

Economic Impacts of Renewable Energy in Indiana

Dagney Faulk, Ph.D.

dgfaulk@bsu.edu

Center for Business and Economic Research

Ball State University

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INDIANA RENEWABLE ENERGY

Siting through Technical Engagement and Planning (R-STEP™)



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THREE INDIANA-FOCUSED STUDIES

- Impact of...
- Renewable energy restrictions on economic outcomes
 - Indiana counties with and without wind and/or solar restrictions
- Utility scale wind projects on residential property values
 - Indiana MLS data, properties within 5 miles of a turbine
- Utility scale solar projects on residential property values
 - Indiana MLS data, properties within 4 miles of a solar project

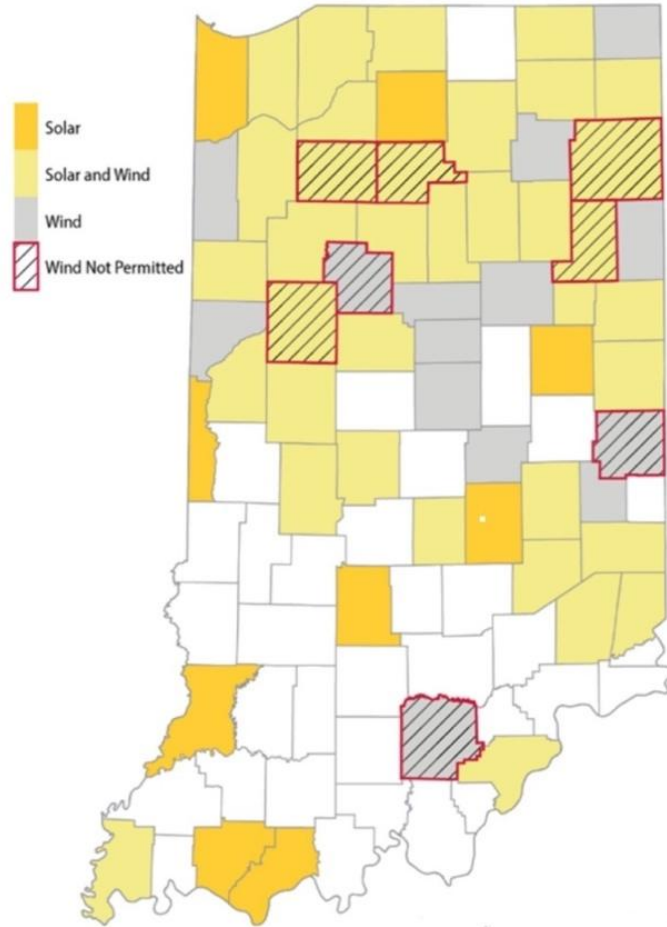


IMPACT OF RENEWABLE ENERGY RESTRICTIONS

- **BY HICKS, FAULK, ORZECOWSKI AND PAYTON (2026)**
- Renewable Energy Restrictions include setbacks and height limits, shadow flicker limits, signal interference limits, sound level limits, light mitigation, drainage, decommissioning, moratorium
- Examined GDP, employment and fiscal measures (tradeoffs)
- Used a Hedonic Difference in Difference statistical method: Control and Treatment groups and outcomes before and after treatment



LAND USE REGULATIONS ON WIND AND SOLAR ENERGY PRODUCTION (MAP)



Source: Ogle and Salazar (2021)



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IMPACT OF RENEWABLE ENERGY RESTRICTIONS (FINDINGS)

- Counties adopting renewable energy restrictions experienced **weaker economic performance** than counties without restrictions.
 - Manufacturing and Transportation/warehousing job losses of 8,954 in counties with restrictions
 - Ag job gains of 113
 - Net loss of 8,841 jobs
- Aggregate net GDP loss of \$204 million in counties with restrictions
- Gain of \$13 million in adjacent counties' GDP => relocation of economic activity
- Slower growth in property assessed value in counties with restrictions.
- These estimates are lower bounds.



