

CLOUDS OVER THE SOLAR INDUSTRY IN MASSACHUSETTS: Inconsistent Policy Slows Growth





EXECUTIVE SUMMARY

VOTE SOLAR'S RECOMMENDATIONS WILL:

- Create 8,000-9,000 well-paying local jobs
- Drive more than **\$5 billion** in direct investments to Massachusetts
- Expand clean energy access and improve health in **low-income** and **environmental justice communities**
- Put the state on track to achieve its **35 percent by 2030** renewable energy requirement

Massachusetts is in danger of falling short when it comes to achieving our existing renewable energy and climate goals. Solar energy must play a fundamental and increasing role in displacing fossil fuels from the Commonwealth's energy mix if we are to reach those goals – and of all the renewable energy sources, it is the one with the most potential for local growth.

However, due in part to several changes in state energy policy, the state has seen a 50 percent decline in new solar installations, predominantly in the residential sector. As a result, the state's solar workforce has shrunk by about 30 percent, shedding around 4,372 jobs between 2015 and 2018. Many shovel-ready solar projects now languishing on waiting lists in two – soon to be three – utility territories further emphasize the need for immediate policy action.

Historically, the Commonwealth has had strong solar policies that have provided thousands of customers with the choice to go solar and contribute to our state's fight against climate change, but constant changes to these policies and gaps between them have slowed growth and discouraged investment.

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In contrast to our short-term policies, New York State recently passed a climate and clean energy law that requires New York to: (a) develop enough local, distributed solar to power one million homes; 6,000 megawatts (MW) by 2025; (b) achieve 70 percent renewable energy by 2030; and (c) 100 percent emissions-free electricity by 2040.

This bold law creates a solid and long-term path to combating climate change and setting up a strong market for clean energy in the Empire State. For instance, our research shows this will create more than 11,000 jobs, drive \$10.0 billion in local economic benefits and save millions of dollars on electric bills in the solar industry in the next five years alone, while building a more resilient energy system throughout the state of New York, including in those low-income and environmental justice communities where opportunity is most needed. ¹

To reclaim the Commonwealth's national leadership and get back on track to meet our renewable energy and climate change goals, Vote Solar is calling for ambitious clean energy policy action this year, which should include:

- The immediate expansion of the Solar Massachusetts Renewable Target (SMART) program to 4,800 MW, an increase of 3,200 MW in order to meet the Commonwealth's clean energy deployment goals under the Renewable Portfolio Standard (RPS) and give solar workers confidence in a few years of consistent policy.
- Effective integration of energy storage and other distributed energy resources into the SMART program and utility grid planning to maximize both resilience and carbon-reduction benefits of solar.
- Strong provisions for low-income access and equitable participation in the state's growing clean energy economy through mechanisms such as contract-less community solar, focused incentive programs, and processes for initial and ongoing public stakeholder input in program design.
- Enable cities and towns, businesses and affordable housing to choose solar by addressing the net metering caps and SMART program design holding these projects back.

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Taking action this year to expand, strengthen and diversify Commonwealth solar policies, such as the SMART program, will help decrease harmful climate-change-causing emissions AND deliver the broader societal benefits of community resilience, energy equity, and local economic activity. **Significant program expansion would create between 8,000 to 9,000 new in-state jobs and result in more than \$5 billion in solar project investment in the Commonwealth.**

This report further outlines the lost opportunities associated with inaction and, conversely, the benefits of enacting Vote Solar's policy recommendations.









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SITUATION ANALYSIS & INTRODUCTION

For nearly a decade, Massachusetts was considered a national leader on solar, consistently ranking in the top 10 states for installed solar projects. To date, the Commonwealth has installed more than 2,400 MW of solar – about 10 percent of the state's total electricity consumption – exceeding the state's initial goal of at least 1,600 MW of solar capacity by 2020. However, since this initial strong start, shifts in policy focus and direction have caused slippage in Massachusetts' status as a national leader in solar innovation and deployment.

A Brief History of the Commonwealth's Solar Industry

In April 2007, Massachusetts announced a goal of 250 MW of solar by 2017 during a time when the state had just 3 MW installed. Landmark environmental legislation came in the form of the Green Communities Act (GCA) in 2008, which set the stage for the future of solar policy in the Commonwealth. Under the GCA, the DOER was able to use the Renewable Portfolio Standard (RPS) program to fire up the solar market, creating solar renewable energy certificates (SRECs) to provide a market value for the environmental and societal benefits of solar power production. These SRECs worked in combination with the compensation for energy and electric grid benefits provided by solar, provided through net metering whereby customers can run their meter backwards or send energy credits to other customers.

