CleanEnergyGroup

How Solar and Energy Storage Can Support Massachusetts' Clean Energy Transition

May 19, 2026

Webinar Logistics

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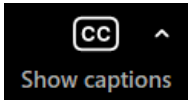
Automated **captions** are available 

Speaker bios will be made available in the Chat

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WEBINAR SPEAKERS

How Solar and Energy Storage Can Support Massachusetts' Clean Energy Transition

Todd Olinsky-Paul
Senior Project Director
Clean Energy Group

Elena Weissmann
Senior Regional Director, Northeast
Vote Solar

Tanya Stasio
Senior Researcher
Applied Economics Clinic
(Q&A only)

CleanEnergyGroup

VOTE SOLAR

Applied Economics Clinic
Economic and Policy Analysis of Energy, Environment and Equity

Clean Energy Group

Affordable, reliable, clean energy for all.

Climate Resilience and Community Health

Distributed Energy Access and Equity

Energy Storage and Flexible Demand

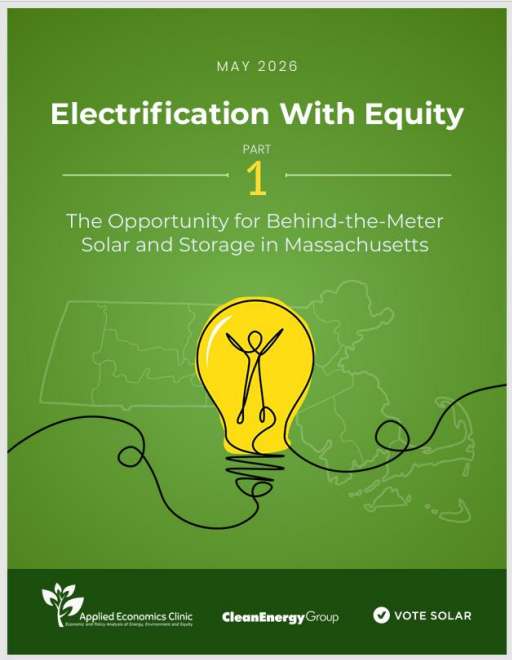
Fossil Fuel Replacement

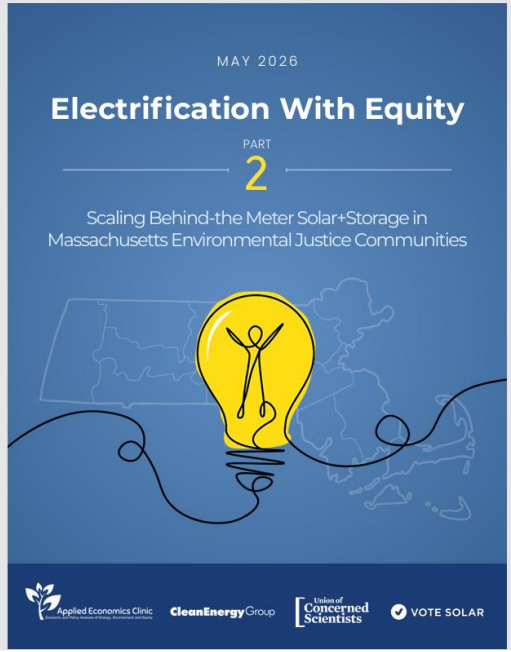
www.cleanegroup.org

- Our mission is to realize a 100% clean energy future through a solutions-driven, people-first approach
- We work across state legislatures, utility regulatory commissions, and communities to defend and expand access to solar solutions

VOTE SOLAR

Two new reports from Clean Energy Group, Union of Concerned Scientists and Vote Solar





Webinar **MAY 26**

Today we will focus on Report 1: *The Opportunity for Behind-The-Meter Solar and Storage in Massachusetts*

Report 1 issued by Clean Energy Group and Vote Solar, with contractor Applied Economics Clinic: Funding from Barr Foundation

Report 2, *Scaling Behind-The-Meter Solar and Storage in Massachusetts Environmental Justice Communities*, will be featured in a second webinar on May 26. Register here: https://www.cleanegroup.org/webinar/solar-and-energy-storage-for-massachusetts-environmental-justice-communities/

