credit (PTC), a credit for every kilowatt-hour of electricity produced, and the Business Energy Investment Tax Credit (ITC), a one-time credit based on the dollar amount of capital investments. Developers can select either the PTC or the ITC, but not both. There are also Advanced Manufacturing Production Tax Credits for companies that domestically manufacture/sell clean energy equipment, and an Advanced Manufacturing Investment Tax Credit, which are competitively.



Wind Farms

Frequently asked questions

HOW MUCH WIND ENERGY IS IN ILLINOIS ALREADY?

Illinois is home to several wind farms, with a total generation capacity of 7,300 MW. That’s enough to power over 2 million homes. There are over a dozen wind energy-related manufacturer companies in Illinois, most focusing on manufacturing the wind turbine tower and nacelle (where the motor is). These facilities and related concrete, electrical, and other companies employ about 9,100 Illinoisans.

Wind Energy in Illinois

7,300 MW

Installed wind energy capacity

9,100

Approx. number of wind energy jobs

Over 4.5 billion

Gallons of water saved by wind energy/year

Over 12%

Electricity generated by wind energy

DOES RWE HAVE ANY OTHER PROJECTS IN ILLINOIS?

RWE operates three wind farms in Illinois, in Iroquois, Ford, and Macon Counties. Between solar and wind, RWE operates over 600 MWs of electricity in Illinois (the majority of this comes from wind energy). That’s enough to power around 200,000 homes and create about 150 jobs. RWE is committed to investing in the State of Illinois.

RWE in Illinois – Radford’s Run in Macon County

305.8 MW	28,400-acre project boundary	90,000 homes powered annually
Over \$20 million spent on local labor	\$16.5 million on locally-sourced construction materials	Over \$20 million spent to upgrade roads
Over \$48 million paid to landowners over project life	Over \$46 million in tax revenue over 30 years	Over \$13.1 million spent through local businesses

CONCLUSION

Wind farms have brought tremendous benefits to their host communities and thousands of landowners across the country. Wind energy is compatible with farming, spurs job creation, and supports rural communities. Those who take the time to research it and look at a variety of sources (like university or public department studies), will see that it is safe, reliable, and beneficial. It is a commonplace form of electricity generation that is a critical part of the U.S. energy mix future.

