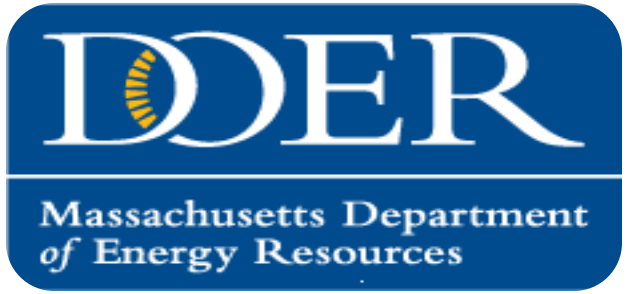
Creating A Clean, Affordable, and Resilient Energy Future For the Commonwealth



COMMONWEALTH OF MASSACHUSETTS

Charles D. Baker, Governor
Karyn E. Polito, Lt. Governor
Matthew A. Beaton, Secretary
Judith Judson, Commissioner

National RPS Summit

Washington, D.C.

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Next Generation Solar Incentive Program

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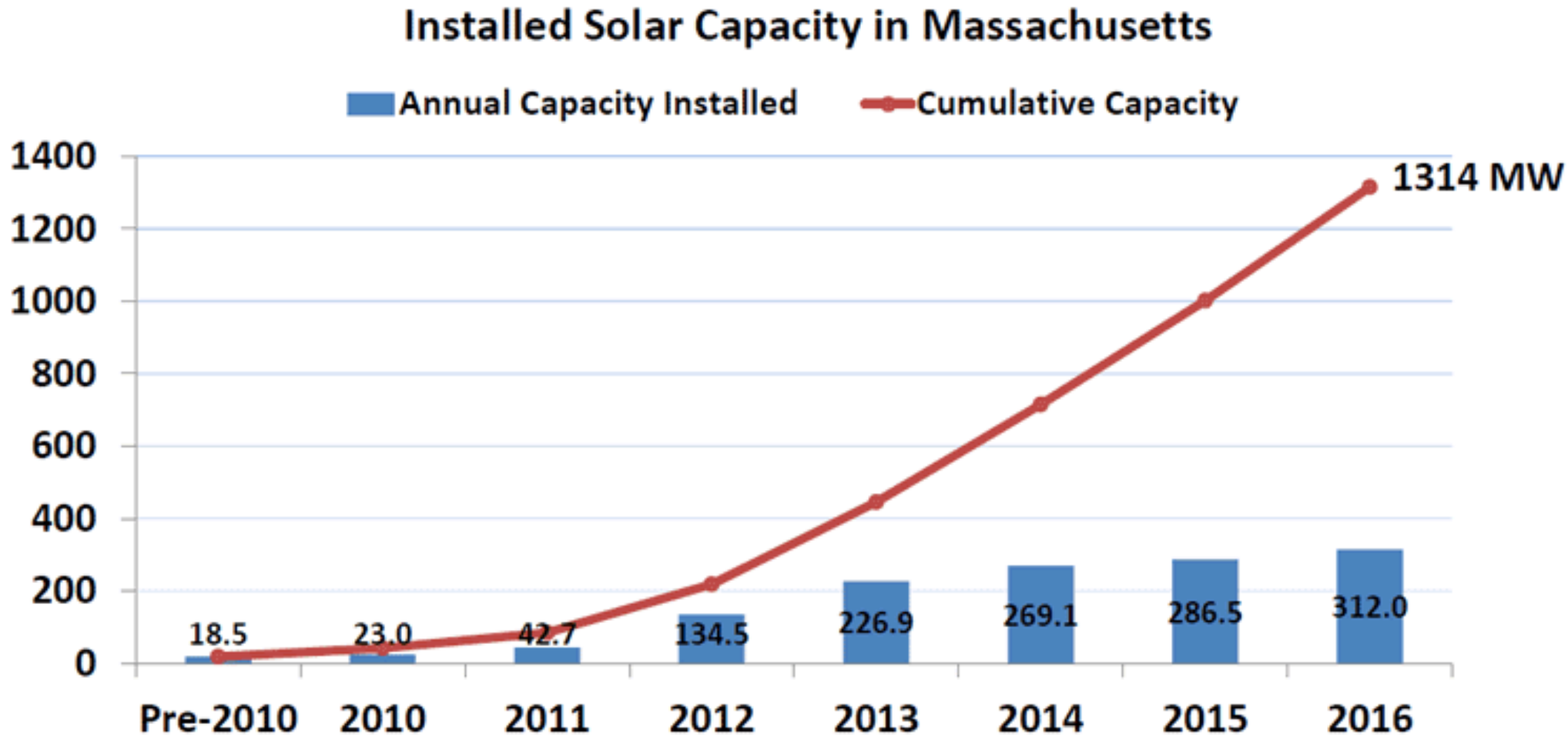
Existing Market Observations