Where can I find them? Reports are archived at Clean Energy Group. Report 1 can be downloaded from https://www.cleanegroup.org/publication/electrification-with-equity-part-1/

Underlying theory:

- **Electrification** is the key to **decarbonization**
- Electrification also creates a **surge in electricity demand**
  - *Electrification will more than double peak demand in MA by 2050*
- If clean energy does not scale quickly enough, new gas generation will be the default technology to meet higher demand
- Clean energy without equity leaves half the state behind

Solution: Behind-the-meter solar and solar+storage can scale quickly to reduce peak demand while delivering equity, resilience and human health benefits through investments in communities, not big corporations

The programs and policies are ALREADY IN PLACE… they just need to be UPGRADED!

Context and Opportunity

Massachusetts Energy Omnibus Bill (Feb – June 2026)

- House passed H.5175 with provisions that can facilitate the expansion of BTM solar and storage: Permitting, interconnection, municipal net metering, solar for affordable housing, VPPs, plug-in solar
- Senate process underway, then the two versions to be reconciled through Conference Committee this summer / fall
    - The report provides evidence for protecting those House provisions, and ideas to expand them even further to meet our BTM potential

Governor Healey Executive Order 654 (March 2026)

- Directs EEA and OEJE to analyze whether EJ communities have equitable access to clean energy program eligibility and benefits
    - Reports underscore the importance and can inform that analysis
- Targets 10 GW of new energy resources by 2035, including 4 GW of solar and 5 GW of storage
    - The report shows which program reforms are needed from all partners
    - 3.5 GW from demand management (a 175x scale): documentation of paired storage gap and how to meet potential

Federal Context

- Phasing out of federal residential solar / storage credits
- Suspended leases for offshore wind projects

Regulatory & Program

SMART 3.0 Tariff (DPU Docket 25-175)

- The tariffs implementing the SMART 3.0 regulations are pending DPU approval.
    - This report documents the impact of the changes and provides evidence for administrators to correct course.

Clean Energy and Climate Plan (CECP)

- The 2025/2030 CECP sets our clean energy targets with dramatic BTM growth to meet a doubled peak demand.
    - This report shows us how to get there and serves as a gap analysis.