The first solar program, SREC I, began in January 2010 and was closed to new solar projects in April of 2014. The second solar program, SREC II, was finalized in 2014 and designed to both significantly reduce costs and send a more predictable price signal to the solar industry and investors. Among other things, SREC II was also setup to help the Commonwealth achieve the new 1,600 MW solar target. In fact, this incentive regime was so effective that new capacity caps were soon required, triggering a need for emergency regulations for the next phase of solar development.

Situation Analysis & Introduction

January 19, 2013

The Boston Globe

Solar power installations hit record in Mass.

Legislation passed in April 2016 directed DOER to develop a successor to SREC II, one that would move beyond the SREC programs' goal of jump-starting a nascent market and create a long-term sustainable incentive program that promotes cost-effective solar development in Massachusetts. This legislation also increased caps on the net metering policy which had stalled projects, which has hindered the ability to create new jobs and build more cost-effective, carbon-free clean energy. DOER, in conjunction with Eversource, National Grid and Unitil, established the SMART program. The program's goal was to encourage the development of an additional 1,600 MW of new solar-generating capacity and it became the first in the nation to offer incentives to projects that are paired with storage to capture the benefits of solar regardless of time of day or weather conditions.

SMART Launch and Shortfalls

The SMART program officially launched on November 26, 2018, after more than a year in which the caps on net metering were reached in several utility service areas, which meant that hundreds of clean energy projects and the jobs they generate could not move forward. This gap in fair compensation for solar customers of medium-sized local projects meant that demand built up over time. The program began soliciting applications for solar photovoltaic (PV) projects of all types and sizes up to 5 MW per project.

Given the popularity of solar power and pent up demand from the previous year, the Department of Energy Resources (DOER) received more than 2,500 applications in the first week alone. Two weeks in, applications had been submitted for more than 600 MW of installations – nearly 40 percent of the total capacity of the program.

Situation Analysis & Introduction

Large (25 kW to 5 MW) projects in Unitil's service area in central Massachusetts and the western portion of Eversource's service area (WMECO) were immediately waitlisted, with large projects in National Grid's service area comprising seven of its eight available blocks.

The launch of the SMART program took place against a backdrop of challenges for the solar industry that have continued to mount – uncertainty over new state regulations, Eversource's rate case decision, the caps on net metering, and the federal government's tariffs on solar equipment. The result? Leading up to the SMART program, Massachusetts had seen a 50 percent decline in new solar installations, predominantly in the residential sector, and the state's solar workforce has shrunk by about 30 percent, shedding around 4,372 jobs between 2015 and 2018.



Chart 1: Market Volatility - Massachusetts Solar Growth Quarter Over Quarter

Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight Q2 2019

Situation Analysis & Introduction

Initial projections had the SMART program on track to reach 1,600 MW by 2022, but the program is already closing in on that target. While seemingly a positive development, most of these projects will take a couple of years to be operational and the looming end of the program and continued lack of net metering will mean that no new projects will be planned beyond this point. As such, the end of the SMART program is leading to yet another gap in solar policy for Massachusetts and a barrier to the continued growth sufficient to meeting the state's RPS goals.

The fact that the program reached 600 MW within the first two weeks demonstrates a dire need for recalibration when it comes to new solar integration and development in the Commonwealth. Unfortunately, the overwhelming response to SMART is also indicative of the state's continued underestimation of solar. For reference, in 2014, DOER's SREC II program set a goal of installing 1,600 MW of solar capacity by 2020. This capacity was quickly met in April 2017.

In addition to the overarching capacity problem with SMART, the program has not delivered the diversity of projects that have served so the Commonwealth so well. Currently, the SMART program has failed to drive solar development that is saving lowincome and environmental justice communities on their electric bills. In addition, the net metering caps have meant that businesses and municipalities are not able to choose to put solar on their property to serve their energy needs. As a result, projects are primarily being sited in open fields rather than on rooftops, carports or landfills.

August 16, 2018

SMART problems in Massachusetts

The state's upcoming solar program looks as if it will very quickly move through allocated volume, stranding developers and installers and tens of millions of dollars worth of projects.

INDICATORS OF EXISTING BARRIERS TO SOLAR GROWTH

Market and policy data illustrates the urgent need for Massachusetts solar program expansion and diversification.

