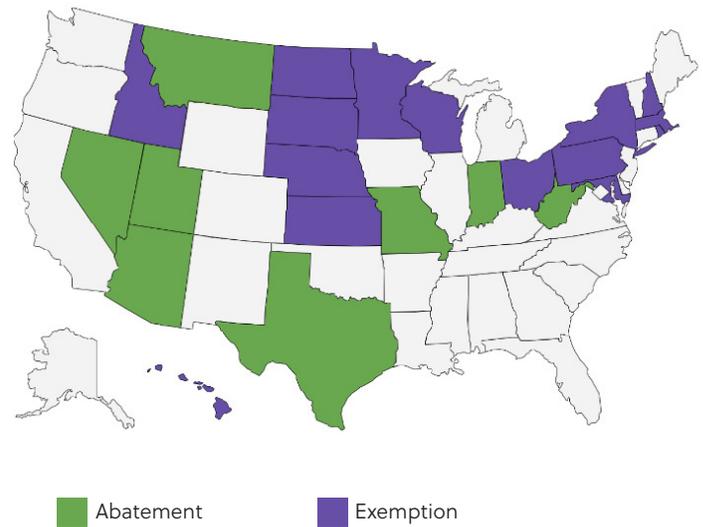


Next, based on a review of the research, we identified and collected data on factors that may influence how a state taxes wind energy property, including region, installed and potential capacity, property tax revenue as share of state revenue, siting authority (state, local, mixed), wind penetration rate, and number of related financial incentives and regulatory policies (including Renewable Portfolio Standards). Examining how these factors relate to actual policies in each state, we find:

- There is no clear relationship between states that use alternative taxes, abatements, or exemptions and states' installed and potential capacity.
- As property taxes become a larger percentage of state revenue, states are more likely to use exemptions (with or without alternative taxes).
- States that use alternative taxes are more likely to have split siting authority, while state government-only siting authority states do not use alternative taxes.
- States with higher wind penetration rates are more likely to use alternative taxes.
- States with more regulatory policies (but not state-level incentives) are more likely to use alternative taxes, but there is no clear relationship between the number of state regulatory policies and the use of abatements or exemptions.

Abatements and Exemptions



Part II – Policy Considerations and Recommendations

Drawing on normative principles of tax policy design, we review the research and state experiences with wind energy taxation to highlight important issues for policymakers to consider when designing tax policy, including:

Efficiency—minimize distortions in economic decision-making

- States can consider the relative tax burden on renewable vs. non-renewable energy sources or wind energy vs. other renewable sources.
- Local-level tax breaks should reflect only local-level externalities of wind production, if any (e.g. aesthetic/visual, noise, tourism, wildlife, local jobs/GDP, etc.). State- or national-level externalities should be reflected in state and federal tax policy.
- At the local level, there is no consistent evidence that wind turbines affect property values, implying that local-level externalities are either negligible or net to zero.
- While states and local governments may use various incentives to compete for wind development, research shows that local incentives have no significant effect on wind development, and a lack of uniformity may actually be a barrier to development.
- States should also consider the availability and taxation of transmission lines to reflect the costs of integrating wind energy into the power grid.

Adequacy—assess the sufficiency of the revenue stream generated

- Certain tax treatments (e.g. cost + depreciation) will result in revenues that decline over time, while others will provide a level or growing revenue stream.
- Certain tax treatments (e.g. a production tax) will result in revenues that are more volatile and elastic (i.e. sensitive to overall economic conditions).
- In some areas, wind energy comprises a large portion of the tax base, introducing concerns of concentrating risk and putting pressure on (or requiring) communities to lower taxes for other taxpayers.

Distributional Equity—assess how the burdens and benefits are distributed across different actors

- Due to local variation in tax policy, identical wind energy properties may be taxed very differently, violating the principle of horizontal equity.
- Classification of wind energy property (real vs. personal) may have an impact on which taxing districts (e.g. state government, general purpose local governments, school districts, etc.) benefit from wind energy.
- In states that use a foundation allowance formula for K-12 school funding, local schools do not substantially benefit from wind development because local gains are often offset by reductions in state per pupil support. Similarly, PILOTS often exclude school districts.
- Power purchase agreements may limit the ability of wind energy owners to pass along property taxes to energy consumers, so the incidence of property taxes is likely to be entirely on the owners.

Administration and Compliance—ease and cost for the government and the taxpayer

- Property taxes that are centrally assessed or provide uniform treatment for all wind energy taxpayers in the state reduce the costs of administration and compliance. However, central assessment removes autonomy from local governments and puts them at risk if there is a prolonged dispute between the state and the taxpayer on the assessment value.
- Uncertainty around the proper assessment of wind energy can create problems for both wind developers, who may be reluctant to invest, and local governments, who face revenue uncertainty.
- States and local government should also consider the alignment of tax policies with other administrative policies that affect wind development, such as siting procedures and road use agreements.

Political Tenability and Procedural Justice—legitimacy in the eyes of taxpayers and citizens

- Local option taxes give communities and wind developers flexibility to negotiate a mutually-agreeable payment, but they may not reflect equal bargaining power, especially in small communities.
- When tax policies have a local option component, for example with PILOTs, local governments may face a learning curve in negotiating the best possible terms.

Acknowledgements

Support for this research was provided by the Ford School Renewable Energy Support Fund.