Renewable Energy Standard (RES)

Expanding Markets for Renewable Energy

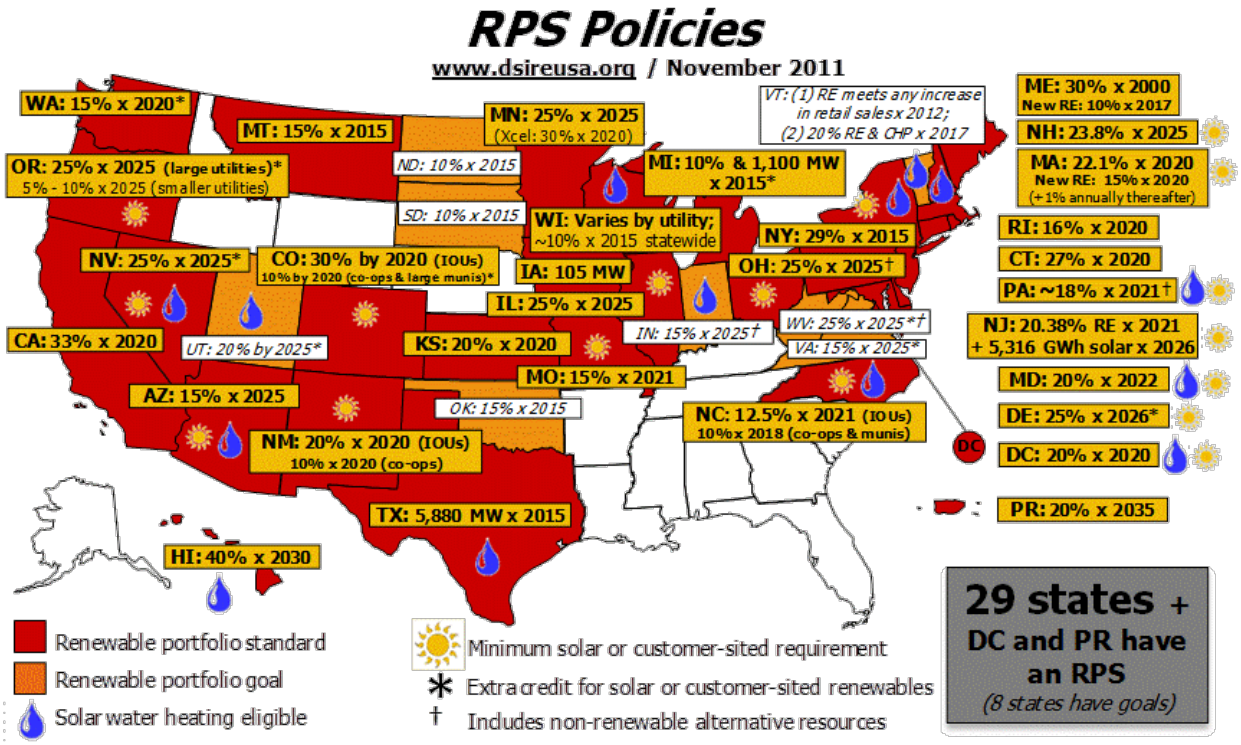
Overview

A renewable energy standard (RES) – also referred to as a renewable portfolio standard (RPS) – requires energy suppliers to acquire a certain quantity of energy from renewable energy sources such as wind and solar. In the United States, these policies have been enacted in 29 states plus the District of Columbia, which together account for approximately 40 percent of the total U.S. electricity load.[1] Generally, RES policies seek to encourage competition between renewable energy providers to reduce the cost of meeting renewable energy targets. President Obama has made a national RES a cornerstone of his energy strategy – advocating that 25 percent of our energy be generated from renewable sources by 2025.

Why Establish an RES?

A strong RES is essential to developing the vast reserves of natural renewable energy resources that exist in the United States. An ambitious national standard will help to create thousands of new jobs, spur economic development, reduce pollution, and save consumers money on their utility bills. An analysis using the National Energy Modeling System (NEMS) predicts that a 25 percent renewable standard will create 297,000 new jobs, generate $263.4 billion in new capital investment and save consumers $64.3 billion on their utility bills by 2025.[2]

State Renewable Energy Standards[1]



[1] Database of State Incentives for Renewable Energy – www.dsireusa.org (November 2011)

What Would a National RES Cost?