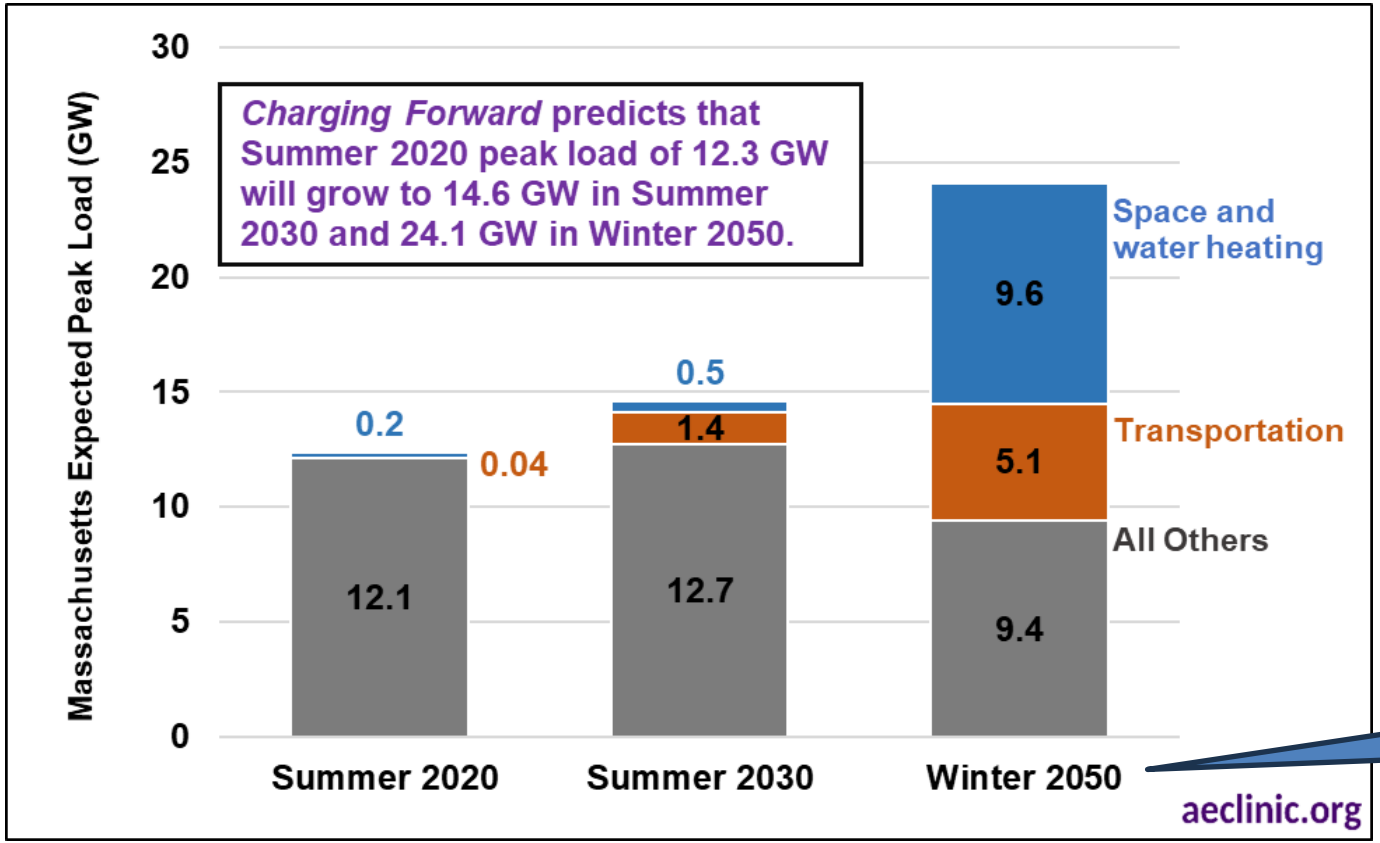
MassCEC Grid Services Study & Pilots

- MassCEC completed a grid services compensation framework in September and will begin pilot project implementation this year.
    - This report provides evidence for the barriers they seek to identify and overcome and can help structure the pilots.

Charging Forward Recommendations

