

# Q2 2014 LEADERSHIP STEERING COMMITTEE MEETING

AUGUST 8, 2014

[www.mass.gov/dcam/aep](http://www.mass.gov/dcam/aep)



**ACCELERATED  
ENERGY  
PROGRAM**



COMMONWEALTH COMMITMENT  
TO A CLEAN ENERGY FUTURE

Secretary Shor  
Commissioner Cornelson



Governor Patrick



Secretary Valley Bartlett  
Acting Commissioner Lusardi



# Welcome

## Department of Correction's Division of Resource Management Team led by **Director Jeffrey J. Quick, A.I.A., CIPS.**

- Worked as instrumental leader on retrofits of 20 DOC sites in AEP.
- Partnered to invest \$31.9 million in 20 sites to save \$4.3 million annually.
- Guided selection of ECMs.
- Ensured qualified implementation of projects.
- Installed over 4.4 MW of renewable energy, 2.7 MW of cogeneration power, and pursuing anaerobic digestion at 2 sites.



*Photo shows one of the three new fire-tube package boilers being installed at Gardner.*

**Thank you for your dedicated efforts!**

## Welcome & Recognitions

Carole Cornelison, DCAMM

## AEP Quarterly Report Review

Hope Davis & Jenna Ide, DCAMM

## AEP Spotlights

- Vendor Update
- Accessibility
- Workforce Advisors
- Holyoke Comm. College  
TZNE
- Innovative Technology  
Vendor Intake

Chris Collins, Energy Conservation, Inc.

Chris McIntosh, DCAMM

Kevin Doyle, NECEC

Kate Maiolatesi & Interns, HCC

Stephen White, DCAMM

## DOER Update

Eric Friedman, DOER

## Questions & Answers

# AEP Quarterly Report Review

# Program Goals & Partners



# Major Q2 2014 Accomplishments

Only 98 sites remaining!

