

Is it NIMBYism or Land Use Priorities that Drive Utility-Scale Solar Siting Preferences? Evidence from a Municipal Referendum and Survey Experiment

Corey Lang¹, Vasundhara Gaur², and Stephanie Erlacher¹

While solar energy receives broad support in general, utility-scale solar arrays can be extremely contentious at the siting stage because it is no longer an abstract idea but a change in local conditions replete with potential disamenities and tradeoffs. Opposition to utility-scale solar can is sometimes dismissed as NIMBYism, but it is likely that people may be expressing more complex preferences for land use. In southern New England, utility-scale solar is often sited on farm or forest land due to cost advantages, but this in turn diminishes amenities and ecosystem services.

To delve into this issue, we take advantage of a municipal referendum held in North Kingstown (NK), Rhode Island related to solar energy. While the referendum was actually about the length of the lease for a solar development on town land, the referendum wording was opaque and largely interpreted as whether or not solar should be built on town land.

We developed an exit poll survey that had two key elements. First, we asked people how they just voted on the solar referendum. The goal of this first question is to understand individual-level determinants of support. Second, we asked them whether they would approve a hypothetical solar development. For the hypothetical question, we randomized whether the respondent saw a proposal for rooftop solar in NK or solar replacing forest in another Rhode Island town that is far away. The goal of the second question is to distinguish between NIMBY attitudes and land use preferences. If NIMBY attitudes are dominant, then respondents will prefer the solar project in the far away town, but if land use preferences are dominant, then respondents will prefer the solar project in their own town on rooftops.

Our results from OLS estimations show that the primary determinants of support for the (real) solar referendum are political affiliation (Democrats and Republicans are more likely than Independents to approve the proposition), higher trust in the government, positive attitudes towards solar energy, the belief that climate change is anthropogenic, being a homeowner in NK, and older age. Regarding our second question, we find that respondents who randomly received the (hypothetical) proposal for rooftop solar in their own town are more likely to approve the referendum than those who received the solar proposal in the far off town. This indicates that it is land use concerns and not NIMBY attitudes that drive respondents' preferences for solar projects in NK. We also find that respondents with graduate degrees and those with positive attitudes towards solar energy are the ones who are most likely to be swayed by land use concerns.

¹ University of Rhode Island

² University of British Columbia