WHY WOULD LARGE WIND AND SOLAR PROJECTS AFFECT PROPERTY VALUES? EXTERNALITIES

- An externality is an economic side effect of an activity that helps or hurts a third party who did not choose to take part in the activity, an unintended consequence.
- May negatively or positively impact the third party.
- An **amenity/disamenity** is a property characteristic/feature that **increases/decreases** property value.

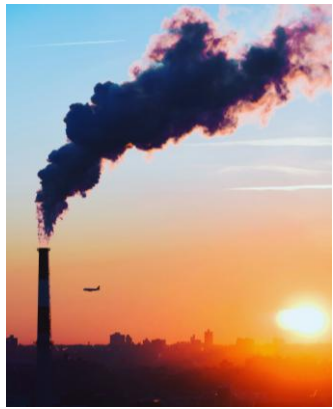


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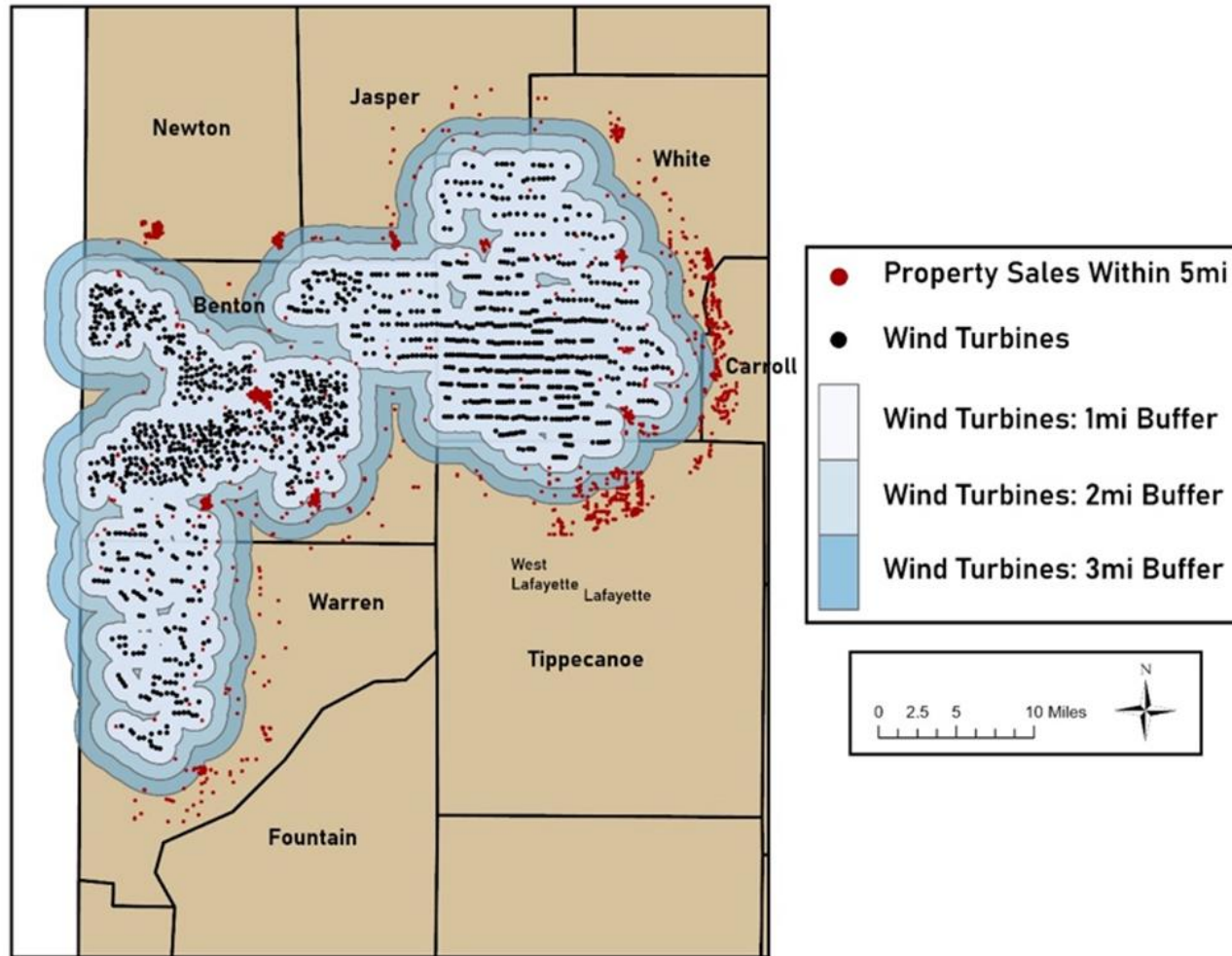
MEASURING PROPERTY VALUE IMPACTS OF EXTERNALITIES:

COMMON METHODS OF ANALYSIS

- **Paired Sales Analysis** — Direct comparison of sale prices of similar properties that are adjacent and farther away from amenities or (dis)amenities.
- **Hedonic Analysis** — Econometric (regression) model separating the price of a house into the value of each characteristic (e.g., number of bedrooms, square footage, basement, and certain location characteristics including amenity or disamenity).
- **Hedonic Difference-in-Differences Analysis** — An econometric approach using the base hedonic approach, but with treatment (test) group and control groups (or multiple spatial treatment groups) before and after a certain event (siting of a solar or wind facility).
- **Event Studies** — Examines change in house price over time controlling for house characteristics and distance from disamenity.

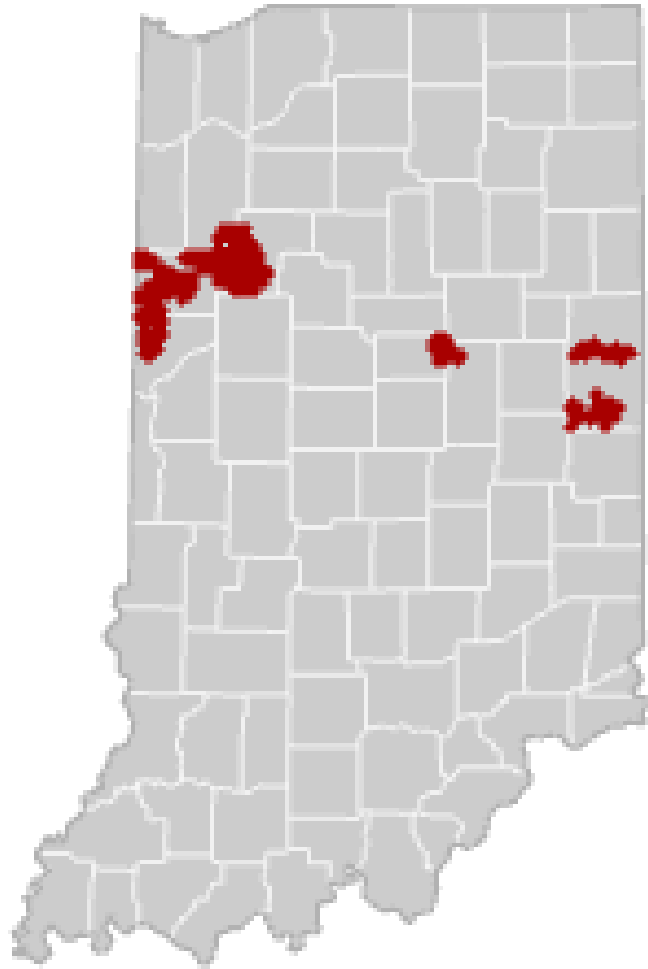


WIND TURBINES AND PROPERTY TRANSACTIONS (DATA USED IN BSU CBER STUDY) NORTHWEST REGION

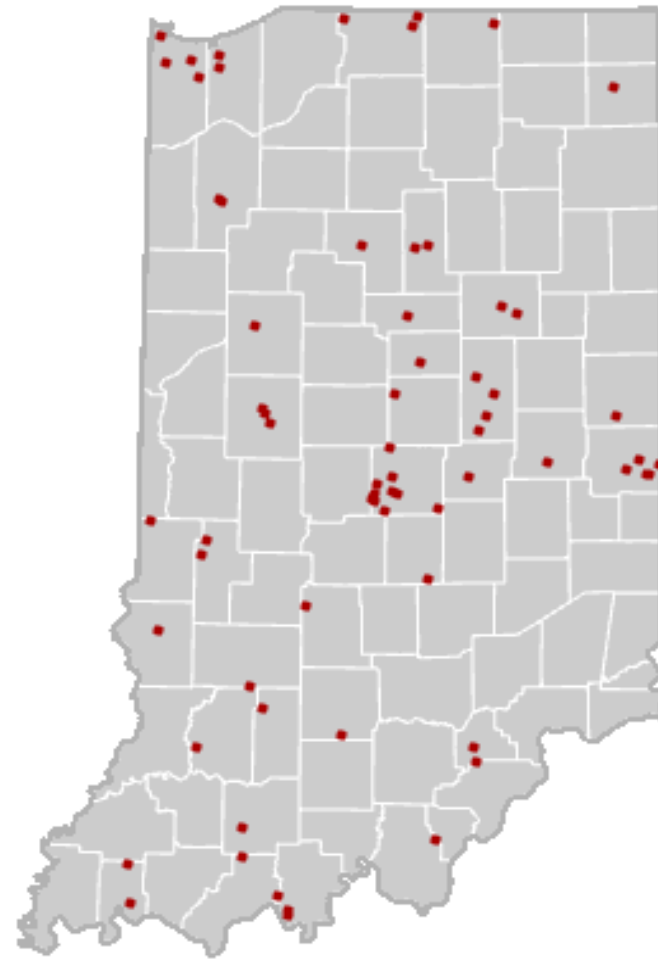


LOCATION OF UTILITY-SCALE WIND AND SOLAR PROJECTS

Wind



Solar



UTILITY SCALE WIND AND SOLAR PROJECTS AND PROPERTY VALUES: FINDINGS (1)

Does Proximity to a Wind Turbine or Large Solar Project Negatively Affect House Values?

The results of the hedonic models reveal no statistically significant negative effects of large wind or solar projects on home prices in Indiana.

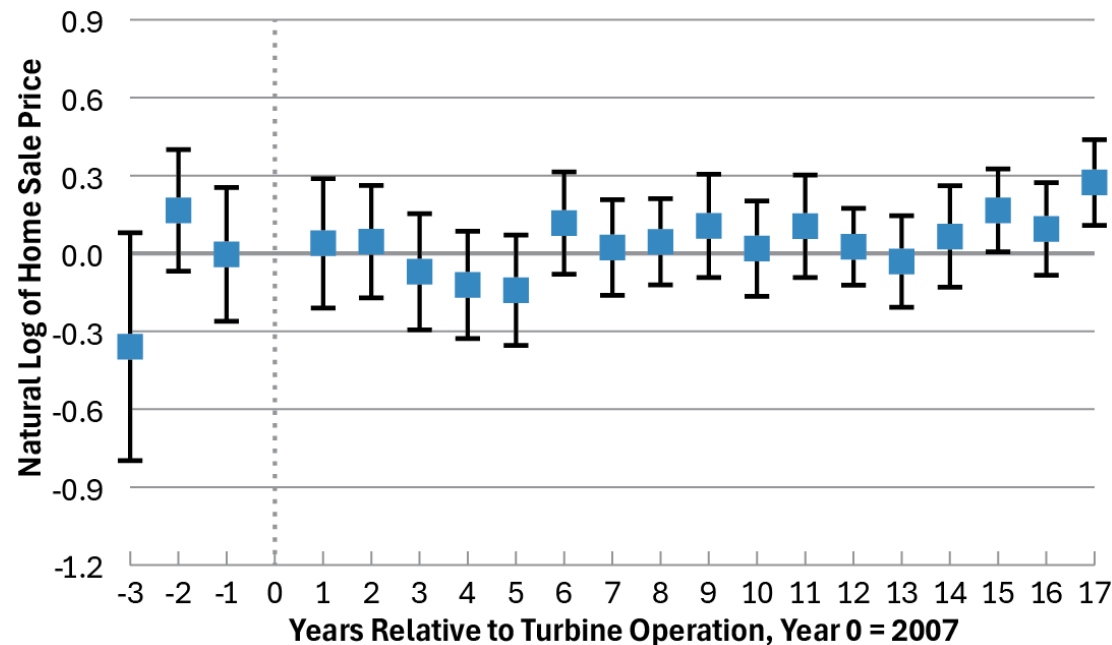
Does Wind Turbine Density Affect House Values?