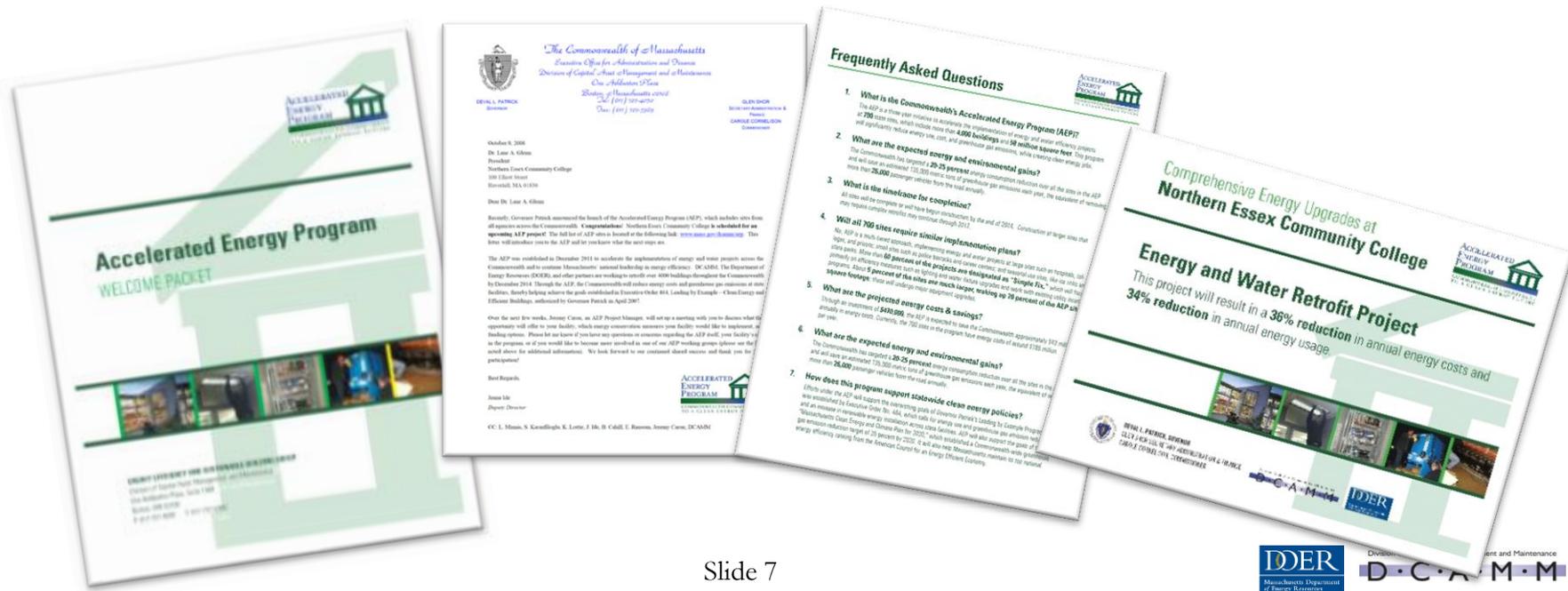
Started Work at 100 new sites

Partnered with DCAMM OPDC to address building accessibility requirements

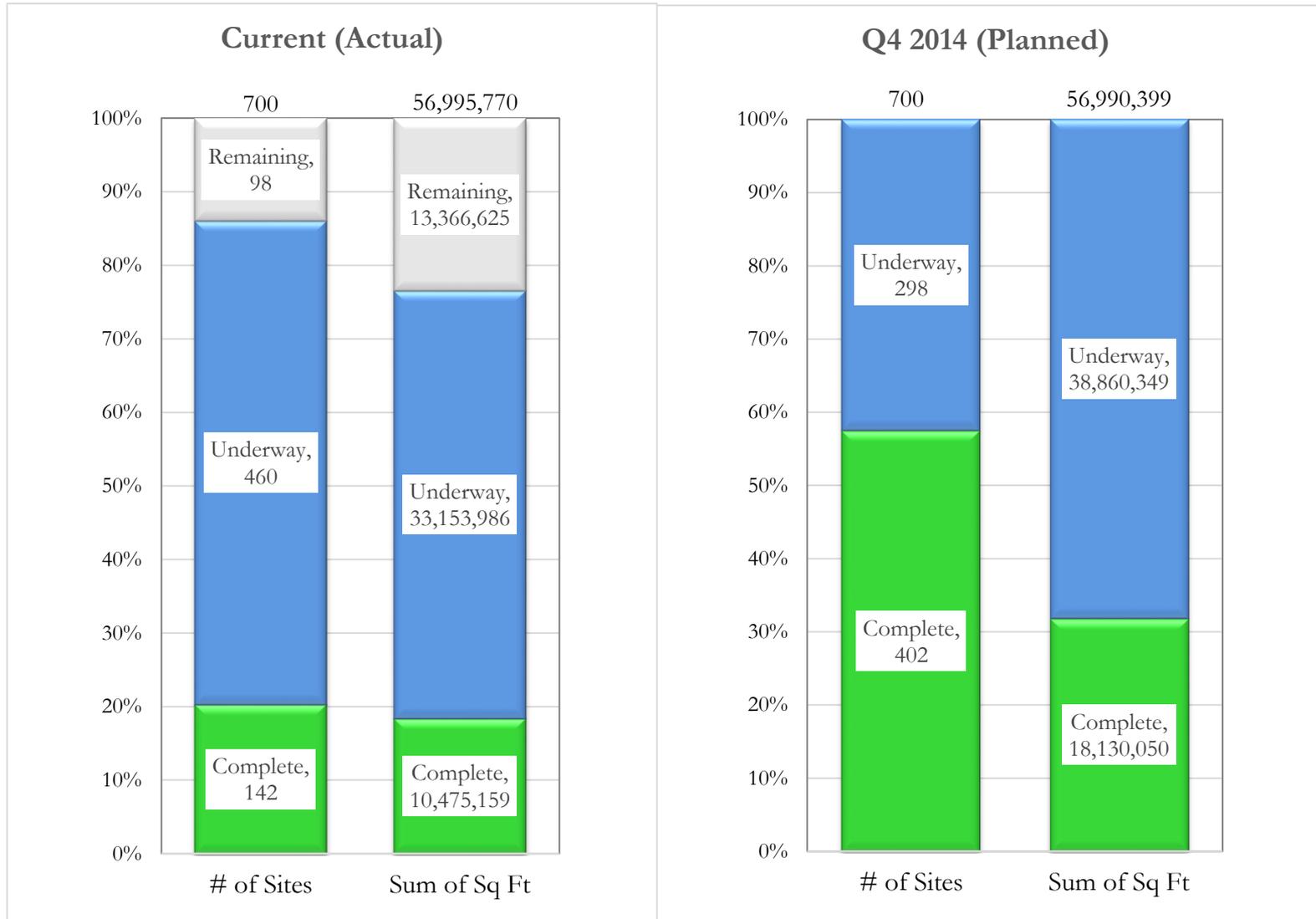
Held Workforce Advisors' Meeting

Launched innovative technology vendor intake webform

Partnered with Courts, MassDOT and DCR to roll-out AEP InReach materials



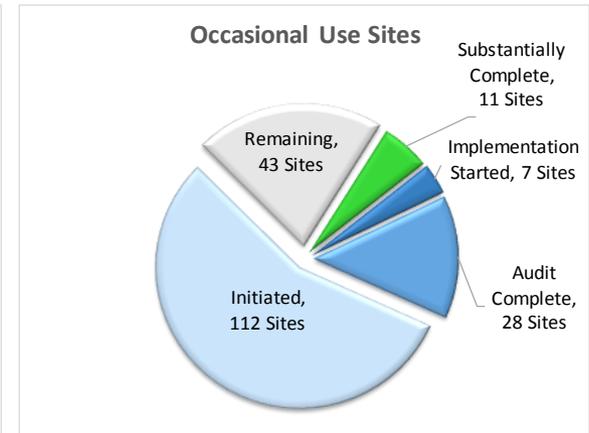
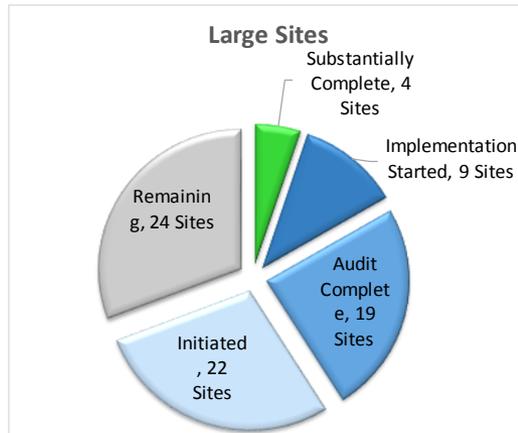
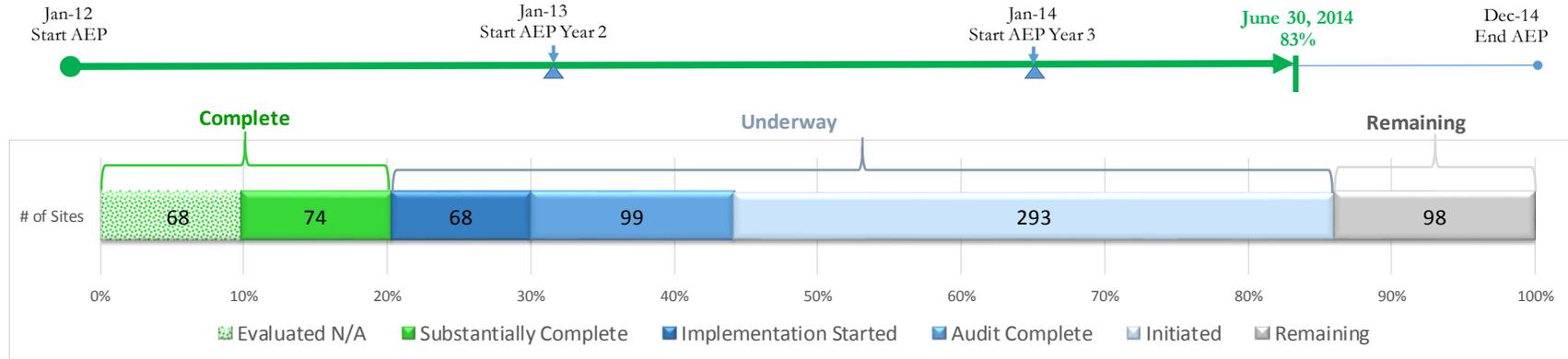
# AEP Status (as of Q1 2014)



# AEP Detailed Program Status

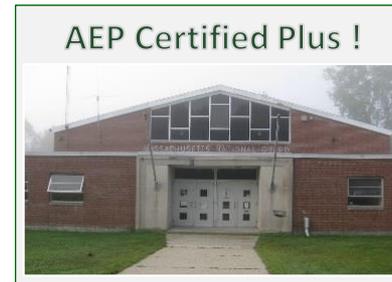
## AEP Status

June 30, 2014



## DCAMM & DOER Recognize State Facilities in Western MA

- Took place at Pittsfield Army National Guard Armory
- Attendees included Brigadier General Gary Keefe and Quartermaster Colonel Timothy Mullen of MA National Guard
- 29 state facilities in Berkshires undergoing renovations, with an expected investment of \$12 million.
- Pittsfield Armory received AEP Certified Plus for 62% energy consumption reduction and 57% GHG reduction.



*On May 16, 2014, state officials presented Military Division representatives with the AEP Certified Plus certificate for the energy project at the Pittsfield Armory.*



## New Technology & Learning Center Building

- Zero Net Energy Laboratory at no additional cost
- Very low projected energy usage intensity (EUI) of 94 kBtu/sq/yr
- Combination of familiar and innovative components:
  - Mix of ground-source and air-source heat pumps
  - 14 of 18 fume hoods will filter and return air to space
  - Air tight envelope and natural ventilation
  - PPA for PV array as shading structure in parking lot



*Photo shows testing for feasibility of ground-source heat pump.*

As of Q2 2014, utility companies have paid \$2.5 million in incentives to AEP projects:

- \$117,000 paid for 11 sites through Simple Fix program
- Over \$2 million paid for 31 sites through comprehensive projects.