- SREC programs have successfully increased solar deployment in Massachusetts
- SREC I goal 450 MW by 2017
  - Met in 2013
- SREC II goal 1600 MW by 2020
  - Met in 2016
- DOER required to file extensions through emergency regulations for each
- As of October 2016, 1314 MW installed



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DOER
Massachusetts Department of Energy Resources

Existing Market Observations

- Market risk and uncertainty has resulted in higher incentives than necessary
- Programs can be improved to better control ratepayer costs, while continuing to expand solar deployment
- SREC II program has made improvements over original SREC program, but more can be done
  - SREC Factors
  - Reduced ACP and Auction rates

DOER Objectives

- Maintain robust growth across installation sectors – residential, small commercial, utility-scale, roof mounted, ground mounted, etc.
- Ensure widespread access to incentives for all ratepayers (e.g. community shared solar, low income, etc.)
- Address land use concerns related to siting of solar projects
- Expand direct ownership of solar among residents and businesses
- Encourage co-location of energy storage and solar
- Enable continued solar market growth without expanded net metering caps

DOER Objectives

- Provide economic support and market conditions to maintain and expand PV market in MA
  - Maintain solar employment numbers in MA
- Provide clear policy mechanisms that control ratepayers costs and exposures
  - Ratepayer costs should better reflect marginal cost of solar installations over time
  - Program design should seek to minimize soft costs associated with project financing and monetizing RECs/SRECs
  - Establish a program now that will drive the market towards cost parity with other RPS Class I resources

Current Design Considerations

- Three consecutive analyses conducted by DOER comparing SRECs to other policy alternatives structures have shown tariffs to be significantly less costly to implement.
- DOER believes that a tariff-based incentive program would be best mechanism to continue supporting solar at the lowest cost to ratepayers.
- Benefits include:
  - Long-term revenue certainty to generators
  - Ability to set incentives with more precision
  - Predictable incentive levels
  - Greater cost certainty to ratepayers
  - Opportunity for greater synergies between incentive and net metering programs

Tariff Program Design Details

- 10-15 year fixed price tariff
- Applies to all electric distribution companies (EDCs)
- Same tariff rates across state
- Tariff payments are for Class I RECs
- Proposed incentive payments would be net of energy value (i.e. total tariff rate minus value of energy)
  - Generators can be net metered, ISO-NE market participants, or qualifying facilities
- Declining block model:
  - 200 MW block sizes (at least 8 blocks)
  - Individual Utility blocks based on load share
  - Tariff values decrease by approximately 5% in each subsequent block (possibility for review and potential adjustments)
  - Possible that subcategories will be guaranteed a portion of each block (e.g. 20% for projects <=25 kW AC)
- Full cost recovery for the EDCs for the cost of all tariff payments and administrative costs
  - Recovery of net costs may be made through a fixed, non-bypassable monthly charge to all distribution customers

Illustrative Tariff Values

Capacity Based Tariff Rates (kW AC)		
System Capacity	**Incentive ($/kWh)**	**Term Length**
Less than or equal to 25 kW AC (Low Income) [1]	$0.35	10-year
Less than or equal to 25 kW AC	$0.30	10-year
>25 - 250 kW AC	$0.23	15-year
>250 - 1,000 kW AC	$0.18	15-year
>1,000 - 5,000 kW AC	$0.15	15-year

1. Must be an R-2 customer to qualify

Note: These are proposed values and are not necessarily indicative of final tariff rates

Illustrative Tariff Adder Values

Location Based Adders	
Type	**Adder Value ($/kWh)**
Building Mounted	$0.02
Brownfield/Landfill	$0.03
Solar Canopy	$0.04

