

Clean Energy & Environment Legacy Transition

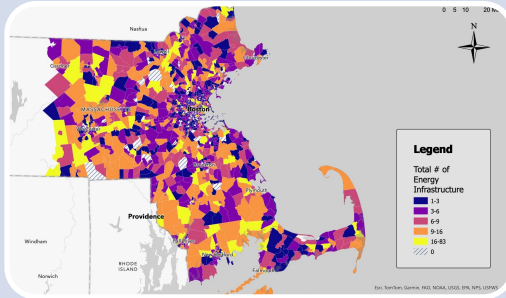
# Massachusetts CELT

A World-Leading University/Industry/Community Collaborative Resource Center



# MASSACHUSETTS CELT

## COMPONENTS OF COLLABORATIVE RESOURCE CENTER



### TARGET 01

Advance state and municipal initiatives on equitable decarbonization through data-driven decision support



### TARGET 02

Enhance state and municipal capacity to secure and execute geothermal energy transition projects



### TARGET 03

Support the growth of a diverse state workforce, tackling existing demographic imbalances



### TARGET 04

Ensure consistent stream of large-scale funding & continued MA/Ireland collaboration in climate tech, energy, and sustainability

# MASSACHUSETTS CELT

## DATA FOR DECISION MAKING AND COMMUNICATIONS

- Goals

- Work with communities to make data more usable and accessible for decision making
- Integrate datasets to answer questions around clean energy transitions
- Help communicate progress through data



ResilientMass Maps and Data Center



NEW ENGLAND DASHBOARD



< Mass.gov | Executive Office of Energy & Environmental Affairs (EEA)



Energy & Environmental Affairs  
Data Portal



Climate and Economic Justice  
Screening Tool



EJScreen



GEAR Maps for MVP 2.0 Pilot

Sea Level Rise and Coastal Flooding Viewer

Energy Infrastructure Exposure Intensity and  
Equity Indices (EI3) Database



School of Public Health  
Center for Climate & Health



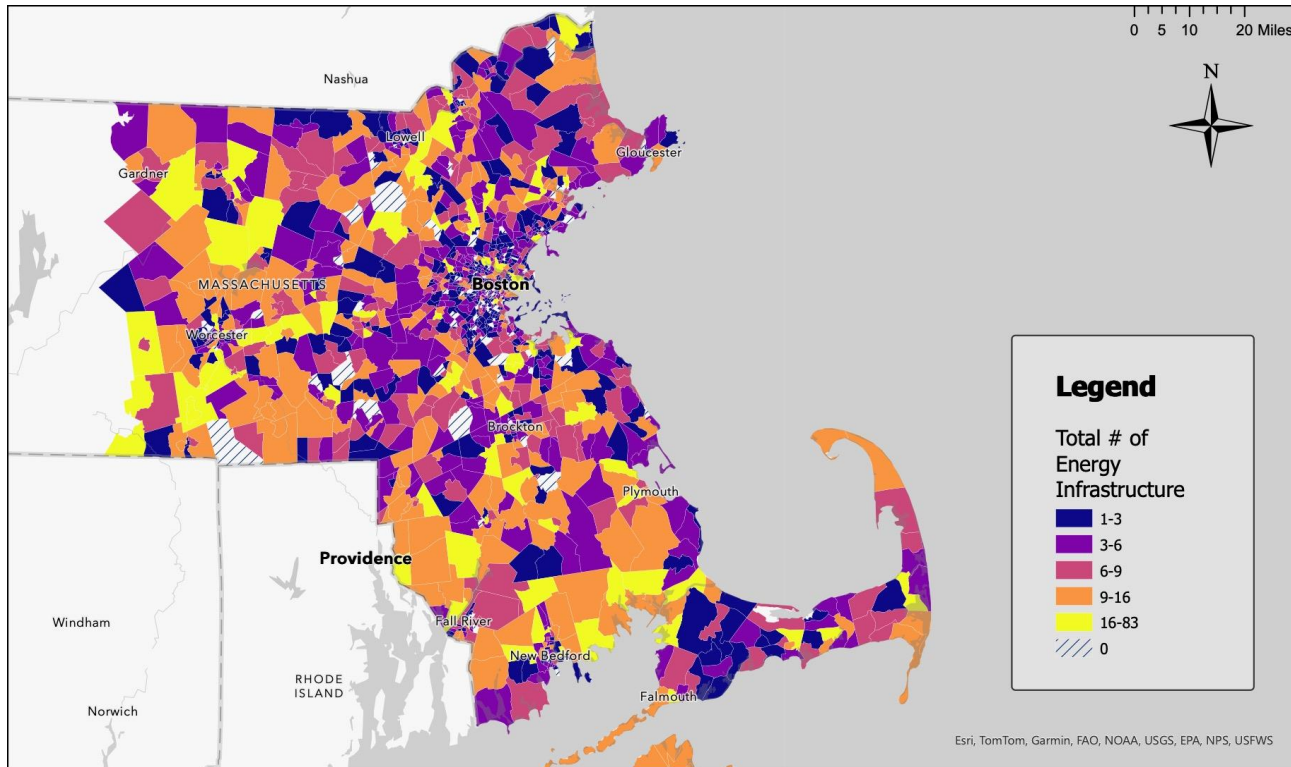
Massachusetts Environmental  
Public Health Tracking



