

Berkeley Lab examines state-level renewables portfolio standards policies

April 14 2008

Renewable electricity is being supported by a growing number of states through the creation of renewables portfolio standards (RPS). A report released by the U.S. Department of Energy's Lawrence Berkeley National Laboratory (Berkeley Lab) provides a comprehensive overview of the early experiences with these state-level RPS policies.

“State RPS policies require utilities to buy a certain amount of renewable energy, and these programs have emerged as one of the most important drivers of renewable energy deployment in the U.S.,” notes Ryan Wiser, of Berkeley Lab's Environmental Energy Technologies Division (EETD), who was one of two primary authors for this report. “But, as the popularity and importance of these RPS's have increased, so too has the need to keep up with the design, early experience, and projected impacts of these programs. Our report is designed to meet that need.”

Collectively, the RPS policies that are in place today in 25 states and Washington D.C., apply to nearly 50-percent of total U.S. electricity load. In addition, four new states joined the RPS roster in 2007.

“Many of these policies have been established recently and each is designed differently,” says Galen Barbose, the report's other primary author and also a member of Berkeley Lab's EETD. “As a result, the experience has been decidedly mixed.”

Some of the key findings of the study include:

-- More than 50-percent of non-hydro renewable capacity additions in the U.S. from 1998 through 2007 occurred in states with RPS policies, and 93-percent of these additions came from wind power.

-- Existing state RPS policies, if fully achieved, would require roughly 60 GW of new renewable capacity by 2025, equivalent to 15-percent of projected electricity demand growth.

-- Solar set-asides in state RPS policies are becoming more common, and these policies have supported more than 165 MW of new solar capacity so far; a total of roughly 6,700 MW of solar capacity would be needed by 2025 to fully meet these set-asides.

The early-year renewable energy purchase targets in the majority of state RPS policies have been fully or almost-fully achieved, with overall average compliance at 94-percent in 2006.

Nonetheless, a number of states have struggled to meet even their early-year RPS targets, and many states have been reluctant to penalize non-compliance.

Renewable energy certificate (REC) tracking systems continue to expand, and all but four states allow unbundled RECs to count towards RPS compliance.

The cost of RPS policies varies by state, but in most states, these programs have, so far, increased electricity rates by one-percent or less; in several states, the renewable electricity required by RPS policies appears competitive with fossil generation.

The market for renewable energy is changing rapidly, and states are increasingly hoping to support that growth. “Given the major role that state RPS policies are playing, we hope that this report will help improve

the next generation of these programs,” concludes Wiser.

Source: Lawrence Berkeley National Laboratory

Citation: Berkeley Lab examines state-level renewables portfolio standards policies (2008, April 14) retrieved 27 April 2024 from <https://phys.org/news/2008-04-berkeley-lab-state-level-renewables-portfolio.html>

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