SMART Waitlists Are Stalling Solar Development

Intended to be "always on," the SMART program was designed as a declining block program to avoid the "start/stop" cycle that has hindered solar development in the Commonwealth. Unfortunately, the quantity of stalled projects from years of inconsistent solar policy was not fully anticipated and now backlogs of projects threaten to disrupt this mechanism if the program isn't updated and expanded.

In Western and Central Massachusetts, waiting lists already exist for large projects in two utility territories – Eversource West & Unitil (~23 MW) – and National Grid is already approving large projects on its final block (8 of 8) with only ~45 MW capacity remaining. The western part of the state has reached capacity quickly because its wide, open spaces can accommodate larger projects (> 25 kW). Backlogs loom in the remainder of utility territories as well, as blocks for both small and large-scale projects are anticipated to fill up rapidly. [See Chart 2]





Indicators of Existing Barriers to Solar Growth

At this point, the need is dire. DOER should act *this year* to expand SMART to avoid further disruption to vital solar development.

SMART Capacity Targets Fall Short of Reaching 2030 RPS Goal

Massachusetts' Renewable Portfolio Standard (RPS) was one of the first programs in the nation that required a certain percentage of the state's electricity to come from renewable energy such as solar and off-shore wind. The RPS is integral to Massachusetts' mandated reduction of greenhouse gas (GHG) emissions per the Global Warming Solutions Act (GWSA) of 2008.

Starting in 2020, the state will require that the percentage of our electricity that comes from renewable resources increase by 2 percent a year for 10 years, with the yearly increase falling to 1 percent a year in 2030 unless the Legislature amends the law in the interim. That means by 2030, the RPS in Massachusetts will be about 35 percent.

Once viewed as an ambitious target, Massachusetts' RPS no longer positions us as a national leader as both the capabilities of clean energy solutions and the immediacy of our climate crisis have become more apparent in recent years. By comparison, New York and California have standards requiring 100 percent clean energy by 2040 and 2045 respectively, and New Jersey and Maryland have 50 percent by 2030 renewable targets. And while Massachusetts' RPS target already lags behind other clean energy leaders, the state's solar program is not equipped to even deliver on the Commonwealth's more modest renewable target.

Our analysis shows that between 2,900 and 3,600 MWac of additional solar is needed for Massachusetts to reach its current RPS clean energy requirements by 2030 [See Chart 3]. This analysis also assumes modest electric load growth as vehicle and building electrification moves forward.

Indicators of Existing Barriers to Solar Growth



Source: Vote Solar based on industry data

SMART Also Fails to Track toward 80 Percent by 2050 Decarbonization Requirement

In order to achieve the Commonwealth's climate goals, the RPS will need to drastically increase and electrification of transportation and home heating will need to accelerate significantly. As electrification ramps up, additional solar will also be needed to get back on track to meet the state's decarbonization requirements. For the sake of comparison, our analysis shows that around 12.4 GW of additional solar by 2030 would be needed to put Massachusetts on track to achieve the 37.3 GW of additional solar required by 2050 to meet our long-term 80 percent decarbonization target [See Chart 4].

This analysis assumes more aggressive electric load growth through 2050 as vehicle and building electrification moves forward * as well as a significant ramping up of other clean resources including off-shore wind, planned and current imported hydro, and others.

Indicators of Existing Barriers to Solar Growth

Chart 4: 37 GW of Additional Solar Needed to Achieve 80% Decarbonization by 2050



Note: Assuming steady annual growth, this corresponds to a 12,446 MW 2030 solar target in order to achieve 2050 targets.

* Roughly what is required for the transportation and building electrification & accompanying electric load growth in order to achieve 80% GHG emission reductions according to the Brattle Group's recent study "The Coming Electrification of the North American Economy" and other related analyses.

POLICY RECOMMENDATIONS

In the following section, we put forward a series of policy recommendations that would not only get Massachusetts solar back on track to meet our existing clean energy targets, but would again position the Commonwealth as a bold national leader in building a state-of-theart clean energy economy.

Increase SMART Program to Support 3,200 Additional MW of Solar Development

The SMART Program should be expanded immediately – by at least 3,200 MW to total 4,800 MW of overall local solar power development. As detailed in the previous sections, without this increase the Commonwealth risks falling short of its own renewable energy and climate requirements and further backsliding as a national leader in solar development, clean energy jobs and climate action.