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## DATA TO SUPPORT COMMUNITY AND STATE DECISION-MAKING

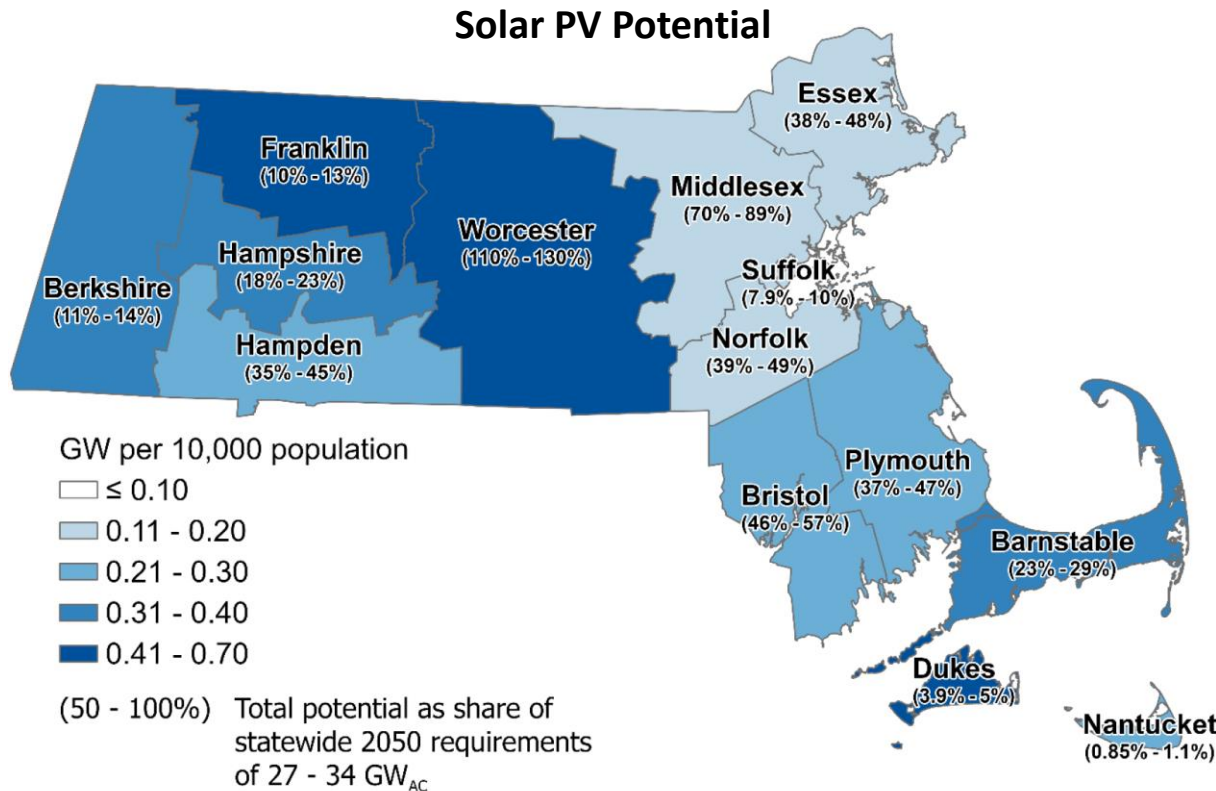
### Energy Infrastructure



- Scoping analysis of existing data and tools >> needs assessment
- Build new resource for cities and towns
- Support state decisions and measure progress

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## DATA TO SUPPORT AND MEASURE STATE PROGRESS



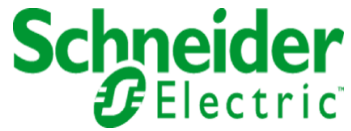
- Measure progress with key indicators:
  - Uptake of energy efficiency and clean energy
  - Reduction in energy and environmental burdens
- Answer key research questions on clean energy, equity, workforce development, etc.

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## ONGOING DATA-DRIVEN PROJECTS AT BU'S INSTITUTE FOR GLOBAL SUSTAINABILITY



