

Cities & Microgrids – The MassCEC Perspective

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Microgrid 2017 Conference

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Why Community Microgrids?

Community Microgrids are small, “islandable” electricity, heat and/or cooling distribution systems that coordinate and distribute energy supplied from multiple generation sources to a network of independent public and/or private users in a spatially defined area.

Community Microgrid Benefits	Corresponding State Goal
Greenhouse gas emissions reductions	✓
Energy resilience for critical facilities	✓
Anchor for economic development	✓
Enable deployment of renewable energy, including PV, energy storage, and CHP	✓
Energy cost reductions	✓
Attract third party investment	✓

Community Microgrid Market Support Activities

Stakeholder Events

2014

3-Part Boston
Microgrid Workshops

- Co-hosted with Boston Planning & Development Association
- Energy Infrastructure Experts
- MA Department of Public Utilities
- Massachusetts utilities

2015

Microgrid Controller
Symposium

- Co-hosted with MIT Lincoln Laboratories
- Microgrid controller technology companies
- Massachusetts utilities
- Energy infrastructure experts

2016

Community
Microgrids:
Opportunities for
Municipalities

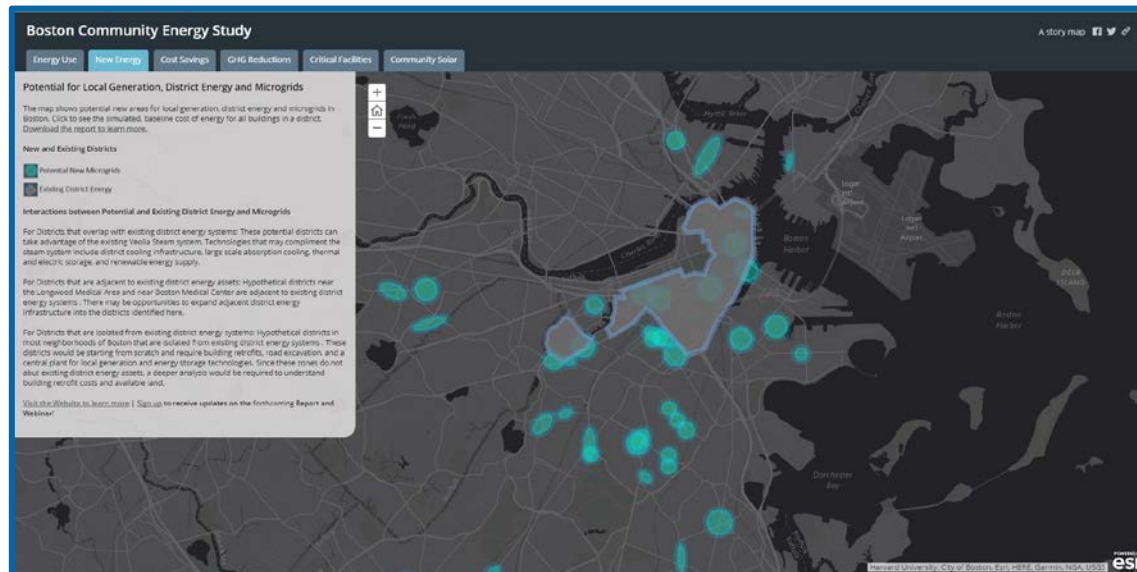
- Co-hosted with Metropolitan Area Planning Council (MAPC)
- Audience: Municipalities
- International District Energy Association
- MassDevelopment
- Pace Energy & Climate Center

2017

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Boston Community Energy Study



- \$75,000 grant to support the Study
- Collaboration between The Mayor's Office of Environment, Energy and Open Spaces; the BPDA; MIT Sustainable Design Lab and MIT Lincoln Laboratories
- MassCEC plans to replicate in other communities across the state

MassCEC's Community Microgrid Program

Funding Opportunity

- Provide funding for clean community microgrid feasibility assessments to help catalyze the multi-user microgrid market in Massachusetts
- Funding for up to 15 feasibility assessments at \$75,000 each

Criteria

- Community/multi-user microgrid located in Massachusetts
- Active and engaged support of local utility
- Potential to reduce GHG emissions and energy costs
- Encompass a public or private facilities, including a critical facility
- Support the distribution system

Program Launch

May 2017

Viability
Assessments
Due

Awards

January 2018

Expressions
of Interest
Due

Project
Interviews

Projects
Begin

Case Example: City of Hartford

Development Partners: Constellation, City of Hartford, CT Light & Power, Bloom

Components: 800 kW fuel cell

Location: Parkville Neighborhood



Facilities and Operations

Blue-Sky Operation:

- Elementary School
- Library, Senior Center
- Health Center

Grid Outage:

- The above facilities, and
- Grocery store
- Gas station

Ownership & Financing

- Public-private partnership
- 15 year PPA with the City
- DEEP Microgrid Grant Program
- Low-Emission RECs Program

Project Drivers

This partnership aimed at creating greater natural disaster resiliency in Hartford in response to Hurricane Irene and other recent strong storms.

Thank you

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