Now that the backlog of stalled projects from years of policy inconsistency has been somewhat alleviated, a capacity expansion of this scale, along with some other policy changes, would provide a few years runway for solar companies and investors to have confidence that Massachusetts is open for business. This kind of policy consistency reduces the cost of financing, and therefore the cost of the overall program, allows companies to hire and invest with confidence, and reduces customer confusion.

Improve the Resiliency of the Energy System by Pairing Storage with Solar in SMART Program Design and Grid Planning

Extreme weather from climate change continues to increase the number of power outages, causing damage to the electrical grid and intensifying known hazards and risks. Critical services provided by hospitals, EMS, and transportation, in particular, require back-up sources of power in the event of such outages.

As the energy transition from thermal sources to renewables continues, solar and other distributed renewables have demonstrated their ability to provide communities and vital organizations with clean, resilient and reliable power. These distributed local resources reduce dependence on fallible systems needed to transport fuel or electricity over long distances. When deployed in conjunction with energy storage onsite or within a microgrid, distributed solar can further increase resilience by providing localized power to critical facilities when the grid is down. And, solar brings the additional resilience benefit of decreasing harmful carbon emissions that contribute to extreme weather and other climate-related challenges to grid reliability.

Going forward on the path toward decarbonization, policymakers and regulators should consider distributed solar energy a key strategy for grid reliability and community resilience. In addition, a Massachusetts Energy Storage Initiative Study entitled "State of Charge" finds storage resources are an important tool for better managing electric outages caused by severe weather, thus increasing grid resiliency. Storage and other distributed energy resources can also help make best use of increasing levels of solar production, helping both minimize costs and maximize carbon-reduction benefits of Massachusetts' clean energy transition.

For these reasons and more, new storage technologies are an important component of a modern electric grid and a resilient clean energy future for the Commonwealth. DOER should preserve and augment the role of energy storage as a main pillar of the SMART program's expansion. Storage should be seen as a primary solution to leverage multiple gigawatts of new solar capacity for performance during peak periods. However, robust solar and storage deployment – half of solar capacity installing storage at 50 percent size ratio with a minimum of two-hour duration – would give Massachusetts at least 3,200 MWh of flexible, dispatchable storage for peak performance.



Image Credit: GE via https://www.ge.com/reports/tapping-reservoir-grid-scale-energy-storage/

Strengthen SMART's Low-Income Provisions

The SMART program is lagging in its goal to improve solar access to low-income communities. Low-income households and communities of color spend a high proportion of their income on energy costs and would see the greatest benefit from the cost savings of direct solar access. These same communities are often disproportionately impacted by the health and economic impacts of fossil power generation and the impacts of climate change.

Yet, as of July 2019, projects eligible for low-income rates made up just 2.3 percent of the program's capacity with only 193 of more than 5,600 projects fall into a low-income category as shown in Chart 5.



Chart 5: Solar Development in Massachusetts by Market Segment

During the annual program review of SMART, state regulators should look at what steps are necessary to increase participation from low-moderate income communities, brownfields and municipal projects which currently appear to be deprioritized under the program. Primarily, we would recommend the following actions:

• Applying incentives on a community basis. Currently, the SMART program defines low-income solar by the individual customer's income or affordable housing status. This makes marketing to and signing up solar customers significantly harder, as highly sensitive economic information is needed to identify qualified customers. Expanding qualification to neighborhoods would broaden participation in the SMART program by making the highest incentives available to people who live in environmental justice and low-income communities. Customers would then know if they qualified based on their residence and companies could market through community institutions and geographic targeting.

Source: Vote Solar based on industry data

• Ensure savings for residents of environmental justice and low-income communities by making it possible to assign solar energy credits directly to people's electric bills without the need for complicated, long-term financial contracts. This type of 'contract-less' solar could be designed to require companies offer significant savings to customers without a financial commitment from the customer, while being compensated directly by the electric utilities for their valuable solar power.



Photo Credit: Conservation Law Foundation via https://www.clf.org/blog/rooftop-solar-threatened-in-new-hampshire/

Enable Municipalities and Businesses to go Solar and Provide Long-Term Policy Certainty

SMART is driving significant solar growth after years of stalled projects, but not all types of solar or all customers are able to utilize the program. SMART provides an alternative to net metering to compensate solar customers for their valuable solar power, but this alternative only works for remote projects. Municipal, commercial and industrial customers that want to go solar on their property and use that energy themselves are reliant on net metering. Unfortunately, net metering caps continue to limit solar growth in much of the Commonwealth.