**Fossil Fuel and Clean Energy Infrastructure**



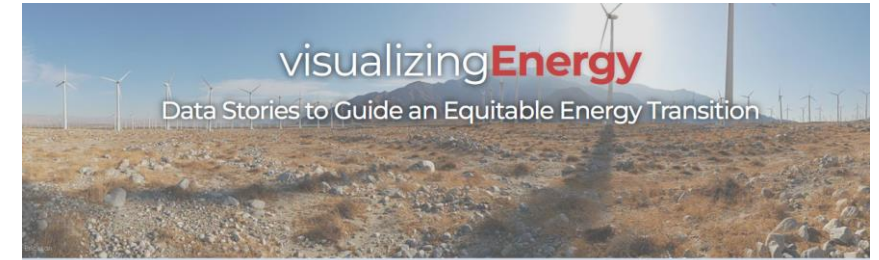
**Building Decarbonization**



**Energy Access &  
Burden in Mass**



**Climate & Health**



**Areas of Focus**



Energy Justice



Well-being

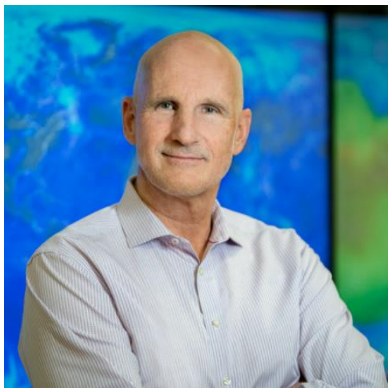


History of Energy



Sources

<https://visualizingenergy.org/>



**Cutler Cleveland**



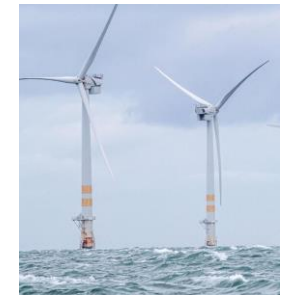
**Patricia Fabian**



**Climate, Energy,  
Community Resilience**



**Environmental Health  
Disparities in Mass**



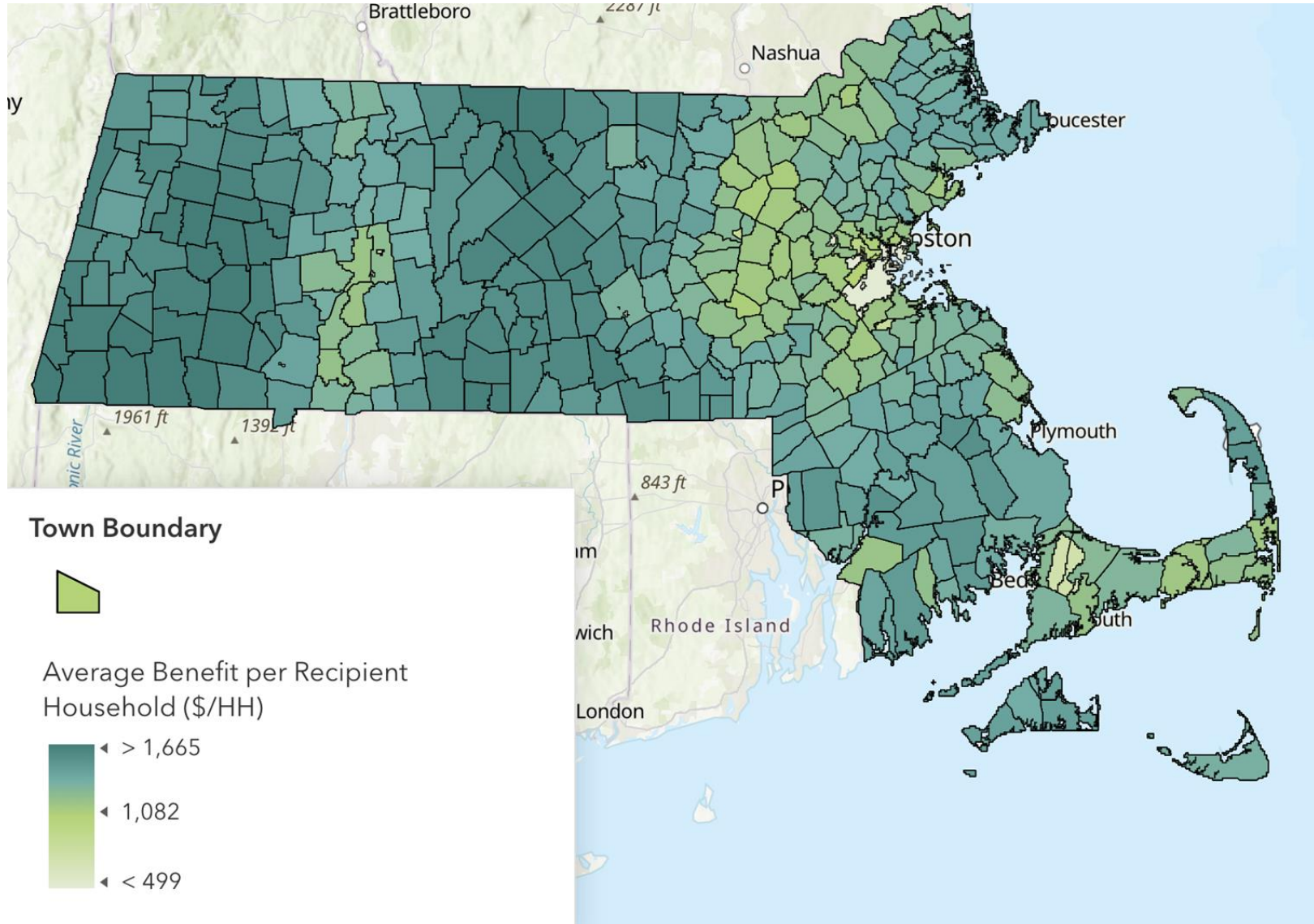
**Energy Justice in  
Northeast Offshore Wind**





