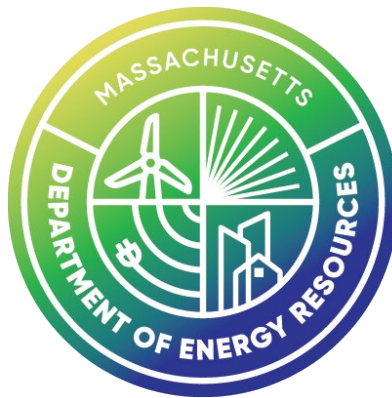


DRAFT

Solar Massachusetts
Renewable Target 3.0
Annual Program Year
Report: Program Year 2027



Massachusetts Department of Energy Resources

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Acronyms

AC ¹	Alternating Current
ATB	Annual Technology Baseline
CSS	Community Shared Solar
DC	Direct Current
DOER	Department of Energy Resources
EDC	Electric Distribution Company
FEOC	Foreign Entity of Concern
GHG	Greenhouse Gas
ITC	Investment Tax Credit
kW	Kilowatt
LBNL	Lawrence Berkeley National Laboratory
LCOE	Levelized Cost of Energy
MW	Megawatt
NLR	National Laboratory of the Rockies
PY	Program Year
REC	Renewable Energy Certificate
RPS	Renewable Energy Portfolio Standard
SAM	System Advisory Model
SMART	Solar Massachusetts Renewable Target
STGU	Solar Tariff Generation Units

¹ Unless otherwise noted, all capacities included in the report are Alternating Current (AC).



Introduction

On June 20, 2025, DOER filed emergency regulations establishing the Solar Massachusetts Renewable Target 3.0 (SMART 3.0) Program under 225 CMR 28.00.² A key change in the SMART 3.0 Program is the yearly setting of the Program Year's components through the Annual SMART Program Assessment and the publication of the Annual Program Year Report under 225 CMR 28.05(2). The Annual Program Year Report sets the following components for the Program Year: the Annual Capacity Block, annual capacity allocation between EDC service territories, capacity set asides, the Base Compensation Rates, the Compensation Rate Adder values, the Flat Incentive Rate for STGUs less than or equal to 25 kW, and the adder value for Low Income STGUs less than or equal to 25 kW.

On December 1, 2025, DOER published the Annual Program Year Report for [Program Year 2026](#) (PY26). DOER will continue accepting applications under PY26 at these rates until December 31, 2026.

This report contains the draft program details for Program Year 2027 (PY27), which will be open for applications from January 4, 2027, to December 31, 2027.

All capitalized terms in this report are defined terms under 225 CMR 28.00.

Annual SMART Program Assessment

Per 225 CMR 28.05(1)(a), DOER considers several factors when determining the programmatic elements for the following Program Year including:

1. Progress Toward GHG Emissions Limits;
2. Historic Program Participation;
3. Ratepayer Cost Impacts;
4. Material and Development Costs;
5. National and Regional Solar Costs; and
6. Land Use and Siting.

DOER evaluates these factors in conjunction with the results of the annual survey of solar development costs and stakeholder comments to achieve a strategic balance between ratepayer impacts, policy goals, desk research, and real-world conditions.

² DOER filed an updated version of 225 CMR 28.00 with the Secretary of the Commonwealth on August 28, 2025, which went into effect upon publication in the Massachusetts Register on September 12, 2025.

This flexibility was intentionally built into the assessment process by DOER to account for externalities or anomalies that exist in the solar development marketplace.

Progress Toward GHG Emissions Limits

Pursuant to the Global Warming Solutions Act (St. 2008, c. 298, as amended and codified at M.G.L. c. 21N, "Chapter 21N") on December 21, 2022, the Secretary of the Executive Office of Energy and Environmental Affairs established a statewide greenhouse gas emissions limit and sector-specific sublimits for 2050.³ The Clean Energy and Climate Plan for 2050⁴ (2050 CECP) identified pathways to achieve the established Power Sector Sublimit of 93% emissions reduction compared to 1990 levels. The 2050 CECP identified that Massachusetts will need an estimated 8,360 MW of solar capacity installed by 2030 to stay on track to meet the established sublimits. Currently, Massachusetts has an estimated installed capacity of 4,311 MW of solar,⁵ an increase of 281 MW over last year, but 4,049 MW short of the 2030 target identified in the 2050 CECP. Based on current installed capacity, Massachusetts would need to target approximately 810 MW of new solar capacity per year to achieve the 2050 CECP's objectives for 2030.

