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SREC Carve-Out Program Expected To Bolster Commercial Solar Projects

A new solar incentive in Massachusetts for projects under 2 MW includes a state-sponsored auction mechanism.

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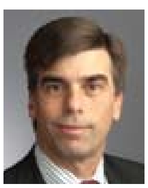
The commonwealth of Massachusetts recently proposed implementing a solar renewable energy certificate (SREC) carve-out program to jump-start the construction of commercial-scale solar PV projects in Massachusetts.

The program, which is limited to projects up to 2 MW in size, contains an innovative auction account that is intended to provide long-term revenue stability to projects by ensuring that all of the SRECs generated in a given year are purchased by load-serving entities.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But although the Massachusetts Department of Energy Resources (DOER) is hopeful that the SREC program will provide long-term price signals that facilitate the construction of commercial-scale projects, it is too early to tell whether the program's auction structure will provide the level of certainty required to finance these projects.

On Dec. 10, 2009, DOER issued its Final Design Document for the program, which is based on the provisions of the Massachusetts Green Communities Act (Section 32 of Chapter 169 of the Acts of 2008) and includes an auction account mechanism (the Massachusetts Solar Credit Clearinghouse).

As of late December, DOER said it would issue emergency regulations to allow the program to begin on Jan. 1, 2010, and thereafter, it would issue final regulations for public notice and comment. DOER anticipates that the final regulations will become effective in May.

The SREC carve-out program replaces the Commonwealth Solar Program, which supported the construction of small-scale projects through the award of direct rebates from the commonwealth.

Created in January 2008, the Commonwealth Solar Program has facilitated the installation of 27 MW of new solar PV projects in Massachusetts. This initiative was suspended in fall 2009, however, after the $68 million in dedicated funds that had been allocated to the program were exhausted. (This year, Massachusetts may re-institute a revised Commonwealth Solar II Program, which will provide rebates for residential and other small-scale solar projects that are up to 5 kW in size.)

Program structure

Under the SREC carve-out program, Massachusetts will require that a percentage of the commonwealth's Class I renewable portfolio standard (RPS) be satisfied with RECs generated from solar PV projects that are constructed after Jan. 1, 2008. The program is intended to both facilitate the development of solar PV projects that are less than 2 MW in size and help achieve Gov. Deval Patrick's goal of constructing 250 MW of solar PV projects in Massachusetts by 2017.

To reach the governor's goal, the carve-out program establishes a statewide minimum standard of 25 MW for compliance year 2010, and then increases this standard by a base growth rate of 30% per year.

However, DOER reserves the right to adjust this base growth rate each year to address any SREC market oversupply or shortage that occurs in the prior year. The program establishes a cap on the statewide minimum standard of 400 MW, after which the qualification of new solar projects will be transferred back to the commonwealth's RPS Class I program. DOER currently anticipates that this cap will be reached - and the SREC program will be terminated - in 2027.

Under the program's rules, a load-serving entity can bank up to 10% of its annual compliance obligation for no more than two years. As with the existing Class I RPS program, if a load-serving entity fails to purchase a sufficient number of SRECs to meet its compliance obligation in any given year, the entity will be required to make an alternative compliance payment (ACP) to the commonwealth.

For compliance year 2010, the ACP rate under the SREC program is set at $600/MWh. In contrast, the ACP rate for 2010 under the Class I RPS Program is set at $60.92/MWh. To respond to fluctuations in the SREC market, DOER retains jurisdiction to reduce the ACP rate by up to 10% on an annual basis.

The successful development of any renewable energy project requires long-term revenue certainty to ensure that project debt is repaid and that project investors and developers receive a sufficient rate of return.

Because the market price that is paid for electricity generated from solar PV projects (on either a retail or wholesale basis) often is not sufficient to provide an acceptable - or even a positive - rate of return, revenue generated from the sale of RECs is crucial to the success of a project.

A number of states have created financial incentive programs to spur the development of solar PV, including solar carve-out programs and feed-in-tariff programs. For example, New Jersey has created its own solar carve-out program, and Vermont recently enacted a feed-in tariff for solar power.

However, programs such as these typically are backstopped (either directly or indirectly) by long-term contracts with utility companies or other load-serving entities.