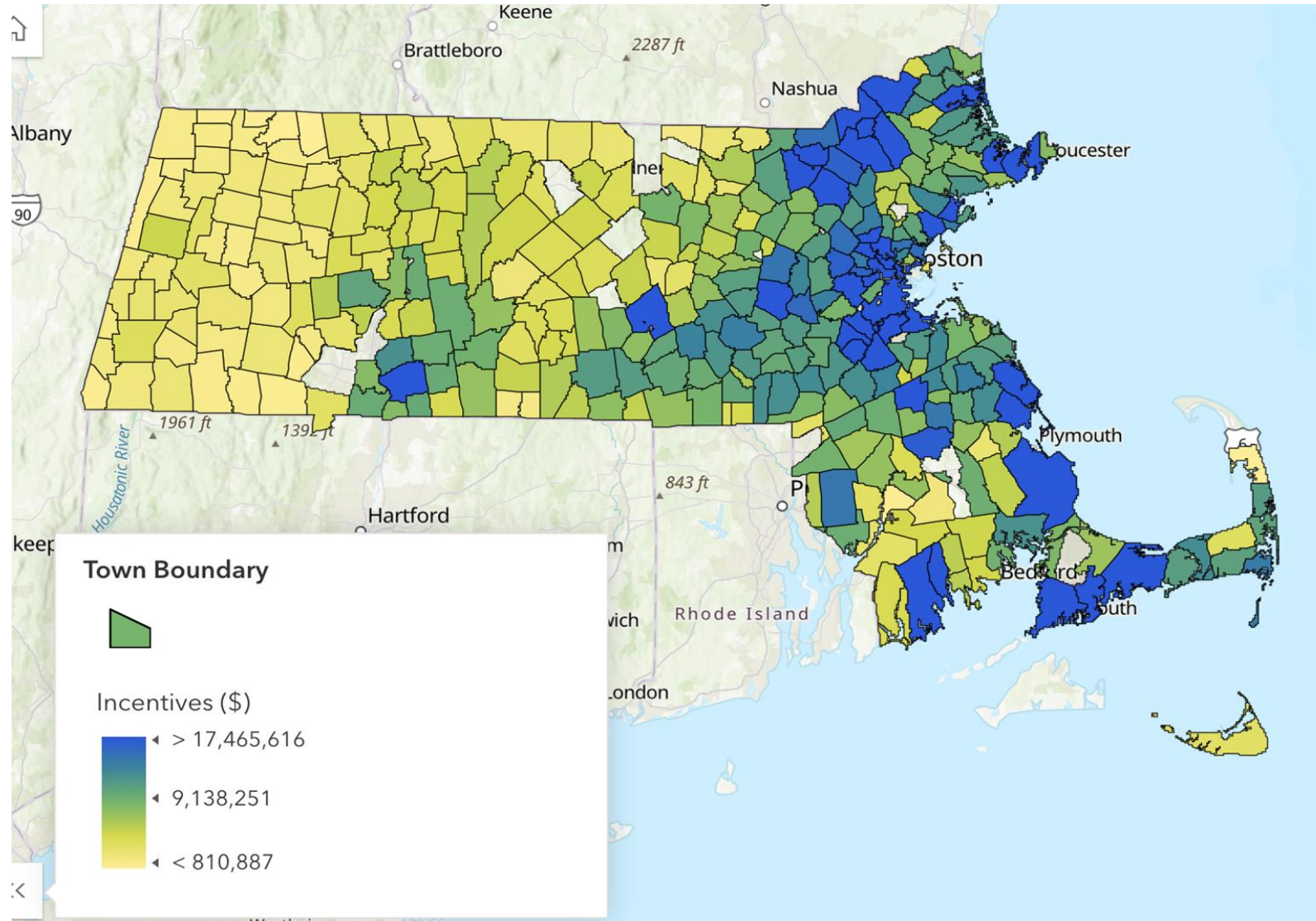
# MASSACHUSETTS CELT

## LIHEAP BENEFITS BY MUNICIPALITY, 2019-2023



