

Why A Strong RES Matters To The Wind Industry

In theory, passing a well-crafted renewable electricity standard would greatly benefit the wind industry. The practice, however, is another matter.

BY ADAM UMANOFF & THOMAS BYRNE

A national renewable electricity standard (RES) has long been a goal of the U.S. renewable energy industry, though the likelihood of enacting one seemed to fade after the Copenhagen Climate Conference. After weeks of uncertainty, Sen. John Kerry, D-Mass., and Sen. Joseph Lieberman, I-Conn., recently unveiled the American Power Act, but conspicuously left out a national renewable energy standard. At the same time, Sen. Harry Reid, D-Nev., said a scaled-back energy bill that includes a national renewable energy standard may emerge later in the year. Whatever the route, Congress needs to enact a strong national renewable energy standard. It would bring predictability into the renewable energy space, and therefore attract new investment in renewable energy projects.

To unleash this potential, Congress needs to get the RES right. If it does, a well-crafted RES could help reduce carbon emissions and the U.S.' dependence on foreign energy sources by significantly increasing the share of renewable energy in the country's energy portfolio. By reviewing RES policies at the state level and considering proposals that have emerged on Capitol Hill, this article focuses on a handful of provisions that will be crucial to the success of a national RES.

Renewable portfolio standards (RPS) gained popularity in the late 1990s as a way to encourage renewable energy production and address climate change. Since then, more than 30 states have enacted some form of RPS. Though the specifics vary, there is one general RPS model: Utilities are required to purchase a portion of electricity generated from qualifying renewable energy sources.

Not surprisingly, states with more aggressive RPS, such as California and Texas, have witnessed stronger growth in renewable energy development.

California enacted an RPS in 2002 requiring virtually all utilities and retail sellers of electricity to obtain 20% of their electricity from renewable sources by 2010. (By executive order, it was recently increased to 33% by 2020). It includes a relatively narrow definition of qualifying renewable energy that favors traditional renewables such as wind, solar and geothermal, and it has a credible mechanism to track and certify renewable energy certificates (RECs) through the Western Renewable Energy Generation Information System (WREGIS). The noncompliance penalty is \$0.05/kWh.

The aggressive RPS has clearly had an impact. In 2009, the three largest utilities in California – Pacific Gas and Electric Co., Southern California

Edison and San Diego Gas & Electric – provided an aggregate of 15% of their electricity sales from renewable energy.

Texas enacted an RPS in 1999 (revised in 2005), mandating the installation of 5,880 MW of renewable energy by 2015. It applies to most retail sellers of electricity (municipal utilities and coops can opt in) and requires them to obtain their pro-rata share of electricity output from renewable sources.

Like California, the qualifying renewable sources are confined to more traditional sources such as wind, solar and geothermal. The program includes a tradable REC program, a three-year shelf life for RECs and a noncompliance penalty of \$0.05/kWh. Since enacting the RPS in 1999, Texas has added more than 9 GW of renewable energy capacity, virtually all of which is from wind.

Other factors, such as excellent wind resources, have contributed to the renewable energy gains in California and Texas. But a strong RES has given developers, utilities and investors significant incentives to increase renewable energy capacity.

All eyes on Washington

The success of Texas, California and other states should encourage Congress to establish an aggressive

national RES. A national RES has been a goal of the renewable energy industry and environmentalists and, more recently, national security experts. It would provide the renewable energy industry with greater predictability and, at the same time, help reduce carbon emissions and the U.S.' dependence on foreign energy sources. Both Democrats and Republicans have taken notice.

In 2009 alone, a number of RES proposals emerged on Capitol Hill. Two draft proposals were circulated by Rep. Edward Markey, D-Mass., and Sen. Jeff Bingaman, D-N.M., while another was passed by the House of Representatives through the American Clean Energy and Security Act (ACESA).

The ACESA proposal requires retail sellers of electricity to obtain a gradually increasing amount of their output from renewable sources, from 6% in 2012 to 20% by 2020.

Of that, a quarter of the 20% could come from energy efficiency measures. Qualifying energy sources would be limited to traditional renewables; bonus credits would be granted for distributed generation, including small wind and rooftop solar; and a noncompliance penalty would be set at \$0.0025/kWh.

In the Senate, while a renewable energy standard passed through the Senate Energy and Natural Resources Committee in 2009, more recently, the efforts of Kerry, Graham, and Lieberman have gained significant attention. Though the proposed American Power Act did not include a renewable energy standard, Graham separately circulated one. His proposal includes a gradually increasing target, from 13% in 2012, to 25% by 2025, and 50% in 2050 – thus far, the only legislation with such a long time horizon. While the definition of “clean energy” includes traditional renewable energy sources, it also includes advanced coal generation, new nuclear, and other sources not uniformly viewed as “renewable.” It allows for up to 25% of the RES to be achieved through energy ef-

iciency, includes a tradable clean energy credit program with a clean energy credit market, and establishes an alternative compliance payment of \$0.05/kWh.

Getting the legislation right

Hitting the mark on each RES provision is unlikely, but weakening the bill too much will result in ineffective policy. In fact, a recent analysis by the National Renewable Energy Laboratory (NREL) revealed that some of the recent RES proposals would result in no additional renewable energy production beyond what is already expected and no reduction in carbon emissions. This outcome was not due to bad intentions on the part of legislators, but instead because various provisions were watered-down or riddled with carve-outs and exceptions, effectively nullifying the bill's impact.