Arbitrary caps on net metering have long plagued the solar industry, leading to several periods of stalled project development that have meant decreased solar hiring and increased costs of financing project development. In order to allow customers to use their own solar and provide long-term confidence that all local, distributed solar will be fairly compensated, caps on net metering should be removed for all on-site solar projects and raised for all other distributed solar projects. This change would require legislative action.

ECONOMIC & SOCIAL BENEFITS OF SMART EXPANSION

In addition to increasing the amount of clean solar energy powering our state, Massachusetts can expect significant economic and societal benefits by adopting these policy recommendations.

Job & Economic Benefits

Between 2015 and 2018, the state's solar workforce shrunk by about 30 percent, shedding around 4,372 jobs [See Chart 6]. Many attributed uncertainty about the state's solar incentive program as one of the reasons for the decline.

A significant program expansion would create between 8,000-9,000 in-state new jobs and make up for the lost solar jobs in Massachusetts [See Chart 7]. In addition, our analysis shows an expansion would result in more than \$5 billion in solar project investments in the Commonwealth.



Chart 6: Solar Jobs Lost

Chart 7: 8-9K Jobs Created From 3,200 MW SMART Expansion

Job - Years				
	2022	2023	2024	2025
Residential	1,458	2,755	2,949	3,137
Commercial	1,338	2,528	2,707	2,880
Community Solar	1,396	2,667	2,890	3,072
Total	4,191	7,951	8,546	9,090

Source & Notes: Vote Solar based on industry data

1.) JEDI produces job-years, which represents the number of jobs needed to build that capacity in a single year. Workers keep their job from one year to the next, therefore the estimate is 8,000 – 9,000 jobs in Massachusetts.

2) These jobs represent direct installation, O&M, trade, and associated services jobs. They do not represent any manufacturing jobs or financing jobs (both of which are assumed to accrue out-of-state).



"The sharp decline of solar jobs in Massachusetts, despite overwhelming popularity of solar energy, is the result of inconsistent policies and unnecessary confusion over regulations. We have a highly-skilled, highly-trained solar workforce that is ready to get this state back on track. The SMART program needs to be expanded and strengthened, which will help spur job growth and get our solar workers back to work." --Lisa A. Podgurski, Manager of Business Development, International Brotherhood of Electrical Workers (IBEW) Local 103.

Energy Equity

Within the U.S. and Massachusetts, systemic inequities place low-income communities and communities of color at greater risk of the health and economic impacts of traditional fossil fuel-based power generation. According to the Department of Energy, low-income households spend a larger portion of their income on home energy costs than other households.

Emissions from power plants, which are most often situated in these communities, also contribute to high rates of asthma and cancer, and the presence of heavy industry contributes to a cycle of poverty and public disinvestment in neighborhoods that can least afford it. In addition to the health impacts, these same energy sources are a major contributor to climate change. Pre-existing vulnerabilities mean that low-income families are impacted more by climate change-related natural disasters and extreme weather. While recent storms, flooding and extreme temperatures have impacted all Bay State residents, the poorest neighborhoods suffer the worst impacts and take the longest to recover from lost homes, wages, and electricity.

With state policies focused on serving these impacted communities, solar energy can reduce energy and climate inequities, enable low-income families to invest in their own future rather than in ever rising and often volatile energy bills, create good career opportunities in neighborhoods where economic opportunity is needed most, and build healthier and more resilient communities.

Further, a recent National Renewable Energy Laboratory (NREL) report found that nearly half of all residential rooftop solar potential in the U.S. is on the dwellings of low-tomoderate income (LMI) households, representing 320 gigawatts of solar market potential. So whether motivated by social justice issues, the climate crisis, or the economic opportunity of a largely untapped solar market sector, there are many reasons to make equity a key pillar of Massachusetts' growing solar economy.

"Dismas House has installed solar in a couple of our locations and are saving thousands of dollars on our electric bills as a result. We are proving that solar has the power to directly impact the lives and well-being of low-income people throughout our communities. Through our work with the Commonwealth Green Low-Income Housing Coalition, we are committed to moving to 100 percent clean energy. If the SMART program is improved and expanded, we will be better able to connect to community-based solar projects, reduce carbon and preserve the social safety net for the most vulnerable among us."

