Renewable Portfolio Standards

Best Practice #3

Renewable Portfolio Standards (RPS), or renewable energy purchase mandates, are one of the most powerful and popular tools that states have used to promote wind energy. In fact, wind power development has been the primary resource motivated by RPS programs, with wind representing 94 percent of RPS-driven capacity additions from 1998-2009.[1] In general, RPS are policies mandating electric load serving entities (utilities) to generate or procure a percent of its electricity from renewable sources. The obligated entity has a choice of how to fulfill this mandate using a combination of renewable energy sources, including wind, solar, biomass, geothermal, or other renewable sources. Some RPS also establish specific targets for specific technologies or renewable resources to support resource diversity and develop higher cost renewables (solar PV), while others leave it up to the market. These policies have been cited overwhelmingly by experts throughout the field as the most important nonfederal policy that has advanced wind energy development, but many are set at low levels or are due to expire soon. In order to continue this foundational push toward increased renewable energy, **jurisdictions should maintain programs and increase state/provincial RPS/RES targets over time.** Currently, RPS targets for all participating Great Lakes states cap out and end after a certain year, the latest of which is 2026.

Challenges and Benefits

The success of an RPS may be linked to a variety of factors including strong implementation support from the jurisdiction's public utilities commission, a credit-trading system that increases compliance flexibility, and penalties for noncompliance. Not all renewable portfolio standards are equally effective; details in design and implementation make a big difference.

Opponents of the RPS system argue that a policy that forces utilities to develop or purchase renewable energy sources will raise rates for consumers. To date, however, there has been no evidence that RPS policies have had a significant impact on average retail rates, and most states have established rate impact cap mechanisms to contain costs.

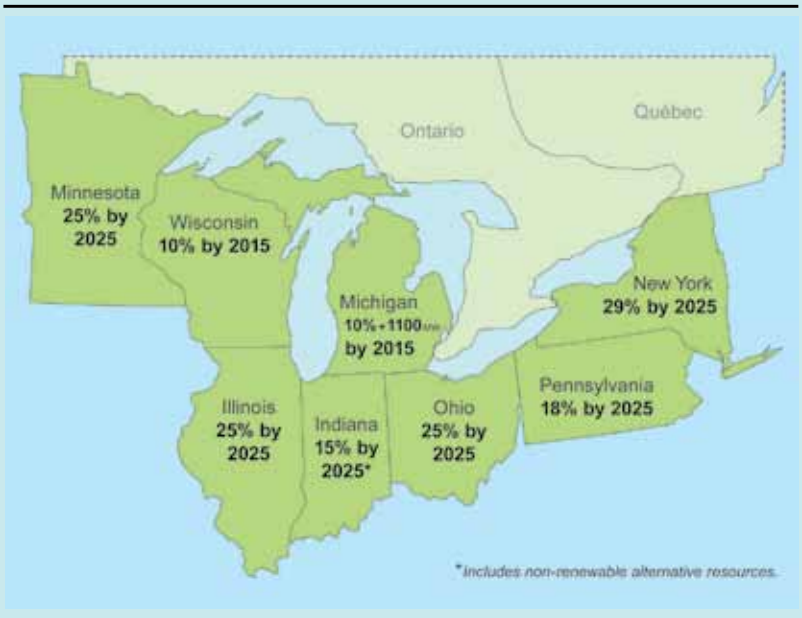
The fact that a jurisdiction has or does not have an RPS is not the sole factor in determining whether wind development advances. Good wind resources, adequate transmission, financial incentives and concise regulations may also foster considerable wind development. However, RPS have been credited with sending appropriate market signals to spur development without compromising environmental and other regulatory concerns. As the wind energy market continues to expand, jurisdictions should consider a gradual increase of their jurisdiction's RPS over time so the market has solid policy support.

Who should implement this practice?

State and provincial governments, and legislatures in particular, should evaluate and modify their RPS policies to increase targets over time.

Case Example | Wisconsin Renewable Portfolio Standards

As part of 2005 Wisconsin Act 141, the Wisconsin Legislature established the current renewable portfolio standard (RPS), requiring investor-owned electric utilities, municipal electric utilities and rural electric coops (electric providers) to meet a gradually increasing percentage of their retail sales with qualified renewable resources. The enabling legislation expressly allows Wisconsin electric providers the option of using Renewable Resource Credits (RRCs) in lieu of providing renewable electricity to their customers.



RPS Standards in the Great Lakes States. Source: Great Lakes Commission, 2011.