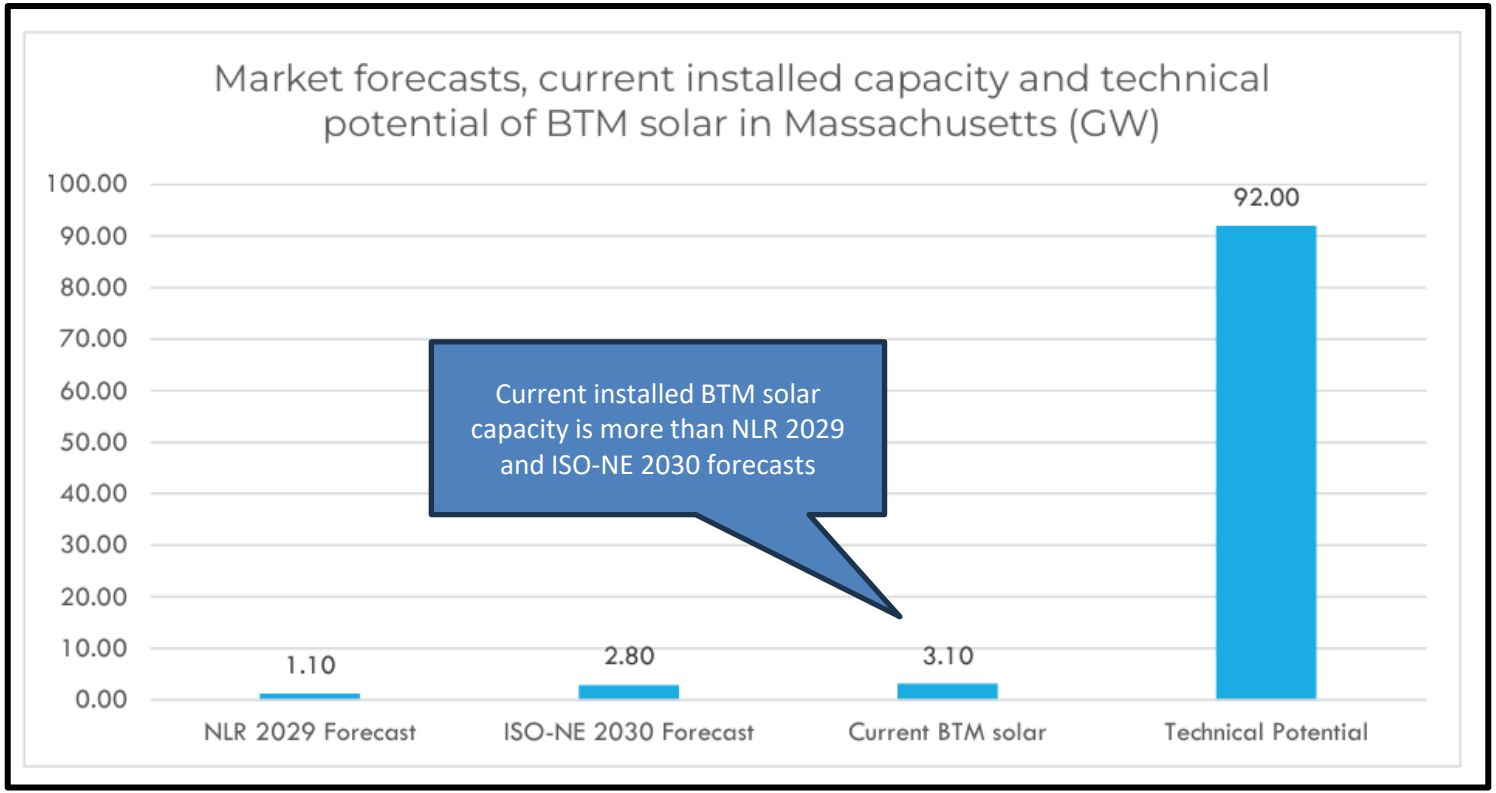
- The 2023 Charging Forward report (MassCEC/DOER) makes the system-level case for expanding storage in our grid planning. It identifies ConnectedSolutions and the SMART storage adder as key solutions for deployment.
    - This report addresses the equity gap and quantifies these provisions, with specific recommendations for how to equitably deploy.

