



Localizing the green energy revolution

Hannah Wiseman
February 2, 2021

As President Biden continues to roll out [executive orders](#) prioritizing climate change, it is increasingly clear that there will be a relatively rapid U.S. shift toward renewable energy from the sun, wind and other sources.

Indeed, [many states](#) are already pushing ahead with ambitious renewable and clean energy policies. These policies will reduce air pollution, spur extensive economic development in rural areas and make progress on the climate front.

This “[revolution](#),” as Biden calls it, is critical. But the bulk of renewables that have been built in the United States are large, centralized projects requiring thousands of miles of transmission lines — primarily in [rural communities](#). A revolution that continues to prioritize these projects risks failure. It threatens to create an infrastructural path dependence like the one that “master builder” Robert Moses [sparked](#) in the 1950s. The federal highway network inspired by his plan led the United States to rely primarily on cars rather than trains and other public transit. This substantially divided communities, particularly along racial lines.

A primarily large-scale energy approach could also broaden rural opposition to Democratic policies. In most states, local governments [control](#) large and small renewable energy installations and resistance is growing to their development. Many towns and counties have substantially delayed or temporarily or permanently [banned](#) such development, citing aesthetics and other nuisances. A large-scale approach to renewables could expand this resistance and reinforce [President Trump’s assertions](#) that Democrats represent “Wall Street bankers and special interests,” not everyday people.

Residents often perceive large-scale renewable energy projects as big corporate endeavors that overtake small towns. Indeed, the world’s [largest](#) electric utility owns approximately 16 percent of the U.S. wind market. It has been a leader in constructing path breaking wind farms in rural areas around the United States, but not without [objection](#). And an extensive rollout of large-scale renewable energy would require roughly [doubling](#) this country’s 200,000 miles of electric transmission lines. Such lines are ugly and fragment habitats and landscapes; burying them is an option, but an [expensive](#) one.

A better path would more clearly prioritize localized or distributed energy — solar panels over homes, businesses and parking lots, for example — and rapidly expand energy efficiency programs, like weatherizing. Large-scale renewables are necessary too, but an energy revolution

should focus on “small” energy first. A recent Biden executive action toward building [1.5 million](#) new energy efficient homes is a good start, but much more is needed in this same vein.

Rather than dividing communities, a federal energy policy focused more centrally on localized energy would place power directly in the hands of residents. Rooftop solar and energy efficiency programs lower consumers’ electricity bills. If we target and support the right populations — specifically, low-income consumers — we will alleviate energy burdens for millions of people. Weatherizing homes and installing efficient air conditioning units and heat pumps will also improve residents’ [health](#) by reducing illness and deaths from extreme weather and poor air quality.

Beyond its beneficial outcomes, an extensive rollout of rooftop solar and energy efficiency is likely to be more politically feasible than a “big energy” approach. This policy area tends to unite [libertarian](#) and liberal voters because it connotes independence from big, government-regulated utilities as well as environmental conservation. And it is practical, especially in rural areas, where moving electricity from large power plants to individual homes is inefficient. Another bonus: Small-scale power creates installation and maintenance [jobs](#) in local communities.

Prioritizing small green energy measures over big ones is not a pipe dream. The Department of Energy (DOE) [estimates](#) that solar panels on existing buildings could meet about 40 percent of U.S. electricity needs. This estimate does not account for millions of miles of highways and other existing infrastructure that could support additional renewable generation.

Some large-scale renewable energy installations and transmission lines are needed to fill gaps that small ones can’t. But we can ensure that big renewable projects are less objectionable to communities. To achieve this, green energy policies should first target former industrial and commercial sites, as [New York](#) does, and low-productivity farms and other marginal lands with adequate wind and sunlight.

As federal and state governments contemplate sweeping efforts to replace our aging energy infrastructure, the United States is at a critical crossroads. This time, we should get it right.

Hannah J. Wiseman teaches energy and land use law at The Pennsylvania State University, University Park and is a member scholar of the Center for Progressive Reform.

<https://thehill.com/opinion/energy-environment/536941-localizing-the-green-energy-revolution>