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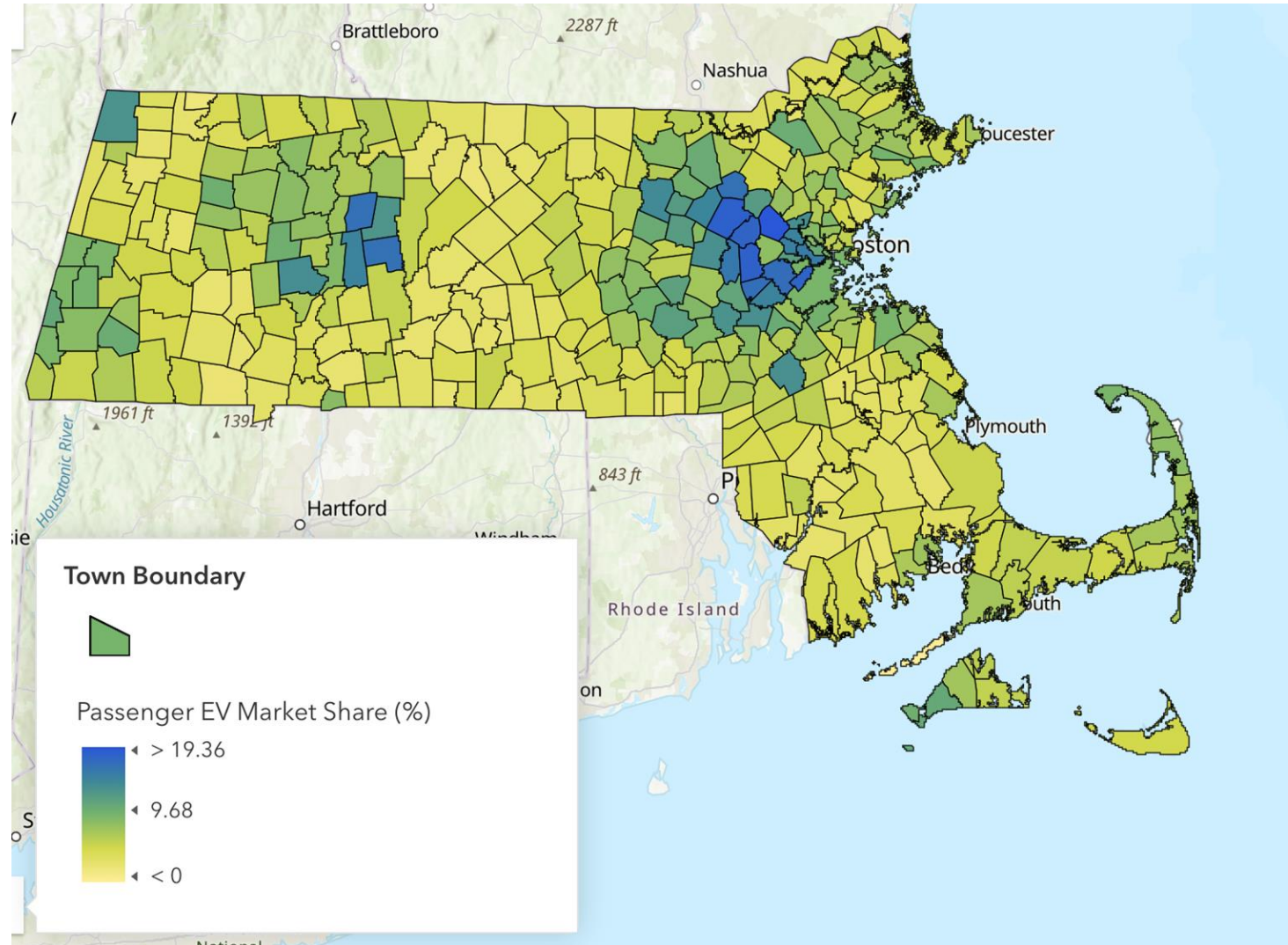
## MASS SAVE INCENTIVES BY COMMUNITY, 2020-2022