Peak load growth in MA is largely due to electrification

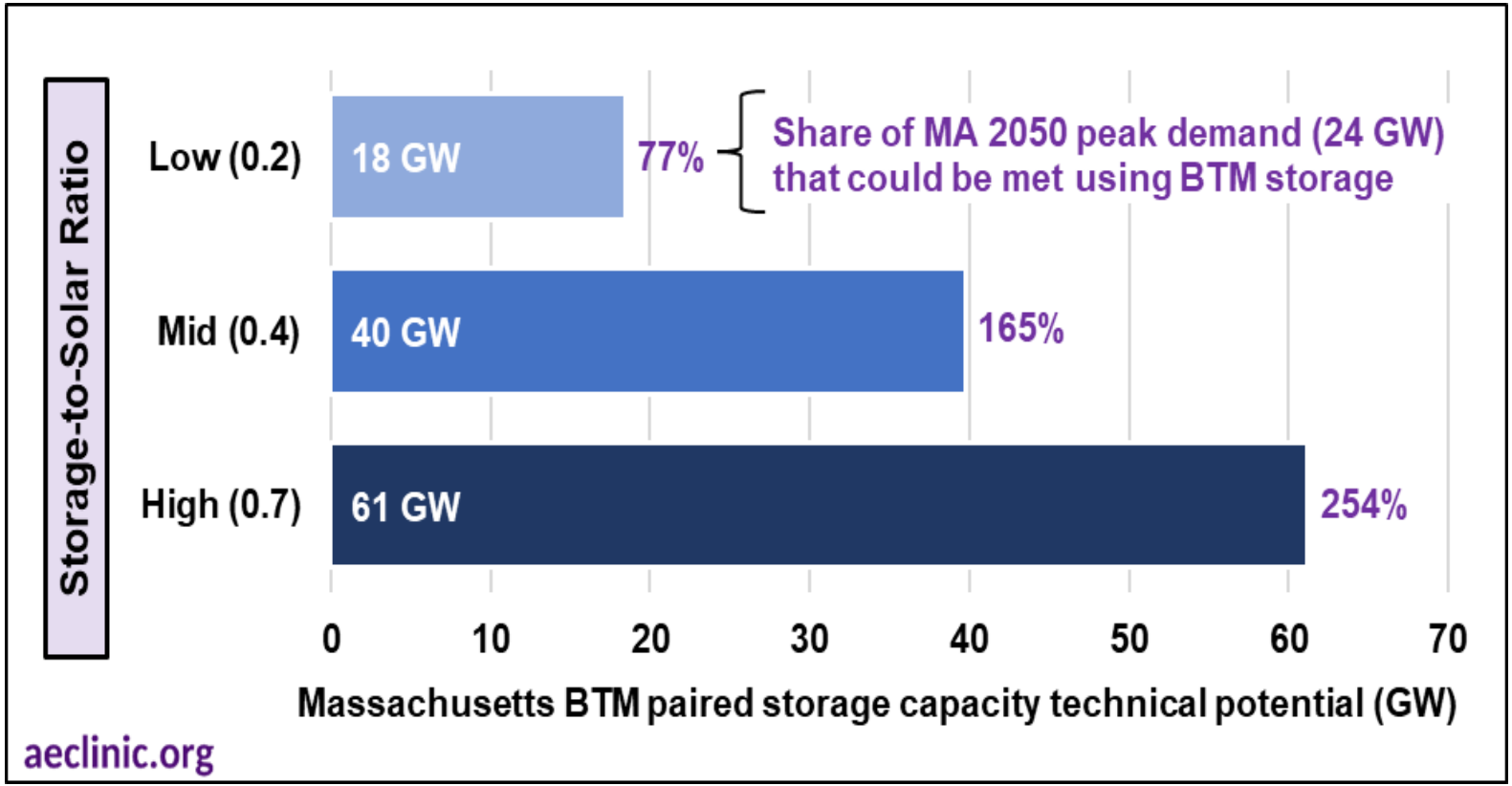


Grid flips to winter peaking

Technical Potential is Huge!



Potential BTM Solar+Storage capacity easily mitigates projected 2050 peak demand



10 barriers stand between potential and deployment

	Barriers to BTM deployment	Description
1	**Insufficient financial incentives**	The high upfront cost of BTM resource purchase and installation is out of reach for many households, especially low-income households and those that lack access to credit
2	**Insufficient equity incentives and lack of equity goals and carve-outs**	Low-income participation is not supported or tracked for some state-led programs and SMART has not successfully incentivized adoption at low-income properties
3	**Need for electric system or building upgrades**	Some buildings, particularly older buildings, may be in need of necessary electric system or building upgrades to be compatible with BTM resources
4	**Workforce limitations**	Solar installations are growing faster than the number of workers needed to design, install, and maintain these systems
5	**Solar and storage ownership barriers and split incentives between renters, landlords, and condo owners**	Renters and condo owners lack the ownership rights to install BTM resources onsite and landlords lack the incentive to cover the upfront cost of solar and storage installations, especially if utilities are paid for by the tenant
6	**Program complexity and lack of coordination**	Businesses and residents may not be aware of programs and tax incentives that support BTM resources
7	**Lack of trust between customers and utilities and solar developers**	Customers are often mistrustful of their gas and electric utilitie and solar developers and may be reluctant to participate in programs
8	**Interconnection and permitting issues**	Permitting and interconnection of BTM resources to the electric grid can be a difficult and time-consuming process for both customers and utilities
9	**Lack of solar panel and battery recycling and disposal options**	Recyling processes for silicon and cadmium telluride PV modules and lithium-ion batteries are available in the United States but expensive.
10	**Lack of internet access to learn about, or participate in, solar and storage programs**	Over 110,000 Massachusetts households lack access to the internet where most information on programs is available

We group these into 4 themes:

Money & Incentives

Barriers 1 & 2:
Cost, equity gaps, no targets or carve-outs

Buildings & Workforce

Barriers 3 & 4:
Upgrades needed, not enough trained workers

Access & Ownership

Barriers 5, 6 & 8:
Renters locked out, programs too complex, interconnection & permitting

Trust & Outreach

Barriers 7, 9 & 10:
Distrust of utilities/developers, recycling concerns, broadband access

Theme 1: Money & Incentives

Barrier 1: Insufficient financial incentives
The high upfront cost of BTM solar and storage is out of reach for many households, especially low-income households and those without access to credit.