On March 16, 2026, Governor Healey issued Executive Order 654: To Secure Massachusetts' Energy Future by Establishing an Energy Supply Plan that Drives Affordability and Reliability⁶ which established a goal to bring 10 GW of new energy resources, including 4 GW of solar energy, online or under contract by the end of 2035. Similarly to the targets established in the 2050 CECP, Executive Order 654 will require Massachusetts to continue to aggressively pursue solar capacity.

Historic Program Participation

SMART 3.0's Program Year 2026 began on January 1, 2026, and DOER began accepting applications on January 2, 2026. As of September 10, 2026, DOER has

³ Massachusetts Executive Office of Energy and Environmental Affairs, *Determination of Statewide Greenhouse Gas Emissions Limit and Sector-Specific Sublimits For 2050* (Dec. 21, 2022), <https://www.mass.gov/doc/determination-letter-for-the-2050-cecp/download>.

⁴ Massachusetts Executive Office of Energy and Environmental Affairs, *Clean Energy and Climate Plan for 2050* (Dec. 2022), <https://www.mass.gov/doc/2050-clean-energy-and-climate-plan/download>.

⁵ Value derived from the sum of interconnected solar facilities reported in the electric distribution companies' 2025 On-site Generating Facilities Reports, and solar capacity qualified under the Solar Carve-out Programs installed municipal light plant service territories. See generally, On-Site Generating Facility Reports, D.P.U. 26-DG.

⁶ No. 654: To Secure Massachusetts' Energy Future by Establishing an Energy Supply Plan that Drives Affordability and Reliability (March 2026), <https://www.mass.gov/executive-orders/no-654-to-secure-massachusetts-energy-future-by-establishing-an-energy-supply-plan-that-drives-affordability-and-reliability>.

qualified 147 applications for STGUs >25 kW, accounting for 56.95 MW, and 366 applications for STGUs ≤25 kW, accounting for 4.72 MW. This amounts to 61.67 MW in total.⁷ After removing STGUs that do not count toward the Annual Capacity Block,⁸ DOER has qualified 8.3% of the available PY2026 capacity.

Of the STGUs ≤25 kW, 1.99 MW, or 42%, qualified as Low Income STGUs. Of the STGUs >25 kW, Public Entity STGUs comprised 4.78 MW, or 8%, of capacity while 27.54 MW, or 48%, of capacity paired with energy storage, totaling 19.70 MW or 67.70 MWh of energy storage capacity.

Ratepayer Cost Impacts

DOER works with BW Research Partnership (BW) to develop a model to estimate the net program costs and the associated impacts on electric ratepayers in the Commonwealth. The model accounts for direct and indirect costs and benefits of the program. The total estimated net program cost will then be used to estimate the monthly and annual impacts on an average ratepayer's electric bill.

Additionally, DOER considered the phase-out of federal investment tax credits for solar projects that are safe harbored through December 31, 2030, but have not yet qualified under the SMART program to ensure there is sufficient capacity available to capture all projects that can meet the federal criteria to retain ITC eligibility. Maximizing the number of projects with the ITC reduces risk for solar project development and mitigates ratepayer costs, two key factors in DOER's assessment.

Further detailed in the Base Compensation Rates and Compensation Rates Adder portion of the report, DOER revised most rates for PY27. DOER's ratepayer impact model projects that PY27 provides comparable or lower ratepayer costs compared to PY26 while remaining in pursuit of Massachusetts 2050 CECP emissions mandates and solar deployment. Based on current program trends, DOER estimates that for PY27, the program would have a direct annual ratepayer cost of \$90.9 million, *if fully subscribed*, based on a comparable mix of qualified SMART 3.0 project types to date. This estimate does not account for direct ratepayer benefits such as wholesale market revenues or the sale of Class I Renewable Energy Certificate generated by STGUs which will drive down the actual program cost borne by ratepayers. This direct annual

⁷ DOER pulled this number from the SMART Portal, the online platform that manages SMART applications.