Although legislators may be willing to compromise on some specifics, as the NREL analysis shows, these specifics really matter. Though other elements of an RES are also important to its effectiveness, there are six elements that should be the starting point for a strong bill: the size of the RES target, qualifying energy sources, energy efficiency credits, tradability of RECs, coordination with state programs, and noncompliance payments.

The size of the target. The size of the RES target is the most important element of an aggressive RES. As a starting point, it is important to have a strong target, such as 25% by 2025, with incremental targets along the way.

The incremental targets are important because they incentivize the development of renewable energy in the near term. Otherwise, there may be a tendency to procrastinate in hopes of regulatory reform. Of course, being aggressive in other areas of the RES bill, such as narrowing the definition of renewable energy or minimizing the use of energy efficiency credits, can compensate for a lower RES target.

Qualifying energy sources. The definition of “renewable energy” should be confined to traditional sources, such as wind, solar and geothermal. There is a good deal of debate swirling around advanced-generation coal and nuclear energy – whether the former could ever really be clean and whether the latter could ever really be safe are matters of contention.

Inclusion of nuclear power or coal in the definition of qualifying renewable energy sources would lessen the growth of traditional renewable energy sources. That said, nuclear plants take nearly a decade to build, and advanced-generation coal is still unproven.

Because little debate exists as to the cleanliness and safety of wind and solar, utilities are still likely to rely heavily on these proven renewables to meet the RES target. This would certainly be the case if the RES target were to include targets, thereby requiring utilities to include renewables in their portfolio in the next few years.

Energy efficiency credits. Energy efficiency credits are awarded for each megawatt of energy saved through energy efficiency measures, such as installing new windows and replacing light bulbs. The Graham proposal allows for up to 25% of the RES to be met by energy efficiency, and the ACESA proposal allows for 20%.

Utilities are given credit for efficiency measures taken by energy consumers. Though energy efficiency is an important way to lower electricity usage and reduce carbon emissions, it should not compete with renewable energy in an RES program. To the extent it is included in the final bill, credits for energy efficiency should be lower than the levels currently proposed in the ACESA bill and the Graham proposal.

Tradability of RECs. The tradability of RECs is an important component of an RES. It provides utilities with compliance flexibility and generators with an alternative revenue stream.

In recently enacting a tradable RECs program, the California Public Utilities Commission said that the tradable REC program “improves the ability of California’s electricity sellers to meet the state’s renewable energy goals” while “supplying useful revenue options for generation developers.”

By purchasing unbundled RECs, utilities can make up for shortfalls in direct renewable energy purchases.

Furthermore, RECs are becoming an increasingly reliable revenue stream. The ability to separate and sell RECs without the electricity encourages the development of projects that might not be commercial-based – such as community wind projects and distributed energy projects – on energy prices alone. For a non-commercial developer, the reliable revenue stream softens the up-front cost of installation.

Additionally, REC sales improve the financeability of both commercial and non-commercial projects. Lenders are increasingly receptive to income from REC sales, making the REC purchase agreement an important piece of the financing package. A tradable REC program on a national scale would certainly bring additional investment into the renewable energy space.

Preserving state programs. A national RES that preempts stronger state RPS would undermine state efforts and be counterproductive. Fortunately, the RES proposals do not this, and there has been no genuine discussion of preemption. However, simply preserving state programs is not enough. In states that have more stringent RPS, surplus national RPS will be created.

To illustrate this point, if a state RPS has a 25% target, but the na-

tional target is only 20%, there will be an extra 5% of national RECs produced in that state, because each megawatt of renewable energy produced gets both a state REC and national REC.

If these excess national RECs are simply sold to a utility in a state without a state RPS, no new renewable energy would need to be generated to bring that utility into compliance. The utility just buys the extra national RECs from the neighboring state.

To resolve this problem, states must have the authority to either retire excess national RECs or step up the national RECs in their state to parity with the state RPS. The ACESA proposal gives states this authority, but the Graham proposal makes it less clear, requiring only “coordination” between federal and state programs. Coordination is vague; the language should clearly provide states with the authority to control the disposition of excess national RECs.

While the two-track system best promotes renewable energy production by preserving strong state RPS programs, it does invite confusion with tracking and certification. Tracking and certifying RECs is crucial to a reliable, credible RES program. This should be clearly addressed in the legislation.

In the power purchase agreement or REC purchase agreement, REC purchasers should insist that sellers ensure that the delivered electricity includes both the state REC and the national REC. Further, utilities must also insist that the generator guarantee that the RECs are properly tracked and certified. Failure in either respect should result in the generator paying damages equal to the cost of purchasing RECs on the open market.

Noncompliance payments. Many

states allow utilities to make a payment in lieu of RES compliance. While this is important to prevent utilities (and, ultimately, customers) from going broke in their effort to comply, it is important that the compliance payment be high enough to provide the proper financial incentives. Paying the alternative compliance payment must not be more financially sensible than purchasing renewable energy or RECs in the first place.

Graham’s proposal sets an alternative compliance payment of \$0.05/kWh, while the ACESA proposal sets it at \$0.0025/kWh. Most agree that an alternative compliance payment above \$0.03/kWh is appropriate to ensure that the purchase of bundled renewable energy or unbundled RECs is more appealing than simply making the alternative compliance payment.

Other provisions in an RES bill are also important, but here, we have laid out a framework for those that are pivotal. As some investors continue to wait on the sidelines for a price signal on both carbon-based fuels and renewables, Congress needs to deliver a strong message that incentivizes investment in clean energy.

Rather than drafting a weak bill that invites later revisions and prolongs uncertainty in the renewables space, Congress needs to send President Obama a bill that includes a national RES. **WVP**

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