Barrier 2: Insufficient equity incentives and lack of equity goals and carve-outs
Low-income participation is not tracked in some programs, and SMART has not successfully incentivized adoption at low-income properties.

Just 0.1% of SMART BTM units brought online 2018–2025 were on low-income properties

Recommendations:

#1 Set statewide BTM capacity targets for 2030 and 2050 aligned with the CECP

#2 Expand SMART, CPS, and ConnectedSolutions budgets, including up-front incentives for low-income households

#3 Restore the SMART storage adder for solar <25 kW

#4 Establish a 50% EJ participation target for statewide programs

#5 Implement statewide budget carve-outs for EJ neighborhoods

#6 Increase low-income incentive adders, adjusted annually if targets are not met

#7 Develop an online tracking tool for program participation in EJ neighborhoods

#8 Require utilities' ESMPs to include strategies to achieve participation targets

#9 Amend the Residential Energy Tax Credit to increase the cap and add a storage adder

Theme 2: Buildings & Workforce

Barrier 3: Need for electric system or building upgrades
46% of MA homes were built before 1960, and only 15% after 2000. Older buildings may need panel upgrades or structural work before BTM resources can be installed, adding cost and time.

Barrier 4: Workforce limitations
Solar installations are growing faster than the number of qualified workers to install and maintain them. From 2022 to 2023, the number of solar PV installers in Massachusetts fell from 950 to 700.

46% of MA homes were built before 1960 — and are disproportionately occupied by low-income households

Recommendations:

#10 Provide financial incentives for electric system and building upgrades on low-income properties

#11 Amend the Stretch and Specialized codes to include BTM solar and storage readiness in new construction

#12 Assess workforce trends and expand training programs, with follow-through measures to help trainees secure employment

Theme 3: Access & Ownership

Barrier 5: Ownership barriers and split incentives
This impacts almost half of all residential units in MA: 37% of MA housing units are rented and 10% are multifamily owner-occupied. Renters can't install solar — and landlords have no incentive to do it for them when tenants pay the utility bills. Condo owners face similar constraints.

Barrier 6: Program complexity and lack of coordination
Programs are siloed. A customer who wants to electrify, install solar, and sign up for ConnectedSolutions must navigate three separate enrollment processes with different administrators.

Barrier 8: Interconnection and permitting issues
Connecting to the grid is slow, expensive, and unpredictable. Cost-causation rules can assign the full cost of a grid upgrade to a single project — making smaller projects uneconomical. Surprise charges of $10,000+ are already killing projects mid-installation.

47% of MA block groups are EJ neighborhoods — yet solar programs have no binding access provisions for renters or small developers

Recommendations:

#13 Investigate incentive mechanisms for multifamily master-metered building owners

#14 Expand budget for community solar and storage; invest in educational outreach

#15 Integrate and coordinate across state energy programs — offer as a single package

#16 Require utilities to share financial incentive information with customers monthly

#17 Replicate the Cape & Vineyard Electrification Offering (CVEO) statewide through ConnectedSolutions

#20 Design and implement required standards for ease and speed of BTM interconnection and permitting

#21 Set maximum total interconnection costs chargeable by utilities to project developers

Theme 4: Trust & Outreach

Barrier 7: Lack of trust between customers, utilities, and solar developers
Utilities in Massachusetts have documented billing errors and poor customer service. In EJ communities with histories of disinvestment, distrust of both utilities and even solar developers reduces participation in programs.

Barrier 9: Lack of recycling and disposal options
In an EJ context, this is a trust issue. Communities that have borne the environmental costs of industry are skeptical about who will bear the cost of disposing of solar panels and batteries at end-of-life. Recycling processes exist but are expensive, and the infrastructure is underdeveloped.

Barrier 10: Lack of internet access
Over 110,000 Massachusetts households lack internet access — cutting them off from program information, enrollment, and the ability to learn about solar incentives. EJ households are disproportionately affected.

