

The Cost of Saying No: Ohio SB 52 and Renewable Energy Development

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Introduction

ON October 11th, 2021, Ohio Senate Bill 52 (SB 52) took effect, subjecting large solar and wind farm projects to review by county commissioners and allowing said commissioners to create exclusion zones within their respective counties. The bill was sponsored by Senators Rob McColley (R) and Bill Reineke (R) and was signed into law by Governor Mike DeWine (R). This new step is in addition to the previous rigorous application process handled by the Ohio Power Citing Board, which requires multiple application letters, public notices, and a public hearing. Because counties can now restrict renewable energy development within their borders, we can examine the specific economic impacts on GDP and the value of housing of a county's decision to restrict. Figure 1 shows the counties that have created these exclusion zones where large solar and wind projects are prohibited, and Figure 2 shows when each county enacted their restrictions.

Ohio Counties with Exclusion Zones for Solar and Wind

Counties in blue enacted restrictions under Ohio SB 52

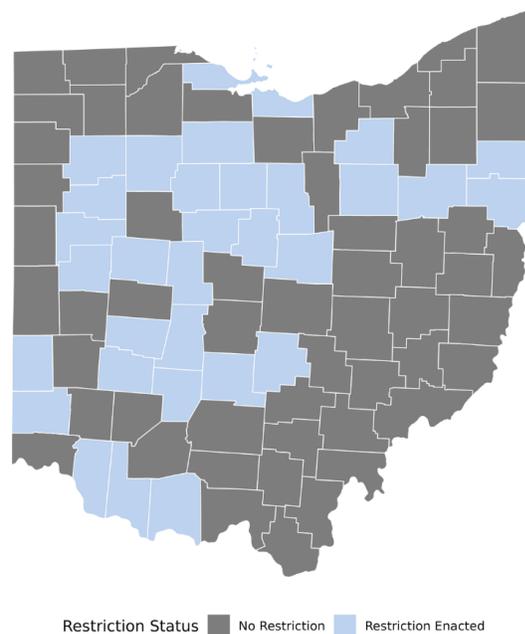


Figure 1: Ohio counties with solar/wind restrictions (as of 9/30/25), self-made restrictions dataset.

Large-scale wind and solar projects are viewed in many rural Ohio counties as disruptive intrusions into long-established agricultural and residential landscapes, as well as a threat to household wealth and property values. Supporters emphasize the aesthetic impacts of solar and wind on rural landscapes, fears about soil and water contamination from materials such as crystalline cadmium telluride in solar panels, and the belief that converting cropland to energy production represents a near-permanent loss of farmland, as reflected in claims that “those fields will never be farmed again” and that “it takes 100 years to restore an inch of topsoil” (Barnet, 2023). What’s more, opponents of large-scale renewable projects often argue that these perceived land-use and environmental risks may manifest as lower property values. There is some evidence for this: “A study from the Lawrence Berkeley National Laboratory found that homes near large solar farms do have lower resale values, though only by 1.5%” (Gottsacker, 2025). The decision to restrict is framed as a way to protect rural character, farmland, and property values in Ohio’s rural counties.

Activism groups, such as Ohio Citizen Action, have opposed the law, claiming that “the added restriction places an unfair burden on renewable energy development, while fossil fuel projects remain largely unaffected.” Opponents of the bill argue that these restrictions infringe on the rights of farmers living on or near affected land to decide how best to use their property. Further, these restrictions prevent developers and landowners from freely contracting over renewable energy projects, artificially constraining consumer and supplier choice and hiding the true demand and economic value of wind and solar. There are also real economic benefits to allowing wind and solar farms to be built in these counties. Counties that choose to welcome renewable energy projects generate revenue that helps fund libraries, police forces, parks, and their education system. In Paulding, they “now have a library system ... in every town” and “a very active parks board that [they] didn’t have before” (Gottsacker, 2025).

While there have been intensive discussions and research about the economic value of renewable and non-renewable energy in Ohio in general, there has been little analysis yet on the impacts of SB 52. We aim to assess how renewable restrictions may be related to home values and GDP.

