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Study: Solar projects driving down home values in R.I. suburbs

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PROVIDENCE — Opponents of the development of large solar installations in rural and suburban Rhode Island argue that sprawling tracts of photovoltaic panels mar the character of their communities.

They worry that in many cases construction of the industrial energy projects mean clear-cutting acres of woodlands or building in open fields, leading to a loss of prime green space.

Now, it looks like they have something else to be concerned about.

After analyzing thousands of property sales in Rhode Island and Massachusetts over a decade and a half, economists at the University of Rhode Island have concluded that solar development is having a negative impact on nearby home values.

Corey Lang, associate professor of natural resource economics, and doctoral student Vasundhara Gaur found that prices of homes within a mile of a solar installation declined by 1.7%. Homes within a tenth of a mile went down by 7%.

Some of the largest impacts were in suburban communities when a solar project was built on a farm or forested property. In those instances, housing prices within a mile of the array dropped by 5%.

“In those non-rural areas there aren’t many large blocks of farmland or forestland,” Lang said. “It’s a scarce resource. When that’s developed into solar, it’s felt by the community. You’re losing green space and also adding an industrial viewscape.”

About five years ago, solar development in Rhode Island took off [after the passage of state laws that sweetened incentives](#) and with the Raimondo administration’s adoption of ambitious targets for renewable energy.

Rhode Island saw a 23-fold increase in the amount of electricity generated by in-state solar projects between 2008 and 2017, according to one state report. The pace of development has picked up in the last three years, with notable projects in Hopkinton, West Greenwich and Cranston.

In June, North Kingstown-based Green Development got approval to build Rhode Island’s largest project, a 38.4-megawatt installation on 160 acres of previously undeveloped land in North Smithfield.

But even as projects move forward in green spaces — which are often the easiest and cheapest to develop — the state is trying to encourage more installations in urban and industrial areas. Last year, grants were created for solar projects on contaminated industrial sites and earlier this year [an incentive was put in place to direct more installations to parking lots](#).

A [report commissioned by the state estimated](#) that the solar potential on rooftops, closed landfills and gravel pits, brownfields, commercial and industrial land, and parking lots could meet the electric demand of every home in Rhode Island.

But with development costs still lower in rural areas and with Gov. Gina Raimondo [doubling down on her commitment to renewable energy](#), there’s no sign of things slowing down in non-urban parts of the state.

In their analysis, Lang and Gaur reviewed 420,000 housing transactions between 2005 and 2019 within three miles of any of the 284 sites where a solar array would be installed.

They looked at how prices changed before and after installation of the project and found that property values within one mile declined on average by \$5,741. It’s not a large number, Lang acknowledged, but if the loss in value is totaled for all the properties around all the solar installations the figure climbs to \$1.7 billion.

Other studies on the impact of energy installations on property values have presented a mixed bag. A University of Michigan economist [determined that properties around power plants that opened in the 1990s lost 3% to 5% of their value](#). But more recently Lang couldn't find any effect on home prices from wind turbines installed in Rhode Island.

As for the solar analysis, Scott Millar, director of community assistance and conservation at Grow Smart Rhode Island, a group that is calling for restrictions on solar development in open spaces, said he wasn't surprised by the findings.

"Many homeowners have been asserting that their property values would be negatively impacted by utility-scale solar and this study confirms their concerns," he said. "A utility-scale solar development is clearly not a compatible use within an established residential area."

To understand the net benefits of solar power, Lang and Gaur calculated the reductions in carbon emissions from installations. They found that the value of the reductions were far outweighed by the losses in values to nearby homes. (Their findings can't be generalized to other states because of differences in housing density and sources of power generation.)

"It doesn't change my mind that we need to be transitioning to renewables," said Lang. "It does give me pause about the current siting practices."

He made the case for locating solar projects away from homes and outside of suburban areas.

"If you take those steps, the benefit-cost analysis will look a lot better," Lang said.

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