In fashioning its SREC carve-out program, Massachusetts declined to adopt a program design that could create a potential burden on utility companies and/or electric ratepayers. Instead, DOER adopted an alternative program design that uses a state-sponsored clearinghouse auction process, as opposed to long-term contracts, in an attempt to provide long-term revenue certainty.

Specifically, DOER will establish an auction account (the Massachusetts Solar Credit Clearinghouse) into which solar PV generators can deposit unsold SRECs. The auction account will be open for deposits of eligible unsold SRECs for the final 31 days in the fourth-quarter trading period (i.e., May 16 to June 15) in each compliance year.

A solar project will be eligible to deposit its surplus SRECs into the auction account only for a limited period of time. The length of this opt-in period, which initially will be set at 10 years, will be determined by DOER at the time that a specific solar project is installed. Of course, solar projects have the right, both during and after this opt-in period, to sell SRECs on a bilateral basis.

Based on market conditions, DOER will adjust the length of the opt-in period that is granted to new projects on an annual basis. In a long market where the supply of SRECs exceeds demand, DOER can reduce the term of the opt-in period for new projects by one year for each full 10% of the SREC compliance obligation that is deposited into the auction account.

Conversely, in a short market where more than 5% of the compliance obligation for SRECs is met through the ACP, DOER will reset the term of the opt-in period to 10 years. The term of the opt-in period for a specific project does not change, however, once it is determined by DOER.

In the event a solar project deposits eligible SRECs into DOER's auction account, DOER will re-mint the SRECs into extended-life SRECs, which can be used for compliance purposes in either of the next two compliance years.

In the first week of July of each year, DOER will then hold a fixed-price auction for the extended-life SRECs, which will be open to all qualified bidders.

The extended-life SRECs will be sold at a fixed price of $300/MWh. Bids will be entered in the auction solely for the volume of extended-life SRECs that are desired by a bidder. If the bid volume is insufficient to clear the volume of available extended-life SRECs, then DOER will increase the shelf life of the extended-life SRECs to three years, and then repeat the auction.

If the bid volume after this auction still is insufficient to fully clear the volume of available extended-life SRECs, DOER will increase the minimum standard for the compliance year to reflect the total amount of SRECs that were deposited into the auction account. The auction will then be repeated by DOER with the shelf life remaining at three years.

DOER anticipates that increasing the minimum standard to reflect the amount of available SRECs will fully clear the auction.

Revenues received from the auction will be paid to the projects that deposited SRECs into the auction account, minus an auction fee of 5% (or $15/MWh). Any auction fees received by DOER, as well as any ACP payments that are made in short-market years, will be overseen by DOER.

Ratepayer impact

DOER intends to administer the carve-out program in a manner that balances SREC supply and demand and that avoids prolonged reliance on either the ACP or high SREC prices. As designed, DOER expects that the program will encourage bilateral contracts of varying terms to lock in SREC prices at a level below the minimum fixed auction price and the ACP rate.

DOER estimates that in the first compliance year (2010), the maximum ratepayer exposure under the program will be $17 million, or approximately $0.00034/kWh, and that when the full 400 MW standard is reached, the maximum ratepayer exposure will be $273 million, or approximately $0.0054/kWh.

Overall, DOER's SREC carve-out program establishes an innovative auction mechanism in an attempt to set both a ceiling (as determined by the value of the ACP) and a floor (of essentially $285/MWh) on the price of SRECs.

A number of stakeholders questioned during the development process for the final design whether the auction mechanism would create sufficient long-term revenue certainty to allow commercial-scale solar PV projects to be constructed.

In a short market for SRECs, it

is likely that the available supply of SRECs will be traded on a bilateral basis prior to the end of the compliance period and that little or no SRECs will be consigned to the auction account.

However, if the SREC market is long, load-serving entities may decide to purchase SRECs before the auction period, but only at a price of less than $300/MWh. At prices higher than this amount, the load-serving entity may decide to instead wait to purchase extended-life SRECs at the auction.

Assuming that this is the case, the auction program still can provide revenue certainty to projects only if DOER is obligated to increase the minimum standard to the extent required to fully clear the auction account. To provide a level of revenue certainty that can be accepted and valued by financing entities, this obligation must not be left to the discretion of DOER, but instead must be clearly established in both the emergency and final regulations that will be issued by DOER.

Otherwise, financial institutions are likely to place minimal or no value on the SRECs that are generated by a proposed solar PV project.

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