*Creating A Cleaner Energy Future For the Commonwealth*

DOER Massachusetts Department of Energy Resources

**COMMONWEALTH OF MASSACHUSETTS**
*Deval L. Patrick, Governor*
*Richard K. Sullivan, Jr., Secretary*
*Mark Sylvia, Commissioner*

Regional Thought Leader Round Table

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# RPS Solar Carve-Out II Program Overview


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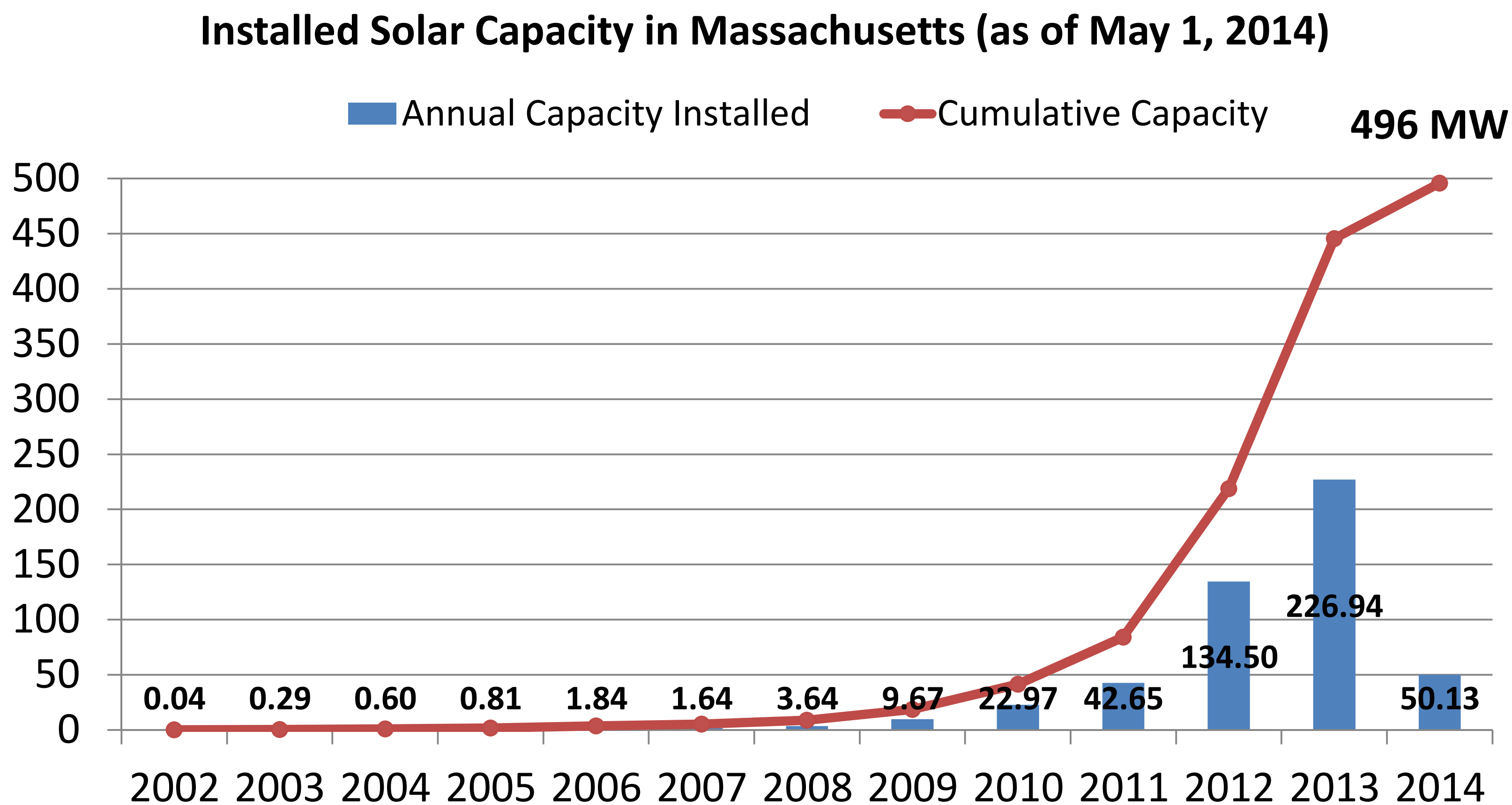
# Summary of MA Portfolio Standard Programs

| RPS Class | Sub Class | Technology | Minimum Standard | 2014 ACP Rate, $/MWh |
|---|---|---|---|---|
| **Class I** | | Wind, LFG, Biomass, Solar PV, Small Hydro, AD, etc. | 9% in 2014; increases by 1% each year | $66.16; increases with CPI |
| | Solar Carve-Out | Solar PV; 6 MW or less, in MA | 0.9481% in 2014; set by formula annually | $523; reduced annually per 10-year schedule |
| | Solar Carve-Out II | Solar PV; 6 MW or less, in MA | 0.0843% in 2014; set by formula annually | $375; reduced annually per 10-year schedule |
| **Class II** | Renewable | same as Class I | 3.6%; stays constant | $27.16; increases with CPI |
| | Waste Energy | Waste to Energy Plants, in MA | 3.5%; stays constant | $10.86; increases with CPI |
| **APS** | | CHP in MA, flywheels, storage, etc. | 3.5% in 2014; increases to 5% in 2020 | $21.72; increases with CPI |