⁸ STGUs less than or equal to 25 kW and Behind-the-Meter STGUs greater than 25 kW and less than or equal to 250 kW do not count toward the PY26 Annual Capacity Block. See DOER, *Annual Program Year Report: Program Year 2026* (Dec. 2025) at 9, <https://www.mass.gov/doc/program-year-2026-annual-report/download>. See also 225 CMR 28.05(3)(c).

cost is roughly 54.4% below the projected maximum PY26 cost – driven largely by the lower Annual Capacity Block from PY 2027 (300 MW for PY27 versus 600 MW for PY26).

DOER has also considered the benefits of solar to customers and the electric grid. A study⁹ published by the Department of Energy Resources on October 1, 2026, in collaboration with Synapse Energy, found that through 2025 the SMART 1.0/2.0 program has provided \$1.49 in benefits to **all ratepayers** for every \$1 invested.¹⁰

Additionally, the report found that solar provides energy independence for Massachusetts consumers and helps insulate them from energy price spikes associated with the fuel supply costs of fossil fuel generation. This is especially critical given current global fuel market conditions.

Material and Development Costs

As detailed in the Annual Program Year Report section, BW conducted a survey of Massachusetts market participants to collect data on the current material and development costs for different project sizes and installation types. BW received 243 survey responses from market participants, which resulted in 141 individual project cost data points. These primary data were supplemented with secondary data from NLR's Annual Technology Baseline (ATB) for solar cost and performance, and primary data from BW's 2025 survey, focusing on project types with a low number of responses in 2026. The primary and secondary data were used as inputs to NLR's System Advisor Model (SAM), resulting in a total of 660 data points for the modeling process. SAM is a desktop software developed by experts at NLR that produces financial models for residential, commercial, and utility-scale solar projects based on installation and operating costs and system design parameters that can be customized within the tool. The following tables show the weighting of 2026 survey data, 2025 survey data, and secondary data in the modeling, based on the number of survey respondents for each project type.

⁹ Direct Costs and Benefits of Massachusetts Solar Incentives, October 2026, Page 19.
<https://www.mass.gov/info-details/direct-costs-and-benefits-of-massachusetts-solar-incentives>

¹⁰ The \$1.49 benefits figure only includes energy specific benefits and is not inclusive of the value of other benefits to Massachusetts, such as avoided greenhouse gas emissions, increased state and local tax revenue, local job creation, or public health benefits. It also does not account for direct benefits to program participants (e.g., incentive payments and avoided electricity costs) that remain in Massachusetts nor does it account for regional energy market benefits that flow to ratepayers in other New England states.

Table 1: Weighting against Primary Data

Survey Respondents for Project Type	Weights
Less than 8	2026 survey weight = 2026 respondents ÷ (2025 + 2026 respondents); 2025 survey weight = remaining share
8 or more	100% 2026 survey data

Table 22: Weighting against Secondary Data

Survey Respondents for Project Type	Weights
Zero	100% ATB cost data
1-2	20% survey responses, 80% ATB cost data
3-4	40% survey responses, 60% ATB cost data
5-7	75% survey responses, 25% ATB cost data
8 or more	100% survey responses

Regional and National Solar Costs

In addition to the modeling of material and development costs, BW's analysis also compared the results to third-party data on regional and national solar costs. The third-party sources included [NLR's state-level installed cost data](#), [LBNL's installed cost data](#), and [Lazard's LCOE data](#). These comparisons showed that the modeling results are aligned with national trends.

The US Solar Market Insight Q3 2026¹¹ identified that for commercial solar in Q2 2026 prices have reached an all-time high. This is largely due to federal policies such as those increasing the cost of steel, which drove system costs up 50% year-over-year, and the limiting of eligible equipment under Foreign Entity of Concern (FEOC) requirements. 53% of respondents to the 2026 annual survey indicated they planned to meet FEOC requirements.

