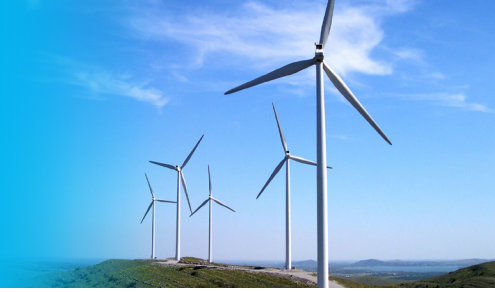
Property Values and Land-based Utility-Scale Wind Turbines



Utility-scale wind energy is the largest source of renewable electricity generation in the United States and is continuing to grow. There are approximately 70,000 wind turbines deployed across the U.S., capable of generating 139 gigawatts of clean, reliable electricity - enough wind power to serve 43 million American homes.[1] Wind energy deployment enjoys broad levels of support from the public and is perceived by most residents as providing an array of economic and environmental benefits.

However, a concern among some homeowners is the perception that wind turbine installations can reduce property values in an area.[2] Extensive research indicates this is not the case.

The wind energy industry is a driver of economic development – particularly in rural areas – and benefits communities by diversifying income sources on local landowners' property in addition to boosting the tax base, providing funds for schools, infrastructure, and community services. Wind energy projects across the U.S. deliver an estimated $1.9 billion in state and local tax payments and land-lease payments each year. Additionally, as of the second quarter of 2022, the industry supports approximately 120,000 in the United States. Further, jobs as turbine technicians experienced the second-largest growth of any job in the country in the last decade, and the industry employs veterans at a rate double the national average.

According to a 2022 peer reviewed study,[3] installation of wind energy projects led to economically meaningful increases in county-level gross domestic product (GDP) per-capita, income per-capita, median household income, and median home values – with the increases in county GDP and income beginning in the construction phase of wind energy development and accelerating during the operation phase.

The study also suggests that wind energy investments may stimulate and diversify local rural economies and the benefits of wind energy increase at an increasing rate with installed capacity – implying rural communities with multiple installations and a greater amount of wind energy capacity benefit the most.

Years of research into the impact of wind turbines on property values has found that there is no negative long-term impact to property values.

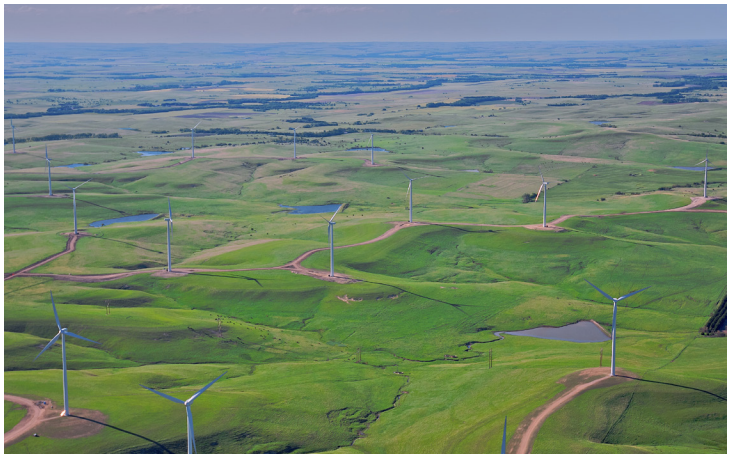
The 2022 analysis by Eric J. Brunner and David J. Schwegman[4] found that home values increase after a wind energy project has begun operating. It is important to note that the researchers estimate the impact of wind energy production on county-wide home values, not on homes in relation to distance from an individual wind turbine. Furthermore, the authors found this increase in home values is driven primarily by the impact of wind energy in rural counties, notably rural counties with a significant amount of installed wind energy generating capacity. The external economic benefits such as additional revenue to schools through the increase in tax revenue may be positively capitalized into home values.

In addition, 2019 analysis[5] of property values research in the energy sector was conducted by researchers at the University of California, Davis. The analysis found that studies on the topic of wind turbines and property values overwhelmingly find that wind turbines do not negatively impact property values at any point during their installment, including post-announcement, during construction and post-construction.

Further, a 2013 study[6] by the Lawrence Berkeley National Laboratory (LBNL), the most comprehensive study of its kind, similarly found no significant impact on the property values of the 50,000 homes researchers analyzed near 67 different wind facilities. According to the lead author Ben Hoen, *"This is the second of two major studies we have conducted on this topic [the first was published in 2009], and in both studies [using two different datasets] we find no statistical evidence that operating wind turbines have had any measurable impact on home sales prices."*[7]

Additionally, numerous other studies on wind turbines and property values have found similar results, installation of wind turbines does not lower property values in the area.

- In March 2022, Marous & Company[8] conducted a Market Impact Analysis for the Shenandoah Hills Wind Project in Fremont and Page counties, Iowa. The analysis was designed "to address the question of whether the development of the wind farm has an effect on the value of residential uses and/or agricultural land in proximity to the turbines." The authors conducted a survey of county assessors across 10 states in which wind farms are located (41 Iowa counties, 11 Minnesota counties, 20 Illinois counties, 5 Indiana counties, 7 Michigan counties, 3 Ohio counties, 6 New York counties, 21 Kansas counties, 8 South Dakota counties, and 5 West Virginia counties). They did not find any market evidence to support a negative impact on residential property values because of the development of and the proximity to a wind farm. They also concluded that there were no reductions in assessed valuations.
- The Center for Economic Development and Business Research at Wichita State University conducted a study[9] on behalf of a nearby Chamber of Commerce to investigate the impact of wind power projects on rural property value appraisals from 2002 to 2019. The study found no statistically significant impact on property values post-construction in rural Kansas.
- Several studies[10,11,12] explored the impacts of wind energy on agricultural land values. Two studies (Sampson et al. 2020 and Schultz et al. 2019) concluded that property values in Pennsylvania and Kansas are not impacted by turbine installation, while a third (Myrna et al. 2019) found evidence of an *increase* in the value of agricultural land. The researchers also found that lands that host wind turbines had a higher property value increase. Myrna et al. found that higher cumulative capacity of wind turbines in an area is associated with higher farmland transaction prices, with an approximately 0.004% increase in farmland sale prices for each 1% increase in wind turbine capacity.
- An Ontario-based study by Richard Vyn[13] highlighted the importance of local attitudes toward wind energy in shaping residential property values. Vyn compared communities that had expressed opposition to wind (through a municipal declaration against wind) with unopposed communities. He found that the impact wind turbines have on property values may be influenced by local attitudes toward wind energy development. It is important to note that a study of attitudes towards wind turbine neighbors conducted by LBNL found that 92% of people living within five miles of a wind turbine reported positive or neutral experiences.[14]
- Researchers at the University of Oklahoma conducted an analysis[15] of 23,000 residential real estate records in five counties in Western Oklahoma, exploring the sale price of platted and unplatted properties before announcement, after announcement, and after turbine construction. They found that there is no significant decrease in property values for homes or unplatted property near wind farms. Among plots of unplatted land between 0.5 - 1 mile away from turbines, the median sale price *increased*, both after announcement and after construction.



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