# MASSACHUSETTS CELT

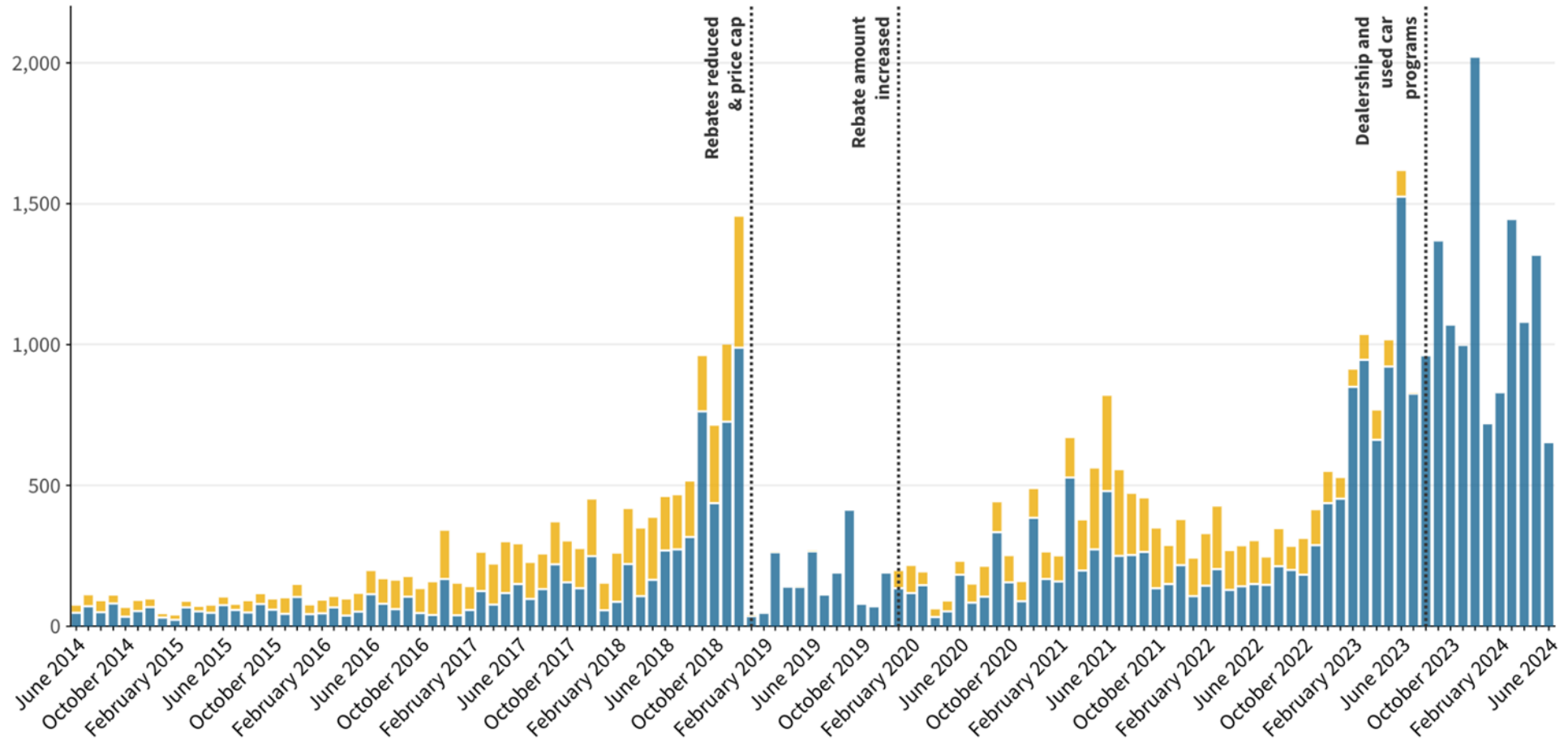
## PASSENGER EV MARKET SHARE IN JULY 2024



# MASSACHUSETTS CELT

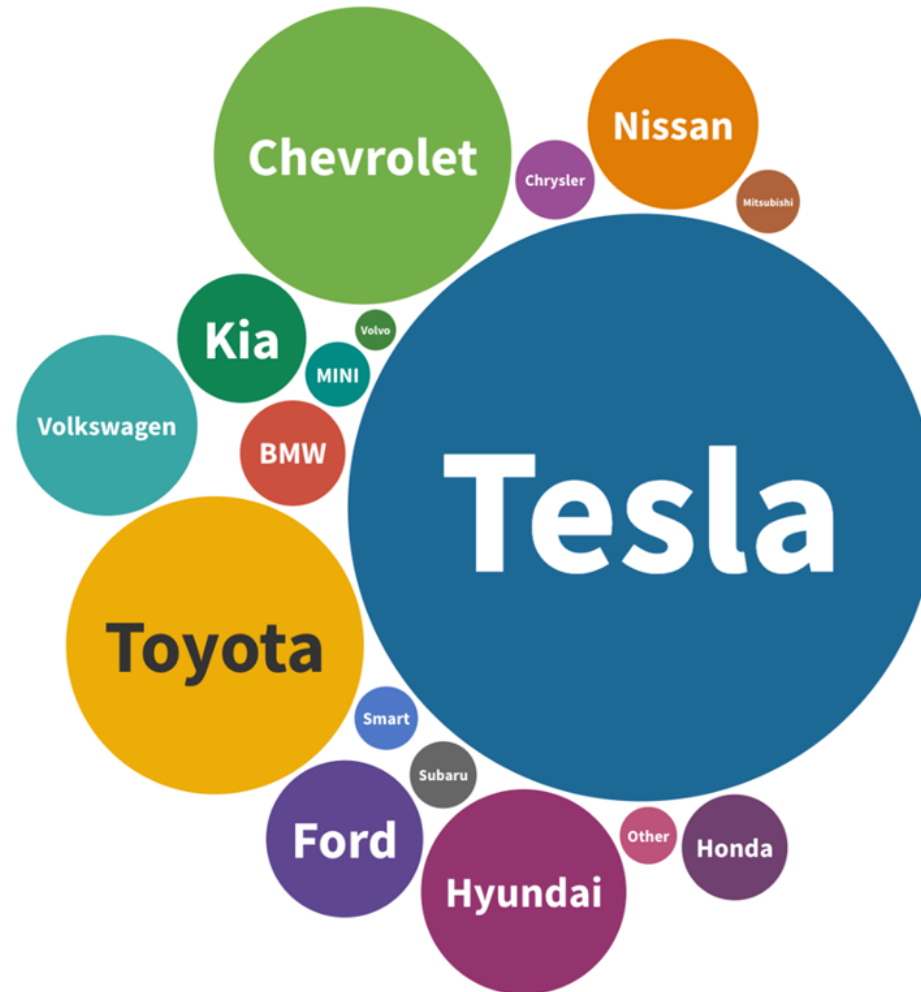
## Rebates for electric passenger vehicles by vehicle category, 2014–2024