Additionally, NLR estimates that solar in Massachusetts is 9% more expensive than the national average, however, Massachusetts' solar costs have declined in line with national trends over the past decade.¹² Massachusetts' higher development costs can mostly be attributed to the cost of interconnection and labor. When asked about the most significant factor impacting project development timelines in Massachusetts, 79 percent of survey respondents cited issues with interconnection.

BW further found that the draft PY27 Flat Incentive Rate for ≤ 25 kW is 2% lower than the average nominal residential compensation rate available in northeast states with comparable programs.

Land Use and Siting

As of September 15, 2026, for STGUs > 25 kW, 53.9% of capacity has qualified for a Locational Compensation Rate Adder and 44.7% of capacity will be subject to the Mitigation Fee. DOER expects to collect approximately \$6 million worth of Mitigation Fees from PY26 projects. Under 225 CMR 28.09(5), all Mitigation Fees are deposited to a trust dedicated to supporting conservation, ecosystem, and biodiversity programs.

Annual Program Year Report: Program Year 2027

PY27's Annual Program Year Report is based on the Annual SMART Program Assessment, the analysis performed by BW and summarized on [DOER's website](#).

Annual Capacity Block

Capped Capacity

PY27 will have **300 MW** of available capacity for STGUs subject to the capacity cap.

¹¹ Wood Mackenzie, *US Solar Market Insight Q3 2026*, (Sep. 10, 2026).

<https://www.woodmac.com/industry/power-and-renewables/us-solar-market-insight/>.

¹² Lawrence Berkeley National Laboratory, *U.S. Distributed Solar and Storage Data Tool* (Sept. 17, 2026), <https://emp.lbl.gov/tracking-sun-tool>.

Uncapped Capacity

Per 225 CMR 28.05(3)(c), STGUs less than or equal to 25 kW and Behind-the-Meter STGUs greater than 25 kW and less than or equal to 250 kW shall not count toward the Annual Capacity Block unless DOER imposes a capacity set aside for those project types. For PY26, DOER will not impose a capacity set aside for those project types and therefore the following STGU types will not be subject to the capacity cap and may submit applications for PY26 without regard to the capacity cap:

- ≤ 25 kW
- Behind-the-Meter STGUs > 25 and ≤ 250 kW

Capacity Allocation

Per 225 CMR 28.05(4), each EDC will be allocated at least 5% of the available capacity block. The remaining capacity will be allocated proportional to the total retail electric load served to Massachusetts customers by each EDC. The distribution of capacity for PY27 is based on Q1 2026 retail electric load of each EDC.

The 300 MW of capacity available under the 2027 capacity block will be allocated amongst the three EDCs' territories as follows:

Table 2: Program Year 2027 Capacity Allocations

Electric Distribution Company	Percentage of MA Electric Load Served	Percentage of Capacity Block	Total Available Capacity
Eversource	52.24%	51.67%	155.02 MW
National Grid	46.86%	46.45%	139.36 MW
Unitil	0.89%	1.86%	5.59 MW

Capacity Set Asides

Per 225 CMR 28.05(5), a minimum percentage of the available capacity block will be set aside annually for the following STGU types:

- Standalone STGUs > 25 kW and ≤ 250 kW

- STGUs >250 and ≤500 kW
- Low Income Property STGUs
- Community Shared Solar STGUs

The percentages set asides for the above STGU types are minimum percentages. DOER will continue to accept applications for these STGU types above their minimum set aside capacities if there is unallocated capacity available in that Program Year's Annual Capacity Block. However, DOER will not reassign unused capacity from one set aside category to another during the Program Year.¹³

For PY27, DOER retained the minimum percentages from 225 CMR 28.05(5) to establish a baseline for program participation rates. Future set aside percentages may be informed by participation rates from the first two Program Years. The capacity set asides for 2027 will be as follows:

Table 3: Program Year 2027 Set Asides

STGU Type	Percentage of Capacity Block	Total Capacity
Standalone >25 and ≤250 kW; and >250 and ≤500 kW	10%	30 MW
Low Income Property	10%	30 MW
Community Shared Solar	15%	45 MW

These capacity set asides will then be distributed between the EDCs' available capacity according to their respective capacity allocations:

¹³ 225 CMR 28.05(5)(b).