In the East Central and Northwest regions, the number of wind turbines in close proximity does not appear to affect the sale price of a home. In the North Central region, the number of turbines within 2 and 3 miles of a home does affect sale price, but we believe this result may be a false positive



UTILITY SCALE WIND AND SOLAR PROJECTS AND PROPERTY VALUES: FINDINGS (2)

- Does the Impact of Wind Turbines and Large Solar Projects on House Values Vary Over Time?
- *Event studies provide no evidence that wind or solar projects negatively affect the sale prices of homes over time.*
- Event Study: Home Prices within 1 Mile of Nearest Wind Turbine, Northwest Region, 2004-2024



UTILITY SCALE WIND AND SOLAR PROJECTS AND PROPERTY VALUES: FINDINGS (3)

Does Solar Project Capacity Affect House Values?

Homes within 0.5 miles of smaller solar projects sell for 5.7% more than similar homes that are 2 to 4 miles away, while homes near larger solar projects sell for 6.2% less than similar homes 2 to 4 miles away.

Do Solar Projects Have a Different Effect on House Values in Rural or Urban Areas?

The results for Indiana show no statistically significant difference in the sale price of homes near solar projects in rural or urban areas.

Do Solar Projects Located on or near Brownfields Have a Different Effect on House Values?

We find no evidence that solar projects located near brownfields have an effect on the average sale price of nearby residential properties in Indiana.



UTILITY SCALE WIND AND SOLAR PROJECTS AND PROPERTY VALUES: FINDINGS (4)

Does the Type of Power Provider Affect House Values?

We find that home sales near investor-owned utilities experienced price increases after the solar project became operational, relative to homes 2 to 4 miles away.



CONCLUSIONS

- The results of the hedonic models and event studies reveal **no statistically significant negative effects** of large wind or solar projects on home prices in Indiana.
- The exception is homes located near large solar projects (>3MW), but this result is not definitive.
- There is no difference in sale price for urban and rural areas or solar projects near brownfields.
- Sale price is higher for homes near solar projects owned by investor-owned utilities.



REFERENCES

Renewable Energy Restrictions (BSU CBER Study)

Hicks, M.J., Faulk, D, Orzechowski, S., and Payton, S. 2026. [Towards the Economic Effects of Renewable Energy Restrictions: Evidence from Indiana, USA](#) Ball State University, Center for Business and Economic Research. (Report)

[Understanding the Economic Effects of Renewable Energy Restrictions: Evidence from Indiana, USA](#), Brief no. 1 (summarizing report).

Link to Mike's webinar explaining this study

https://mediaspace.itap.purdue.edu/media/The+Economic+Effects+of+Local+Renewable+Energy+Restrictions/1_7c4uwyh9?_ga=2.239180547.149923459.1777404416-1130261437.1762291529



REFERENCES (CONTINUED)

Impact of Utility-Scale Wind and Solar Projects on Property Values (BSU Studies)

Faulk, D., Hicks, M.J., and Payton, S. 2026. [A Hedonic Analysis of Wind Power Facilities in Indiana](#). Ball State University, Center for Business and Economic Research.

Niekamp, P., Faulk, D., and Hicks, M.J. 2026. [A Hedonic Analysis of Large-Scale Photovoltaic Projects in Indiana](#). Ball State University, Center for Business and Economic Research.

Faulk, D., Niekamp, P., Hicks, M.J. 2026. [Indiana Renewables and the Residential Real Estate Market](#). Ball State University, Center for Business and Economic Research. (brief that summarizes two technical studies)

Upcoming webinar presenting these reports on September 16.

[APA-Indiana - Indiana Renewables and the Residential Real Estate Market](#)
(registration link)