■ Battery electric vehicle (BEV) ■ Plug in hybrid electric vehicle (PHEV)



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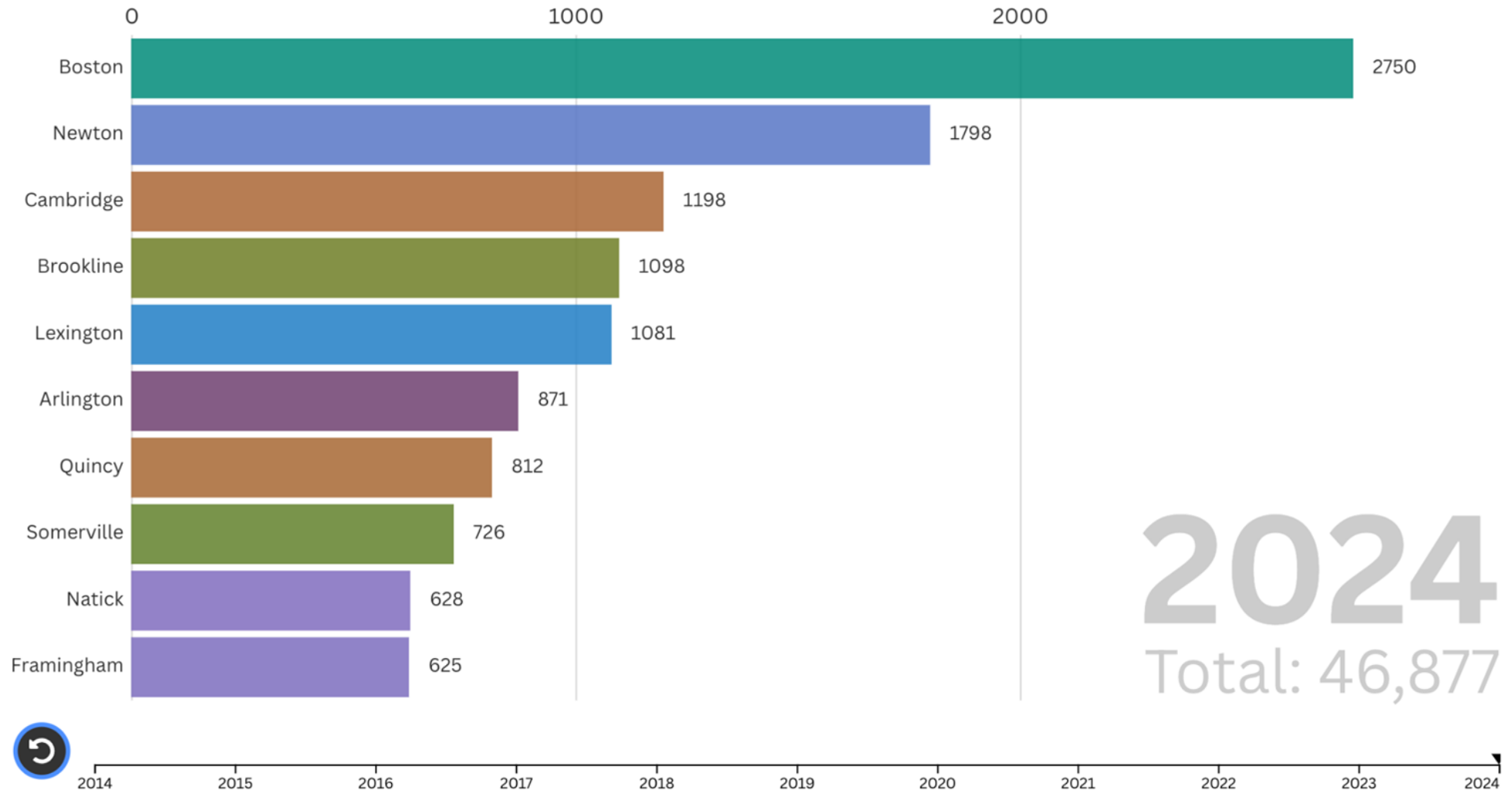
## Rebates for electric passenger vehicles by manufacturer, 2014–2024





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## Rebates for electric passenger vehicles by municipality, 2014–2024



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## CASE STUDY: SELECTING A “COOL BLOCK” FOR CLIMATE MITIGATION IN CHELSEA



2020



2021



2022

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## CASE STUDY: SELECTING A “COOL BLOCK” FOR CLIMATE MITIGATION IN CHELSEA



