

Power of Place National

The U.S. can build the clean energy infrastructure needed for economy-wide, net-zero emissions by 2050 while avoiding most impacts to sensitive natural and working lands.



Power of Place: A Nationwide Decarbonization Study

To reach the goal of net-zero carbon emissions in the U.S. by 2050, we must transition to a clean and equitable energy economy. To do this, we need to increase our renewable energy capacity almost four times and expand high-voltage transmission capacity by roughly 60%. As the renewable energy buildout advances, this related infrastructure will touch down in landscapes and communities virtually everywhere. While there are numerous environmental and social benefits associated with this development, there are also tradeoffs for nature and people. If we don't account for these tradeoffs and plan accordingly, resulting conflict could substantially slow progress on the clean energy transition.

Power of Place is a visionary study that outlines a practical methodology for decarbonizing our nation while minimizing land-use footprints and costs. It is designed to assist energy planners and decision-makers at all levels of government in identifying pathways to achieve net zero by 2050 while prioritizing people and nature. **The study demonstrates that with early planning and the right incentives, we can minimize tradeoffs and maximize benefits for climate, nature, and people.**

The *Power of Place–National* report is available at www.nature.org/powerofplace



Fast Facts

■ CLIMATE

To reach net-zero nationwide by 2050 with current clean energy deployment practices, we will need a land area the size of Texas to build out new wind, solar, and transmission. By planning with the *Power of Place* approach and adopting the right policies, it's possible to dramatically reduce environmental impacts.

■ CONSERVATION

Power of Place finds that there are sufficient suitable, cost-effective sites to build the clean energy infrastructure we need while protecting the majority of sensitive wildlife and habitat.

■ COMMUNITIES

Power of Place finds that roughly 30% of the 2050 electric portfolio could be hosted by communities that have historically been economically driven by the fossil fuel industry, creating clean energy opportunities in areas home to nearly 23 million people.

■ CROPS

Under current siting practices, roughly 6,000 square miles of highly productive croplands would need to be converted to renewable energy to meet decarbonization goals. By mindfully selecting clean technologies and incentivizing agrivoltaics and co-location of wind and solar, we can avoid a third of these croplands.

■ COST

Building new clean energy while reducing 70% of impacts to people and nature comes at a modest 6.3% price tag increase over the current cost trajectory. However, this premium may be an overestimate since siting clean energy in minimally impactful ways can reduce costs by avoiding delays from social conflict and environmental mitigation.

Policy Recommendations

Power of Place offers the following recommendations to energy planners and policymakers in their path to achieve net-zero by 2050:

- 1 Plan for nature and people at all levels
- 2 Adopt regionally appropriate incentives
- 3 Allow projects that have mitigated risk to "jump the line"
- 4 Ensure community engagement and equitable benefit sharing
- 5 Adopt incentives to encourage land-saving approaches on croplands
- 6 Prioritize transmission investments in inter-regional connections and existing infrastructure

Contact

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