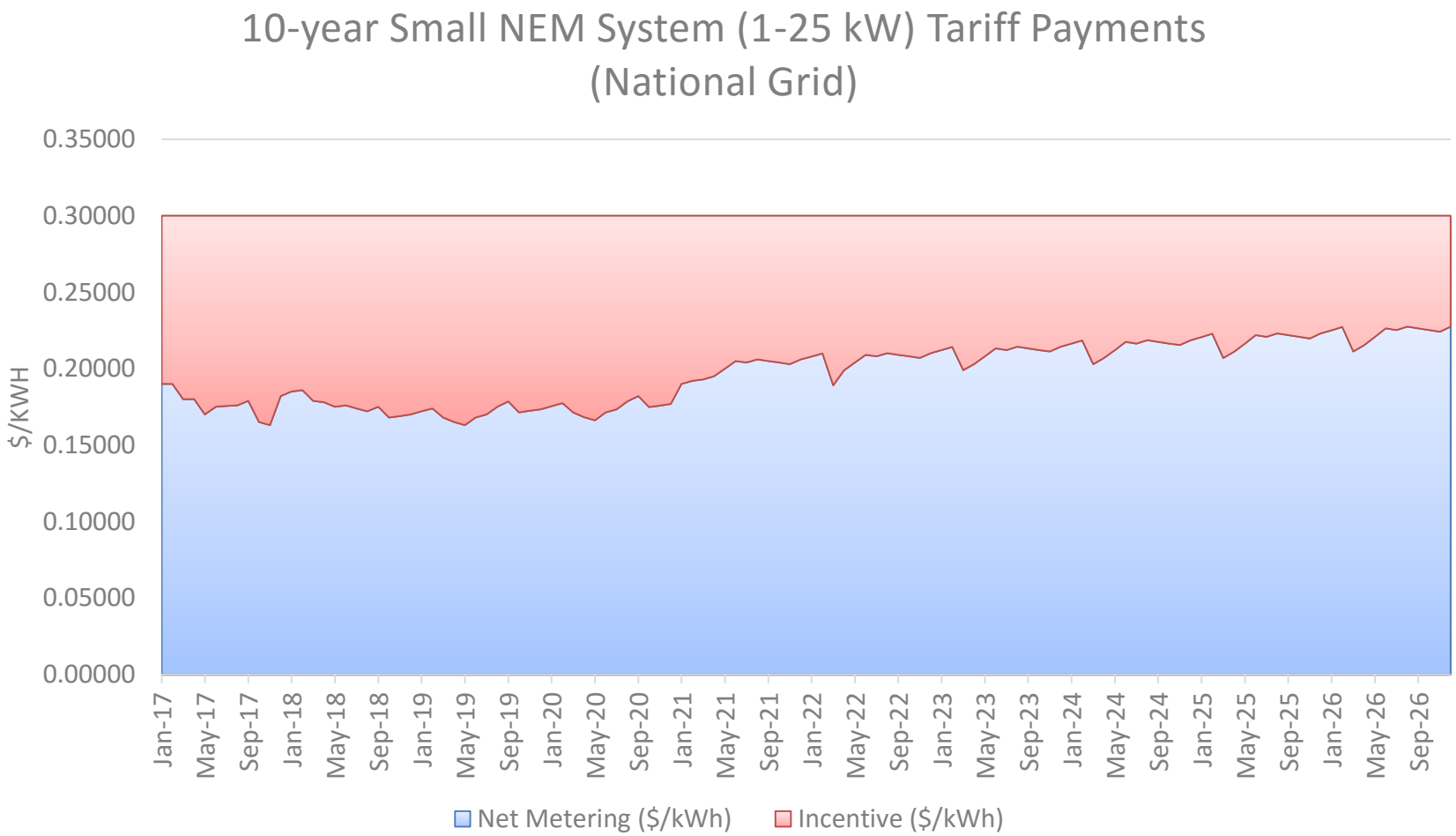
Off-taker Based Adders	
Type	**Adder Value ($/kWh)**
Community Shared Solar (CSS)	$0.04
Low Income Property Owner	$0.04
Low Income CSS [1]	$0.06

Policy Based Adders	
Type	**Adder Value ($/kWh)**
Behind-the-Meter Energy Storage [2]	$0.03
Standalone Solar + Energy Storage	$0.05
Non-Net Metered	$0.05

1. Must be at least 25% R-2 customers (extra $0.01/kWh for each additional 25% of off-takers consisting of R-2 customers)
2. Must be connected to the meter of a customer with a minimum amount of load to be determined

Note: These are proposed values and are not necessarily indicative of final tariff rates

Small System Tariff



Note: Graph is illustrative of how tariff payments would be determined and does not reflect projected values

Implementation Process

- DOER must establish new regulation
- DPU proceeding would be initiated following EDCs jointly filing a model tariff
- DPU proceeding expected to last at least six months depending on the amount of consensus between parties at time of filing
- DOER and DPU processes may be run concurrently, but DOER regulation would need to be effective before DPU process begins
- Would require DOER to file emergency regulation prior to EDCs filing model tariff with the DPU

Process

- Small Stakeholder Meetings
  - Billing, Crediting
  - Block Designation and Application Review
  - Tariff Design
  - Land use and Siting
  - Storage Incentive
- DOER file emergency regulations January 2017
- Utilities file tariff with DPU April 2017
- New program effective Fall 2017

Contact

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