110,000+ MA households lack internet — and EJ communities are understandably skeptical of programs they've been excluded from

Recommendations:

#18 Establish outreach and transparency requirements for utilities and clean energy developers

#19 Investigate additional measures to improve transparency and trust with utilities and developers

#22 Investigate recycling and reuse solutions for solar and storage systems

#23 Require utilities to host in-person workshops in EJ neighborhoods to learn about and enroll in existing programs

We have the tools and the technology – Now let's grow to meet the moment

Scale up:

- Restore SMART storage adder
- Set CECP-aligned targets
- Add equity carve-outs
- Raise the Residential Energy Credit cap

Remove barriers:

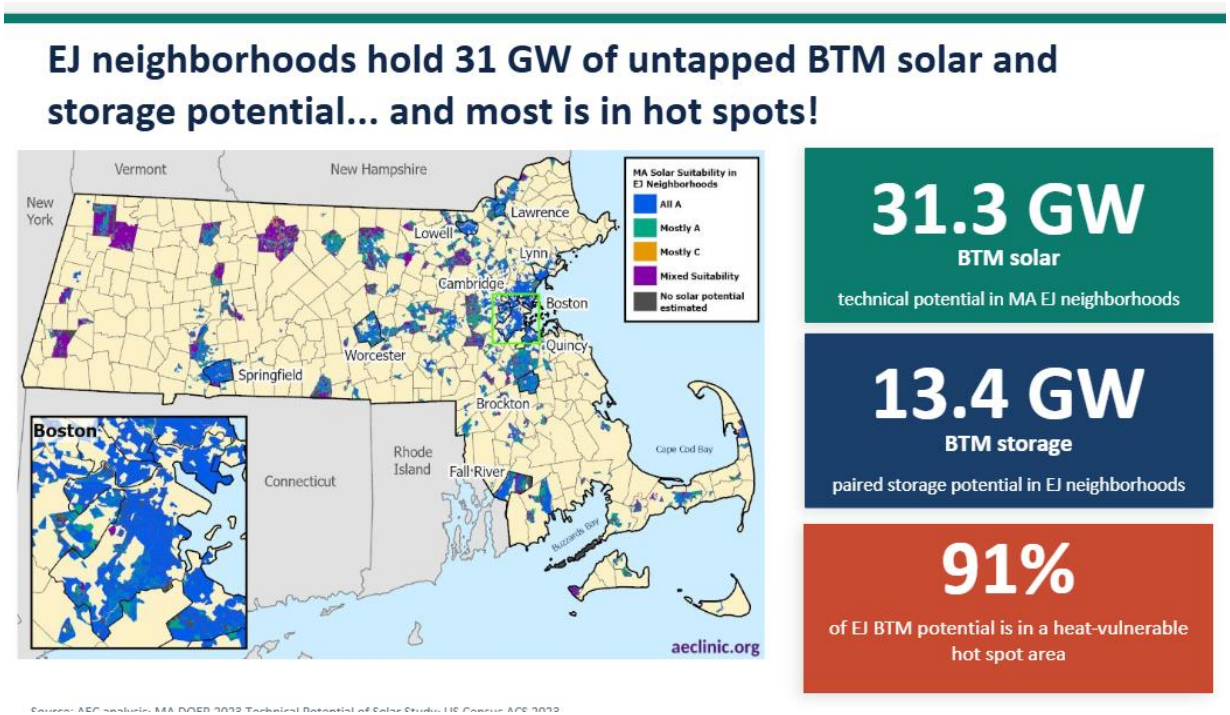
- Cap interconnection costs
- Streamline permitting
- Fund building upgrades for low-income households

Reach everyone:

- Coordinate programs into a single enrollment
- Fund outreach in EJ neighborhoods
- Build trust through transparency

What's next?

Here's a preview of our upcoming webinar, *Electrification with Equity, Part 2: Scaling Behind-The-Meter Solar and Storage in Massachusetts' Environmental Justice Neighborhoods* (May 26):



Thank You

Todd Olinsky-Paul, Clean Energy Group
Senior Project Director
Todd@cleanegroup.org

Elena Weissmann, Vote Solar
Senior Regional Director, Northeast
elena@votesolar.org

Upcoming Webinars

Solar and Energy Storage for Massachusetts Environmental Justice Communities: Benefits, Barriers, and Solutions
(May 26)

Beyond Lithium, Part 2: ESS Tech's Iron Flow Battery
(June 3)

Read more and register at www.cleanegroup.org/webinars

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