Table 4: Program Year 2027 Set Asides by EDC

STGU Type	Unitil	Eversource	National Grid
Standalone >25 and ≤250 kW; and >250 and ≤500 kW	0.27 MW	15.67 MW	14.06 MW
Low Income Property	0.27 MW	15.67 MW	14.06 MW
Community Shared Solar	0.40 MW	23.51 MW	21.09 MW

Base Compensation Rates

For PY2027, the Base Compensation Rates for STGUs >25 kW are based on the levelized revenue requirements for each project size category and consider the following inputs:

- Capacity factor and production degradation
- Installed costs
- Financing costs
- Operation and maintenance costs
- Project management costs
- Land lease costs
- Incremental operating and capital expenditure costs for certain project types

Information on these inputs was obtained via a survey of solar installers and developers in Massachusetts. This information was then integrated with high-quality public secondary data on solar costs and input into NLR's SAM, which modeled anticipated levelized revenue requirements for project types based on project size, battery storage, and project type.

Respondents were asked to provide Massachusetts specific project costs for each current SMART project size, and Compensation Rate Adder categories. The survey collected the following project cost data:

- **Total installed cost** - costs associated with installing the photovoltaic system, and include equipment, labor, engineering, permitting, customer acquisition, marketing, interconnection and any other costs that apply in Year 0 of the project cash flow.
- **Total fixed costs** - annual costs associated with the operation and maintenance of the photovoltaic system over the lifetime of the project, including annual costs associated with the replacement of solar photovoltaic inverters.
- **Total solar photovoltaic plus energy storage installed cost** - cost of purchasing and installing all photovoltaic and battery-related equipment, including labor and other associated costs.
- **Total energy storage fixed costs** - annual costs associated with the operation and maintenance of the energy storage system over the lifetime of the project, including annual costs associated with the replacement of battery-related equipment.
- **Solar photovoltaic financing data** - project financial and debt structure.
- **Solar photovoltaic project ownership** - project financial and debt structure under varying ownership structures.

This analysis indicated the some of the Base Compensation Rates for PY27 should be reduced (see “Calculated PY27 Base Compensation Rate” below), while others should remain constant or increase. The aggregated survey results are available for download on [DOER’s website](#). Pursuant to 225 CMR 28.05(6), several Base Compensation Rates for PY27 do not align with the results of BW’s analysis due to the limit on year-over-year changes.

Based on the above, the Base Compensation Rates for PY27 will be as follows:

Table 5: Program Year 2027 Base Compensation Rates (\$/kWh)

STGU Capacity (kW)	PY26 Base Compensation Rate	Calculated PY27 Base Compensation Rate	Draft PY27 Base Compensation Rate	Change Between PY26 & PY27 Rates
>25 and ≤250	0.2807	0.2548	0.2548	-9.2%
>250 and ≤500	0.2430	0.2214	0.2214	-8.9%
>500 and ≤1,000	0.2317	0.2874	0.2780*	20%
>1,000 and ≤5,000	0.1790	0.2367	0.2148*	20%

* Pursuant to 225 CMR 28.05(6) Base Compensation Rate changes across program years are limited to up to 20% of the value for the same category of Base Compensation Rate or Compensation Rate Adder from the Prior Program Year or one cent per kWh, whichever is greater.

Compensation Rate Adders

The Compensation Rate Adders for STGUs >25 kW were developed by comparing the average levelized cost of energy of all project types >25 kW for each respective adder category to a baseline value.

Based on the PY27 analysis, DOER found that there was variation in whether Compensation Rate Adders for PY27 should be reduced, kept the same, or increased (see “Calculated PY27 Adder Rate” below). As with the Base Compensation Rates, based on the overall Annual SMART Program Assessment, DOER decided to maintain, decrease, or increase the value of Compensation Rate Adders (see “PY27 Adder Rate” below) largely based on the results of BW’s analysis.

Some Compensation Rate Adders changes were limited by 225 CMR 28.05(6), which limits changes in the value of an adder to 20% from the prior Program Year or one cent per kWh, whichever is greater.