Reports and Publications

Photovoice

Temperature Sampling

Community Resources

Heat Adaptation in Cities

Presentations

Heat Vulnerability Maps

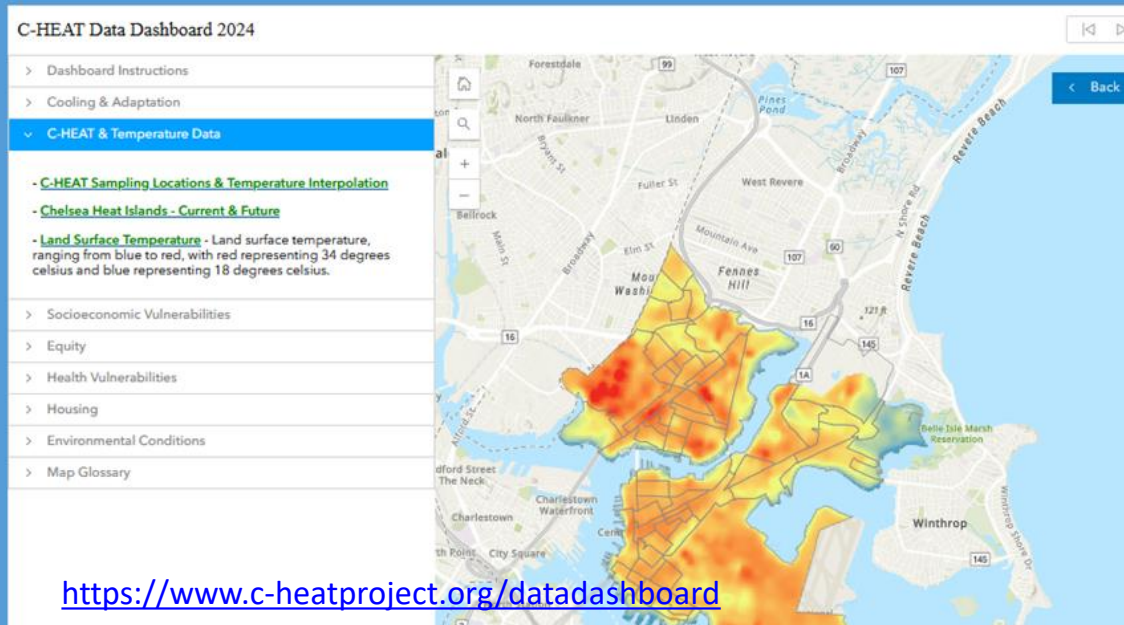
Data Applications

About Us



*Do you worry about extreme heat in your home?  
Are you concerned about your electricity bills during summer?*

# Heat Vulnerability Maps



### Data layers

- Land surface temperature
- Population density
- Vulnerability: youth, low income households
- Public right-of-way
- Black, flat, rubber roofs



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## CASE STUDY: SELECTING A “COOL BLOCK” FOR CLIMATE MITIGATION IN CHELSEA



Community – researcher – city  
partnerships  
“One block at a time”



Celebrating **25** Years  
of Fighting for Social and  
Environmental Justice!  
**GreenRoots**

Cool Block video

<https://vimeo.com/799997127/de5a35e471>

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## FELLOWSHIP PROGRAMS

- Actively recruiting students right now for placements as Fellows with the Massachusetts Office of Energy Transformation
  - Positions starting in Jan 2025
  - 12-month placements
- Example project
  - How do we ensure grid reliability, replace the lost capacity, and generate equitable economic development opportunity for the community?



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## FELLOWSHIP PROGRAMS

- Partnership with the Municipal Vulnerability Preparedness (MVP) and Green Communities programs, regional planning agencies, and municipalities.
- CELT will build capacity for Massachusetts environmental justice communities to plan for, apply for, and execute geothermal energy transition projects.
- Municipal Fellows Cohorts
  - Students from across the state
  - Immersive training and development programming
  - 6-month placements within municipalities focused on decarbonization strategies





# MASSACHUSETTS CELT

## GETTING INVOLVED

- Interested in learning more about CELT?
- Follow up questions?
- Interested in working with CELT?

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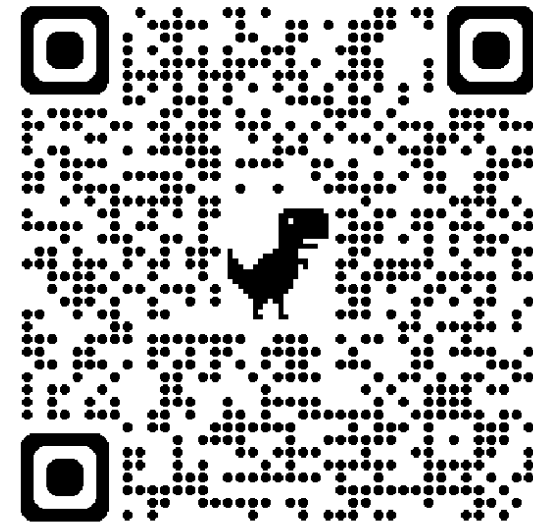
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<https://tinyurl.com/MACELT>