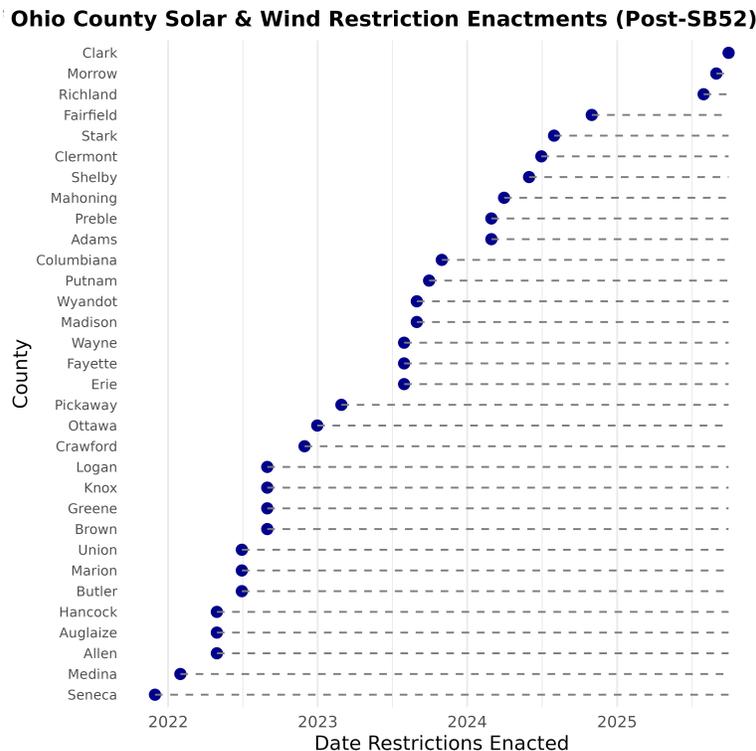


Figure 2: Timeline of solar & wind restriction enactments in Ohio by county (Post-SB52), self-made data-set.

Literature Review

The current view of renewable energy projects by the Ohio Chamber of Commerce informs our analysis of this bill. In recent years, the Ohio Chamber of Commerce’s views on renewable energy has changed. Although opposed to renewable energy projects initially, they now recognize the economic benefits of a statewide initiative on energy and disagree with SB 52. They explain that numerous highly-ranked companies that could provide jobs and tax revenue for Ohioans may choose renewable energy generated outside of the state, rather than in-state non-renewable energy, if given a choice. A brief published by Kingwood Solar notes that “denial of renewable project applications may jeopardize Ohio’s future economic growth and energy stability.” SB 52 could stall economic growth in the energy sector, and therefore growth for the whole economy.

Economist Colton Smith explains, “while renewables such as solar and wind do create problems such as land and habitat losses, high water use, and the use of potentially hazardous materials in the manufacturing process, the benefits of sustainable electricity generation, acid rain declines, emissions reductions, and climate change mitigation still outweigh these costs, especially when compared to the alternatives.” Smith suggests that Ohio should not put as many restrictions on wind and property lines and should protect the state’s renewable energy portfolio (Smith, 2018).

In his dissertation on the impact of renewable energy adoption on state-level housing prices, Checchi finds that solar and geothermal energy have opposite associations with housing prices. Using fixed-effects and instrumental-variable estimation, he reports a positive correlation and causal effect of solar energy consumption on housing prices, and a negative correlation and causal effect of geothermal energy consumption (Checchi, 2024).