DOER did opt to deviate from BW’s calculated Compensation Rate Adder for the Floating Solar and Public Entity adders. DOER opted not to increase the Floating Solar adder as floating solar has limited potential in Massachusetts, remains less economically efficient than other project types, and is a minor policy priority under the SMART 3.0 program. Alternatively, DOER opted not to decrease the Public Entity adder given the reduction in federal incentives and the challenges public facilities face. Due to this, DOER believes it prudent to maintain strong incentives for public facilities at this time.

Lastly, due to an absence of data, the economics of raised racking systems were not included in the BW analysis. However, DOER is aware that raised racking systems have had low adoption under the SMART program as they face similar cost drivers to projects such as solar canopies due to the amount of steel required. Given the policy priority of siting projects in the built environment, DOER has made a 1 cent increase to the Raised Racking adder in alignment with the 1 cent increase to the Canopy adder.

Projects may only qualify for one location based adder and one off-taker based adder at a time.¹⁴ The one exception is for Brownfield projects, which may qualify for one additional location based adder.¹⁵

¹⁴ 225 CMR 28.13(3)(f)1.

¹⁵ 225 CMR 28.13(3)(f)2.

The Compensation Rate Adders for PY27 will be as follows:

Table 6: Program Year 2027 Compensation Rate Adders (\$/kWh)

Adder Type	STGU Type	PY26 Adder Rate	Calculated PY27 Adder Rate	Draft PY27 Adder Rate	PY26 & PY27 % Change
Location Based	Brownfield*	\$0.04	\$0.05	\$0.05	25%
	Building Mounted	\$0.03	\$0.03	\$0.03	0%
	Canopy	\$0.08	\$0.13	\$0.09	12%
	Dual-use Agricultural	\$0.09	\$0.16	\$0.10	11%
	Floating	\$0.04	\$0.27	\$0.04	0%
	Landfill	\$0.06	\$0.05	\$0.05	-16.7%
	Large Building Mounted (≥ 900 kW)	\$0.04	\$0.04	\$0.04	0%
	Raised Racking	\$0.04	\$0.04	\$0.05	25%
Off-taker Based	Community Shared	\$0.07	\$0.06	\$0.06	-14.3%
	Low Income Property	\$0.05	\$0.06	\$0.06	20%
	Public Entity	\$0.04	\$0.03	\$0.04	0%
Other	Pollinator	\$0.01	\$0.09	\$0.02	100%
	Solar Tracking	\$0.01	\$0.01	\$0.01	0%
	Energy Storage Multiplier*	\$0.04	\$0.06	\$0.05	25%

* Pursuant to 225 CMR 28.05(6) Compensation Rate Adder changes across program years are limited to up to 20% of the value for the same category of Base Compensation Rate or Compensation Rate Adder from the prior Program Year or one cent per kWh, whichever is greater.

Flat Incentive Rates for ≤ 25 kW AC

To simplify program participation for residential participants, 225 CMR 28.05(7) establishes a flat \$/kWh incentive rate for all STGUs ≤ 25 kW. STGUs serving Low Income Customers will receive an adder on the Flat Incentive Rate.

The Flat Incentive Rate compensates the system owner for the Renewable Energy Certificates that the EDC retains from their system. The \$/kWh value is locked in at the time of qualification and is guaranteed to the system owner for a 20-year tariff term. The Flat Incentive Rates were developed by calculating the difference in the levelized cost of energy between rooftop systems ≤ 25 kW relative to the cost per kW for systems > 25 and ≤ 250 kW.

Based on the PY27 analysis, DOER found that the Flat Incentive Rates for PY27 should be kept the same (see "Calculated PY27 Flat Incentive Rate" below).

Table 7: Program Year 2027 Flat Incentive Rates (\$/kWh)

STGU Type	PY26 Flat Incentive Rate	Calculated PY27 Flat Incentive Rate	Draft PY27 Flat Incentive Rate	Change between PY26 & PY27 Rates
STGUs ≤ 25 kW	\$0.03	\$0.03	\$0.03	0%
Low Income STGUs	\$0.06	\$0.06	\$0.06	0%