

A Case of Sunburn?

Government incentives may be overheating New Jersey's solar market.



In response to the nation's economic collapse, the federal government incentivized solar investment through cash grants and generous depreciation allowances beginning in 2009. Additionally, in early 2010 the State of New Jersey implemented the most aggressive solar incentive program in the country. As a result, the installed capacity of solar arrays in New Jersey has quadrupled in the last year, leading to growing concern that governmental incentives may be overheating New Jersey's solar market.

According to the New Jersey Clean Energy Program website, 43.7 megawatts of solar arrays were installed and registered from 2007 through 2009. The combination of generous federal tax incentives and New Jersey's passage of the Solar Energy Advancement and Fair Competition Act (the Act) in early 2010 resulted in the number of installed systems tripling in the first

11 months of 2010. Further, statistics reveal that there are enough approved projects currently "in the pipeline" to double the state's existing solar capacity. This explosive growth of the New Jersey solar market has caused many to wonder whether the market can support further investment.

Although the federal investment tax credit and depreciation allowances have assisted in fueling the growth of New Jersey's solar market, it is the Act that will ensure its long-term growth. The Act mandates that regulated electric generators in New Jersey generate an annually increasing portion of their electricity from solar energy (the Renewable Portfolio Standard or RPS). If the RPS is not met, electric generators must pay a penalty for each megawatt hour (Mwhr) they fall short. The Act requires the New Jersey Board of Public Utilities to promulgate a penalty schedule through 2026 and provides that once the final schedule is adopted, it cannot be reduced.

In lieu of paying the penalty, generators may retire a Solar Renewable Energy Certificate (SREC) for each required penalty payment. An SREC is issued to the owner of every registered solar electric generating system in New Jersey for each Mwhr of electricity generated. Producers that are subject to the RPS can purchase SRECs from system owners, typically at a rate slightly less than the penalty. The sale of SRECs will produce an income stream far in excess of the value of the electricity generated by a system. As such, it is the

SREC that fuels investment in New Jersey's solar market. In 2009 and 2010, RPS shortfalls resulted in \$117,000,000 in SREC value being retired.

The RPS currently requires an annual total of 306 gigawatt hours (Gwhrs) of solar electricity. Industry experts estimate the total installed and registered capacity of solar arrays in New Jersey as of January 31, 2011 will produce approximately 190 GWhrs of electricity per annum—well short of the requirement. Because utilities can purchase and retire an SREC for less than the penalty they are otherwise required to pay, this shortfall creates a demand for SRECs that far exceeds their supply. As long as this shortfall continues, SRECs will continue to provide a significant revenue source for owners of solar arrays.

Assuming the solar market continues its explosive growth in 2011, it is conceivable that there could be enough registered and installed system capacity capable of generating the required 306 Gwhrs of electricity before the end of this year, thereby limiting the demand for SRECs. However, the RPS will increase by 45 percent in June of 2011, another 35 percent in June of 2012, and another 30 percent in June of 2013. Further, the RPS continues to escalate aggressively annually until 2026, when it reaches a whopping 1,750 percent of its current level. Additionally, in the event the RPS is met for three consecutive years between 2013 and 2026, the Act automatically increases the RPS by another 20 percent per annum.

What does all of this mean for potential solar investors? As long as the demand for SRECs outpaces the supply (meaning the RPS exceeds the amount of solar energy generated), investment in solar energy makes sense. New Jersey's existing registered and installed solar capacity must increase to 28 times its existing size over the next 13 years to meet the RPS, thereby creating a demand shortage in the SREC market. Industry experts estimate the installation of the capacity required to meet the 2026 RPS will require an additional investment of between \$15 billion and \$20 billion.

While current federal and state incentives have caused explosive growth of New Jersey's solar market over the past year, we can't know whether the solar RPS will be met in 2026. What we do know is that New Jersey has a framework in place that will support billions of dollars of additional investment. New Jersey's solar market is red-hot, but it is far from overheating. ■

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