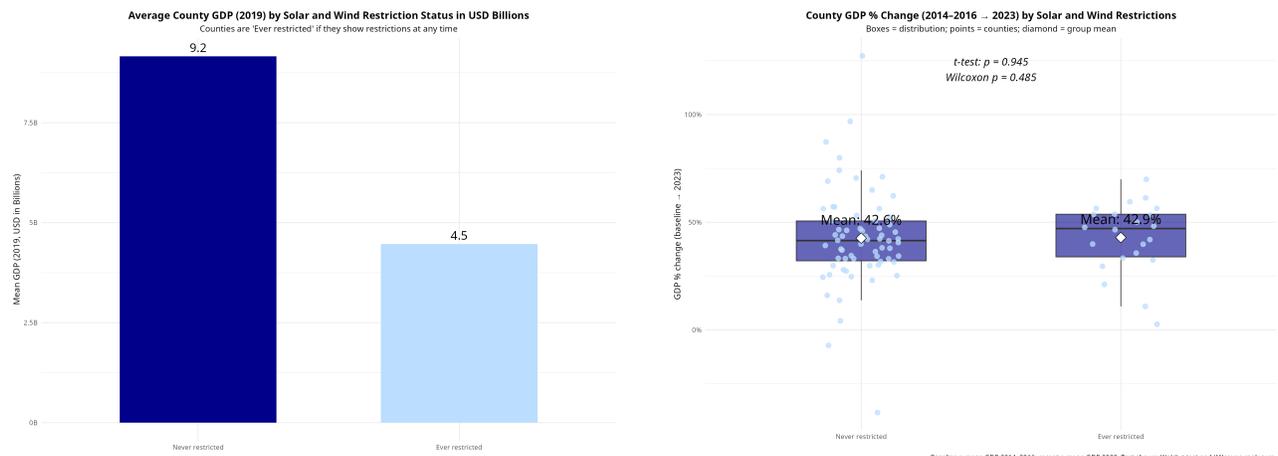
Data and Methods

To obtain an up-to-date and thorough dataset on individual county restrictions, we completed deep research into each county’s current policy on wind and solar farms. This research included scouring local news sources and county websites, as well as cross-checking with a map created by the Ohio Citizen Association, documenting counties with restrictions that impacted five townships or more as of 2023. We, however, decided to consider those who enacted any restrictions to be a “restricted county.” We then found the dates when each of the policies was enacted, giving us a clear timeline of the bill’s outcome. County enactment dates are shown in Figure 2.

For our analysis, we chose to look at variables that are likely to respond relatively quickly to changes in renewable energy restrictions and that are available from datasets that are updated regularly. We obtained annual county-level GDP from the Bureau of Economic Analysis, and we use Zillow’s Home Value Index (ZHVI), updated monthly and at the county-level, as a measure of property values. Using county GDP data from before the passage of Senate Bill 52, we first examine whether counties that eventually adopted restrictions differed systematically from those that did not. We then use changes in GDP and median housing values after the adoption of county restrictions to test whether restricting is associated with different economic trends. Additionally, we run both a t-test and a Wilcoxon signed-rank test to determine if the differences between counties that did or did not restrict are statistically significant. We selected a Wilcoxon signed-rank test because it was less impacted by outliers than a paired t-test, and counties with cities and urban populations were major outliers in our GDP analysis.

Analysis

We use county GDP to compare the overall scale of economic activity in restriction and non-restriction counties. Because we use total GDP rather than GDP per capita, our measure reflects changes in aggregate output and may partly capture differences in population growth or industrial structure, rather than changes in economic well-being per resident. In the left panel of Figure 3, the mean GDP in 2019 is shown for the counties based on their current restriction status. Counties that have never restricted themselves have a much higher average GDP. This could be due to outlier counties such as Cuyahoga County or Franklin County, which have a much higher GDP and did not enact any restrictions, as most wind and solar developers do not wish to build large projects in metro areas. The counties with lower GDP are often in rural, more conservative areas, which accompanies the decision to restrict renewable energy for two major reasons: these areas are the most likely to be impacted by large solar and wind farms, and this bill was championed by conservative politicians who earn higher support in rural areas.



(a) Average County GDP (2023) by restriction status.

(b) County GDP % change (2019–2023) by restriction status.

Figure 3: County GDP levels (2023) and GDP growth (2019–2023) by solar and wind restriction status.

Table 1: County GDP% Change 2014-2016 → 2023

Group 1	Group 2	Mean Group 1	Mean Group 2	T Statistic	DF	P Value
Never Restricted	Ever Restricted	0.426	0.429	-0.07	50.18	0.945

In the right panel of Figure 3, we compare the change in GDP from a 3-year period well before SB 52 to 2023, two years after SB 52. We chose these years as we wanted our base year to predate COVID-19, as some counties were hit harder than others, and our ending year to be the closest possible to 2025. It should be noted that for this graph specifically, we only counted counties that enacted restrictions before 2024 as “restricted.” Counties that restricted had, on average, a 0.3 percentage point higher change in GDP over the selected years. The large p-values from our significance tests determine that this difference is statistically insignificant at the 5% level. One major limitation of this visualization is the fact that we only have two years of GDP data post-SB52. This means that it is possible that in future years, the decision to restrict could have a larger impact than we can not yet determine.