# MA Ranks High Among States Supporting Solar

- Governor's goal of installing 250 MW by 2017 met four years early; new goal of 1600 MW by 2020.
- 349 of 351 MA cities and towns have a solar installation.  Over 130 municipalities are hosting solar projects on town facilities.
- Solarize Mass program has supported 9 MW of residential solar in 33 towns (another 15 towns are underway).
- More solar was installed in 2013 than in all prior years combined
- Massachusetts is well ranked nationally (SEIA and Solar Foundation 2014)
  - 4$^{th}$ in solar capacity installed in 2013
  - 5$^{th}$ in cumulative installed capacity
  - 2$^{nd}$ in commercial installations; 6$^{th}$ in residential installations
  - 4$^{th}$ in total solar jobs; 6$^{th}$ in per capita solar jobs
- Over 1,800 firms in MA work primarily in the renewable energy sector, employing over 21,000 workers.  Nearly 60% of renewable energy workers support the solar sector *(2013 MassCEC Jobs Report).*

# Remarkable Solar Growth in Massachusetts

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# Solar Carve-Out I (2010-date)

Program designed to ensure market stability and balance

- Adjustable Minimum Standard

  maintains SREC demand/supply in reasonable balance

- Forward ACP Rate Schedule

  provides investor certainty

- Solar Credit Clearinghouse Auction Account

  essential price support mechanism to assure SREC floor price

- Opt-In Term

  provides right to use Auction, adjusted to throttle installation growth rate

- Program Cap

  Enables sufficient market growth opportunity (exceeds Governor's goal of 250 MW by 2017)

# SREC I Market Update

- SREC I program oversubscribed in May/June 2013
- Emergency Regulation was filed on June 28th and extended eligibility to projects that had met certain project development milestones
- Currently 671 MW qualified under SREC I
- About 210 MW not yet operational
- Qualified projects over 100 kW must be interconnected or be able to demonstrate that they are mechanically complete by June 30, 2014 in order to remain qualified
- Projects less than 100 kW were able to qualify if they submitted an application and were interconnected on or before April 25, 2014, the effective date of SREC II
- No new projects qualify under SREC I after April 25, 2014

# SREC-II Policy Objectives

- Provide economic support and market conditions to maintain and expand PV installations in MA
- Control ratepayer costs
- Maintain robust, progressive growth across installation sectors and manage growth to reach 1600 MW by 2020
- Maintain competitive market of diverse PV developers, without undue burdens of entry
- Address financing barriers limiting residential and non-profit direct ownership, without compromising third-party ownership model
- Minimize regulatory complexity and maintain flexibilities to respond to changing conditions

# Key Differences Between SREC I & SREC II

- Larger program capacity cap (1,600 MW – Final SREC I Cap).
- No more Opt-In Terms. Qualified projects generate SREC IIs for 40 quarters (10 years) from quarter in which they qualify.
- Both ACP Rate and Auction Price decline over time.
- SREC Factors differentiate market sectors and provide different incentive levels to different types of projects.
- Managed Growth sector helps control market growth. Qualification under this sector will be limited by Annual Capacity Blocks made available on a two year forward schedule by DOER.
- Compliance Obligation and Minimum Standard set in regulation for 2014 and 2015. Annual calculations thereafter based on actual and projected supply, constrained by Yearly Installed Capacity Targets, which help determine Annual Capacity Blocks for Managed Growth sector.