--David McMahon, Co-Director of Dismas House in Worcester, which offers support and transitional housing for former prisoners and others trying to reintegrate into society



Improved Public Health

In June 2019, more than 70 medical and public health institutions nationwide came together to declare climate change a public health emergency, calling the crisis "one of the greatest threats to health America has ever faced." The group urged immediate action to combat the effects and called for a dramatic cutback in fossil fuel use.²

Indeed, the effects of climate change on public health can already be felt here in Massachusetts. Healthcare professionals throughout the state have reported an increasing number of patients seeking treatment during extended heat waves, as well as for asthma, chronic bronchitis, and other respiratory ailments related to pollution.

In addition, the Commonwealth has been breathing unhealthy air, driven by power plant emissions and extreme heat, according to the 2019 **"State of the Air"** report from the American Lung Association (ALA). Both forms of air pollution can have a dramatic impact on public health, increasing the risk of premature death, lung cancer, cardiovascular damage, and developmental and reproductive harm. ³

² https://insideclimatenews.org/news/24062019/us-health-groups-declare-climate-change-public-health-emergency-urgefossil-fuel

³ https://www.masslive.com/opinion/2018/05/climate_disruption_has_real_im.html

The ALA reports that Barnstable, Bristol, Hampden, and Hampshire counties all received Fs for their amount of bad ozone level days, while Dukes, Plymouth, Suffolk, and Worcester counties received both Cs and Ds – lower grades than last year. Over a threeyear period ending in 2017, the report recorded a total of 97 "bad ozone" days in Massachusetts, meaning the air was either unhealthy for sensitive groups or unhealthy for everyone. The number was a significant increase from the 59 days found in the threeyear period ending in 2016.⁴

While climate change affects everyone it also exacerbates health inequities, disproportionately harming the most vulnerable among us – children and pregnant women, low-income households, communities of color, immigrants, the elderly and people with disabilities and chronic illnesses. An analysis by the National Renewable Energy Laboratory (NREL) found that widespread solar adoption would significantly reduce carbon and other dangerous emissions like nitrous oxides and sulfur dioxide, all of which can cause a host of illnesses. NREL found that, among other health benefits, solar power results in fewer cases of chronic bronchitis, respiratory and cardiovascular and neurological problems.⁵

As we transition to a low-carbon economy, we need smart solar and other renewable energy policies that support cleaner buildings and transportation – especially if Massachusetts is to reclaim its status as a national leader. Expanding the SMART program will not only get Massachusetts back on track to reach its RPS and decarbonization goals as outlined earlier in the report, but also create a healthier environment by further displacing fossil fuel electricity that pollutes our air and water.



"Healthcare is on the front lines of climate change, bearing the public health costs of increased asthma rates along with the impacts of more frequent, extreme weather events. The sector also has a unique responsibility and opportunity to combat it, and is accelerating its transition to solar and other low-carbon energy sources. Not only would expanding the SMART program expand access to solar, it would create a significant opportunity to improve public health outcomes while helping the Commonwealth combat climate change." --Bill Ravanesi, Senior Director of Health Care Green Building and Energy Program, Health Care Without Harm

CONCLUSION & NEXT STEPS

With the federal government failing to act on (or even acknowledge) climate change or drive any significant renewable energy progress, states across the country are leading the transition to a stronger, more resilient, more equitable clean energy future. The international science community reports the world has just 11 years to stop irreversible climate damage. Action must be ambitious and urgent and pushed forward today at the local level to address this global emergency. The old slogan "think globally, act locally" applies more today than ever before.

New York is doubling the state's solar goal to 6,000 MW of locally developed energy by 2025, extending the state's existing incentive program and making \$40 million available to support large-scale solar projects that integrate energy storage. Together, these groundbreaking investments in solar energy will create thousands of jobs, generate billions of dollars in investment, and move New York toward its goal of 100 percent carbon-free electricity by 2040.

New York's ambitious climate goals dwarf those of Massachusetts, which hasn't seen a bold, long-term vision for solar since the Green Communities Act of 2008. Further inaction will only cost the Commonwealth more jobs and set the state back in its efforts to combat climate change and build a cleaner, more resilient and affordable energy system.

Massachusetts needs a strong, consistent commitment to developing renewable energy resources, including solar energy and storage, which is a proven source of clean power, good jobs and broad economic benefits. We stand to lose our competitive position if we fail to act now, in 2019, to adopt visionary and ambitious goals to help drive the growth of solar energy in Massachusetts. The stakes are higher than ever, and instead of a continued path of incremental improvements, the people of Massachusetts and the next generation deserve and demand bold and immediate action by the Commonwealth's leaders.







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