Analysis by the Energy Information Administration (EIA) and experience at the state level both indicate the cost of even a robust national RES would be minimal. Examining a 25 percent by 2025 renewable standard, the EIA concluded that retail electricity prices compared to a business-as-usual scenario through 2022 would be negligible.[3] After 2023, retail electricity prices were 3.9 percent higher, but were partially offset by lower natural gas bills.[4] A survey of state RES cost projections by DOE's Lawrence Berkeley National Laboratory (LBNL) indicates that 70 percent of studies anticipate no more than a 1 percent increase in retail electricity prices in the year the state RES target reaches its peak.[4] According to these projections, only two states will experience rate increases of greater than 5 percent and five states will realize cost savings.[5] The bottom line is that RES policies do not significantly raise electricity rates, and often result in cost savings for consumers. They also create local demand for renewable technologies, creating jobs and economic development.

A Strong Solar RES should:

- Ensure deployment of all types of solar technology by including distributed photovoltaics, solar heating and cooling, and utility-scale solar power as qualifying technologies.
- Guarantee that the U.S. gets 25 percent of its energy from renewable sources by 2025, matching President Obama's goal.
- Require that all utilities adhere to the standard, and maintain additional incentives for distributed generation
- Ensure compliance through a strong penalty, and require that all penalty payments be used by states to deploy renewable energy.

How Does RES Work?

Renewable portfolio standards establish incremental targets which increase over time. Utilities that are subject to the standard must obtain renewable energy credits (RECs) for a specific percentage of their generation. A REC is created for each megawatt-hour of electricity (or equivalent energy) generated from a qualifying renewable energy source. They are a purely financial product, and may be bought, sold or traded separately from the underlying electricity in order to facilitate flexibility in RPS compliance. Some RES policies vary in terms of which resources qualify, whether "carve-outs" for certain technologies or distributed generation are included, and whether entities other than retail electricity suppliers are subject to the standard.

Solar in the National RES

Solar technologies are critical in meeting the renewable targets in any national RES policy. Photovoltaic and utility-scale concentrating solar systems qualify for RECs under all current and proposed RES standards. Some standards do not include solar water heating, despite the fact that it is a renewable, low-cost alternative to standard electric or gas-heated water systems. Given the low costs and wide geographic applicability of solar water heating, it should be included as a renewable resource in any national standard.

By removing market barriers to small-scale, distributed solar systems, individuals can also play a role in meeting national renewable goals by installing solar systems on their homes. By requiring utilities to interconnect and net meter these systems, customers with PV installations will see their electricity meters run backwards while generating more electricity than they use. Optimal RES policies will also allow customers to retain the RECs for electricity they generate, creating another source of revenue to offset the cost of their systems.

About the Solar Energy Industries Association®

Established in 1974, the Solar Energy Industries Association is the national trade association of the U.S. solar energy industry. Through advocacy and education, SEIA® and its 1,100 member companies are building a strong solar industry to power America. As the voice of the industry, SEIA works to make solar a mainstream and significant energy source by expanding markets, removing market barriers, strengthening the industry and educating the public on the benefits of solar energy.

For a referenced version of this factsheet and more information, please visit www.seia.org.

[1] LBNL, Weighing the costs and benefits of state RPS, March 2007 (http://eetd.lbl.gov/EA/EMS/reports/61580.pdf)
[2] UCS, Clean Power Green Jobs, March 2009 (http://www.ucsusa.org/clean_energy/solutions/renewable_energy_solutions/clean-energy-green-jobs.html)
[3] EIA, Energy and Economic impacts of implementing both a 25% renewable portfolio standard and a 25% renewable fuel standard by 2025, August 2007 (http://www.eia.doe.gov/oiaf/servicerpt/eeim/pdf/sroiaf%282007%2905.pdf)
[4] LBNL, Weighing the costs and benefits of state RPS, March 2007
[5] Ibid.