In Figure 4, we use home values as an indicator of the effects of restricting. Before SB 52 was passed in 2021, the average median housing value yearly was higher for counties that had restrictions enacted compared to those that did not. The two lines seem to follow a fairly similar trend prior to SB 52’s passage. After SB 52 was passed into state law, the difference in average median home values between counties that have passed restrictions and those that have not has widened slightly. Counties that have used SB 52 to restrict the development of renewable energy farms have average median home values that are increasing at a higher rate than those with no restrictions. This would support the fears many Ohioans had about solar and wind farms: the creation of these renewable energy farms will hurt housing values. However, there are limitations to this analysis. First, the restrictions in each county were enacted at different times after the bill was passed, so a staggered difference-in-differences approach would be necessary to estimate any possible effect. Second, there could be other factors that have influenced home values in these counties. Finally, by giving each county equal weight, the comparison does not account for differences in population size between counties or the number of households affected.

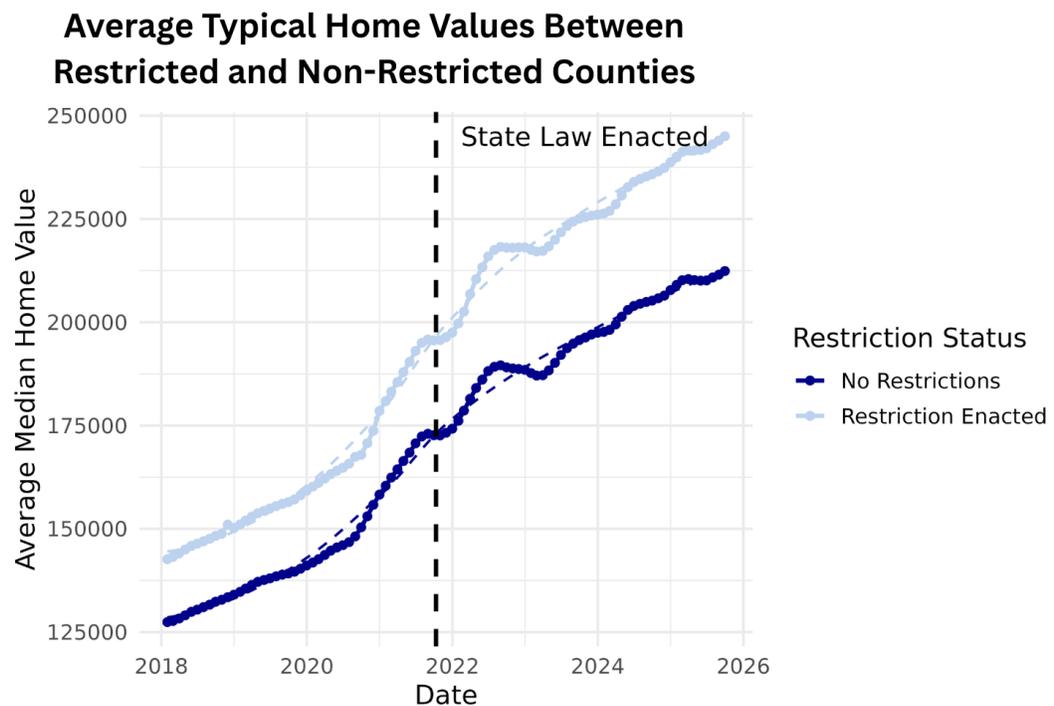


Figure 4: Average typical home values between counties with and without restrictions.

Conclusion

Our analysis of economic data on a county-by-county basis has given us insignificant results for the correlation between GDP, median housing value, and the restriction status of counties. We have, however, gained insights into which counties restricted and why they did. Counties that restrict tend to be rural and have lower total GDP. Ohio Senate Bill 52 has only been in effect since 2021. Many solar and wind projects in counties without restrictions that are currently being built or will be built in the future are not yet causing economic impacts. As renewable energy is becoming increasingly popular, the differences in the economies that allow and those that restrict renewable energy will become clearer. Our analysis of the effects of the bill is exploratory, and we cannot draw any strong conclusions. In the future, we are interested in re-running our tests with more data after restrictions have been enacted for longer periods of time. Additionally, a staggered difference-in-difference model could be used to estimate the causal effect of restrictions. Extensions from this project could include an analysis of the effect of only restricting renewables or, alternatively, only restricting fossil fuels in different areas, or an analysis of the statewide impacts of these restrictions in the long run.

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