# Auction and ACP Rate Schedules

| | $/MWh | | |
|---|---|---|---|
| Year | Auction Price Bid | Auction Price After 5% Fee | ACP Rate |
| 2014 | 300 | 285 | 375 |
| 2015 | 300 | 285 | 375 |
| 2016 | 300 | 285 | 350 |
| 2017 | 285 | 271 | 350 |
| 2018 | 271 | 257 | 350 |
| 2019 | 257 | 244 | 333 |
| 2020 | 244 | 232 | 316 |
| 2021 | 232 | 221 | 300 |
| 2022 | 221 | 210 | 285 |
| 2023 | 210 | 199 | 271 |
| 2024 | 199 | 189 | 257 |
| 2025 | Values announced by DOER each year to maintain 10-year forward schedule. | | |
| 2026 | | | |
| 2027 | | | |
| 2028 | | | |
| 2029 | | | |
| 2030 | | | |

# Market Sectors and SREC Factors

| Market Sector | | SREC Factor |
|---|---|---|
| A | 1. Generation Units with a capacity <=25 kW<br>2. Solar Canopies<br>3. Emergency Power Generation Units<br>4. Community Shared Solar Generation Units<br>5. Low or moderate income housing units | 1.0 |
| B | 1. Building Mounted Generation Units<br>2. Ground mounted Generation Units with a capacity >25 kW where 67% or more of the electric output on an annual basis used by an on-site load. | 0.9 |
| C | 1. Generation Units on Landfills<br>2. Generation Units on Brownfields<br>3. Generation Units with a capacity of <= 650 kW where less than 67% of the electrical output on an annual basis used by an on-site load. | 0.8 |
| Managed Growth | Unit that does not meet the criteria of Market Sector A, B, or C. | 0.7 |

# SREC-II Rulemaking Process

- Series of stakeholder meetings held between March 2013 and August 2013
- RPS Class I regulation revisions were filed in early January
- DOER held a public hearing on January 24th and accepted comments through January 29th
- DOER filed final revisions to regulation with the Secretary of State's office on April 11th
- Final revisions promulgated on April 25, 2014



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# Important Dates

| | |
|---|---|
| April 25th | 1. SREC I application deadline for systems <=100 kW DC<br>2. SREC II regulation promulgated |
| May 13th | DOER begins accepting applications for SREC II |
| May 16th | 2013 Auction Account opens for deposits |
| May 20th | Initial application period ends for Managed Growth projects |
| June 15th | 1. End of 2013 trading year<br>2. 2013 Auction Account closes |
| June 16th or 17th | Auction volume announced |
| June 30th | SREC I Interconnection/Construction Deadline for Systems >100 kW DC |
| Mid-July 2014 | Preliminary 2015 Minimum Standard for SREC I announced |
| July 31st | 1. Final SREC I capacity announced no later than this date<br>2. First round of 2013 auction must occur no later than this date |
| August 8th | Final round of 2013 auction will occur no later than this date |
| August 30th | 1. Final 2015 Minimum Standard for SREC I announced<br>2. 2016 Annual Capacity Block announced for SREC II |

# Online Registration (OLR) Platform

- DOER and the Massachusetts Clean Energy Center (MassCEC) have developed a new online registration (OLR) application for SREC II
- The application uses MassCEC's Production Tracking System (PTS) platform and supports direct entry of SREC II applications applicants
- OLR will automate the registration process, improve data sharing, and significantly reduce the time needed to approve and register PV applications
- Will significantly improve the administrative process, which had created significant delays in SREC I as application volume increased over time
- More information on new application process was presented by DOER and MassCEC in an April 24th webinar
- User Guide and Glossary of Terms are now posted on DOER and MassCEC's websites

# Residential Direct Ownership

## ACP-funded Support Program

- DOER estimates that a robust residential direct ownership market would need to be supported by $20-50 million in loans at the start of SREC II, and $300-600 million cumulatively through 2020. This represents a significant opportunity for the financing/banking industry.
- DOER announced, in parallel with the SREC-II rulemaking, a financing support program using ACP funds. Final development of the program will be done in coordination with stakeholder input, including direct discussions with the banking industry.
- DOER anticipates using approximately $30 million of ACP funds for this purpose. Leveraging funds will be important, along with strategies to enable banking sector to sustain lending as ACP support is diminished.
- MassCEC will maintain CommSolar II rebate program through the development of the financing program.

# Net Metering

- Many non-residential and most municipal solar projects depend on the net metering credit incentive, along with SREC revenue
- MA market is non-uniform in the availability and value of Net Metering credits by utility territory
- Any change to the Net Metering caps or other related provisions must be made by the legislature
- Bills sponsored by utilities and SEIA have been filed with legislature
- Ongoing negotiations between DOER, DPU, National Grid, Northeast Utilities, SEIA, and NECEC

# 2014 RPS Class II Rulemaking

- DOER commenced a rulemaking on its RPS Class II Regulation on February 28, 2014 to address three specific changes:
  - Implement changes to woody biomass eligibility added to RPS Class I in 2012
  - Address Class II Renewable market undersupply by recalibrating Minimum Standard
  - Address perennial Class II Waste to Energy market oversupply
- Public comments were received in March and legislative comments in early May
- Final regulation expected to be promulgated in June

# Thank You

**DOER RPS Website:** www.mass.gov/energy/rps

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