Wisconsin's RPS originally required investor-owned utilities and electric cooperatives to obtain at least 2.2% of the electricity sold to customers from renewable-energy resources by 2012. Legislation (S.B. 459) enacted in March 2006 increased renewable energy requirements and established an overall statewide renewable energy goal of 10 percent by Dec. 31, 2015. The requirements are as follows:

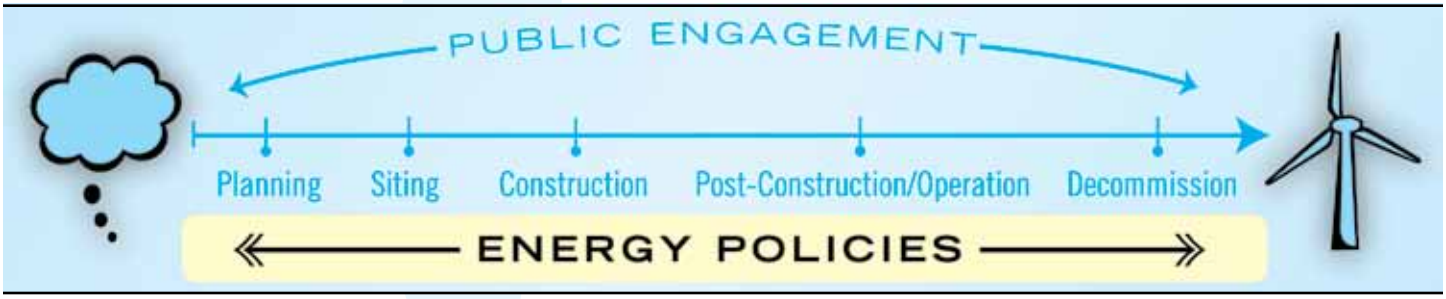
- For the years 2006, 2007, 2008 and 2009, each utility – including municipal utilities – may not decrease its renewable-energy percentage below the utility's average renewable-energy percentage for 2001, 2002 and 2003.
- For the year 2010, each utility must increase its renewable-energy percentage by at least two points above the utility's average renewable-energy percentage for 2001, 2002 and 2003.
- For the years 2011, 2012, 2013 and 2014, each utility may not decrease its renewable-energy percentage below the utility's renewable-energy percentage for 2010.
- For the year 2015, each utility must increase its renewable-energy percentage by at least six points above the utility's average renewable-energy percentage for 2001, 2002 and 2003.
- For each year after 2015, each utility may not decrease its renewable-energy percentage below the utility's renewable-energy percentage for 2015.

Case Example | Massachusetts Renewable Portfolio Standard

The Massachusetts RPS began in 2003 with a modest 1 percent of electricity required to come from renewable sources. The statute obligated the RPS to increase by half a percent every year until it reached 4 percent in 2009. In 2009, the RPS doubled the rate of increase to 1 percent per year, reaching 15 percent of new electricity resources from renewable sources by 2020. This RPS does not currently have an expiration date, so will continue to increase by one percent annually after 2020.

When should this practice happen?

Ideally, these policies are in place before wind projects are developed and are periodically adapted and updated to reflect emerging issues and challenges.



Related Tools

Feed-in Tariff Policy: Design, Implementation, and RPS Policy Interaction | http://www.nrel.gov/docs/fy09osti/45549.pdf | The National Renewable Energy Laboratory's report on feed-in tariffs and interactions with Renewable Portfolio Standards.

States With Renewable Energy Portfolios | http://apps1.eere.energy.gov/states/maps/renewable_portfolio_states.cfm | Wind Powering America provides a map and description of the Renewable Portfolio Standards in each state across the country. Clicking on each state provides further information for each state.

Increasing Coordination and Uniformity among State Renewable Portfolio Standards | http://www.cleanenergystates.org/Publications/CESA_Holt-RPS_Policy_Report_Dec2008.pdf | The Clean Energy States Alliance prepared a document on coordinating RPS policies among states and building regional markets.

Rules, Regulations & Policies for Renewable Energy | http://www.dsireusa.org/summarytables/rrpre.cfm | The Database of State Incentives for Renewables & Efficiency hosts a table with links to all federal, state, local and utility rules, regulations, and policies that promote renewable energy in the United States.

Renewables Portfolio Standards in the United States — A Status Report with Data Through 2007 | http://eetd.lbl.gov/ea/emp/reports/lbnl-154e-revised.pdf | By Ryan Wiser and Galen Barbose (2008), this report gives information about RPS policies throughout the United States and their effects on renewable energy development.

Renewables Portfolio Standards: A Factual Introduction to Experience from the United States | http://eetd.lbl.gov/ea/emp/reports/62569.pdf An overview by Ryan Wiser (2007) of the history, concept, and design of the RPS, information on states' experiences with implementation, and an overview of the Federal RPS proposals.

Weighing the Costs and Benefits of State Renewables Portfolio Standards: A Comparative Analysis of State Level Policy Impact Projection http://eetd.lbl.gov/ea/emp/reports/61580.pdf | This analysis by Cliff Chen, Ryan Wiser, and Mark Bolinger (2007) examines issues surrounding Renewable Portfolio standards such as rate increases, renewable technologies, costs, and public benefits.

1 Ryan Wiser, Galen Barbose, and Edward Holt. 2010. Supporting Solar Power in Renewables Portfolio Standards: Experience from the United States. Lawrence Berkeley National Laboratory. http://eetd.lbl.gov/ea/ems/reports/lbnl-3984e.pdf

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