AEP estimates a total of \$16 million in incentives will be issued.

AEP meets bi-monthly with DOER, utilities and DCAMM construction office.



In Q2 2014, DCAMM signed contracts:

- **ESCO:** 2<sup>nd</sup> bundle MassDOT District 5 facilities.
- **Paquette** – 4<sup>th</sup> bundle DCR and Fisheries Wildlife and Environmental Law facilities
- **Guardian Energy** – 2<sup>nd</sup> bundle Trial Courts facilities and 3<sup>rd</sup> bundle MassDOT District 3 facilities.
- **Source One** – 3<sup>rd</sup> bundle DCR facilities in the Boston area.
- **RISE** – 4<sup>th</sup> bundle Department of Developmental Services facilities.
- **Energy Conservation, Inc.** – 2<sup>nd</sup> bundle of DCR facilities in the Northeast.

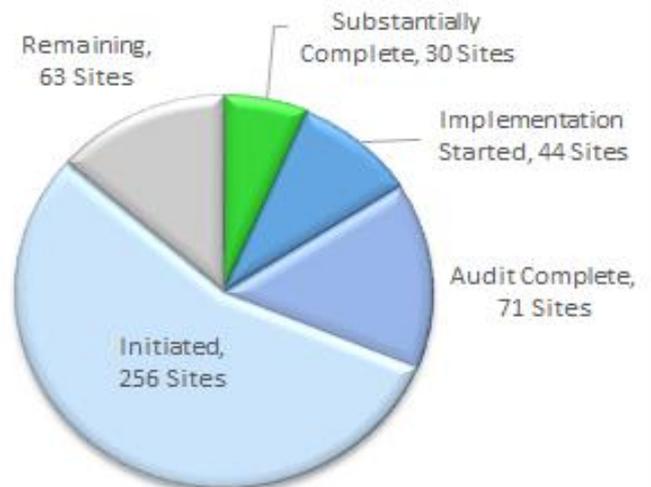
In addition, the team sent out monthly FAQs and conducted 1-on-1 check-in meetings with 5 vendors.

## Utility Approved Vendor Status

28 contracts with 13 vendors

464 total sites planned

## Utility Vendor Contracting Status



## **Spotlight** – Vendor Update

*Chris Collins, President, Energy Conservation, Inc.*

## Bundles:

1. Military Division, Department of Developmental Services, Department of Public Health
2. DCR Southeast
3. DCR Northeast

**Total Sites: 38**

## Energy Conservation Measures:

Lighting upgrades, Lighting controls, Energy Management System Upgrades, Domestic Water, Insulation, Weatherization, Variable Frequency Drives

**Total cost for sites in construction:** \$405,432  
**Estimated yearly savings:** \$71,445  
**Projected incentives:** \$96,076  
**Payback:** 4.3 years

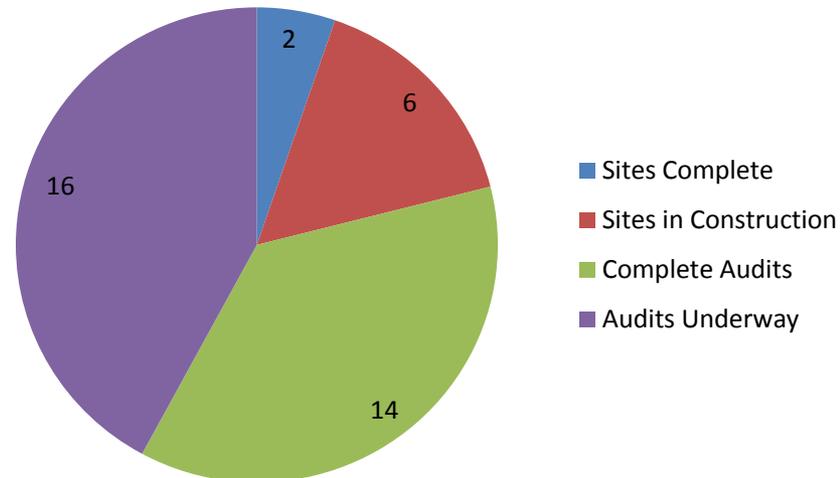
## Minority and Women Business Enterprise Status

AEP1402E UT1: Goal- 10.4%      Actual 22%

## Site Highlight: Lemuel Shattuck Hospital

**Total Cost: \$97,874**  
**Estimated Yearly Savings: \$21,000**  
**Projected Rebate: \$28,942**  
**Payback with Incentive: 3.3 Years**

## Site Status:

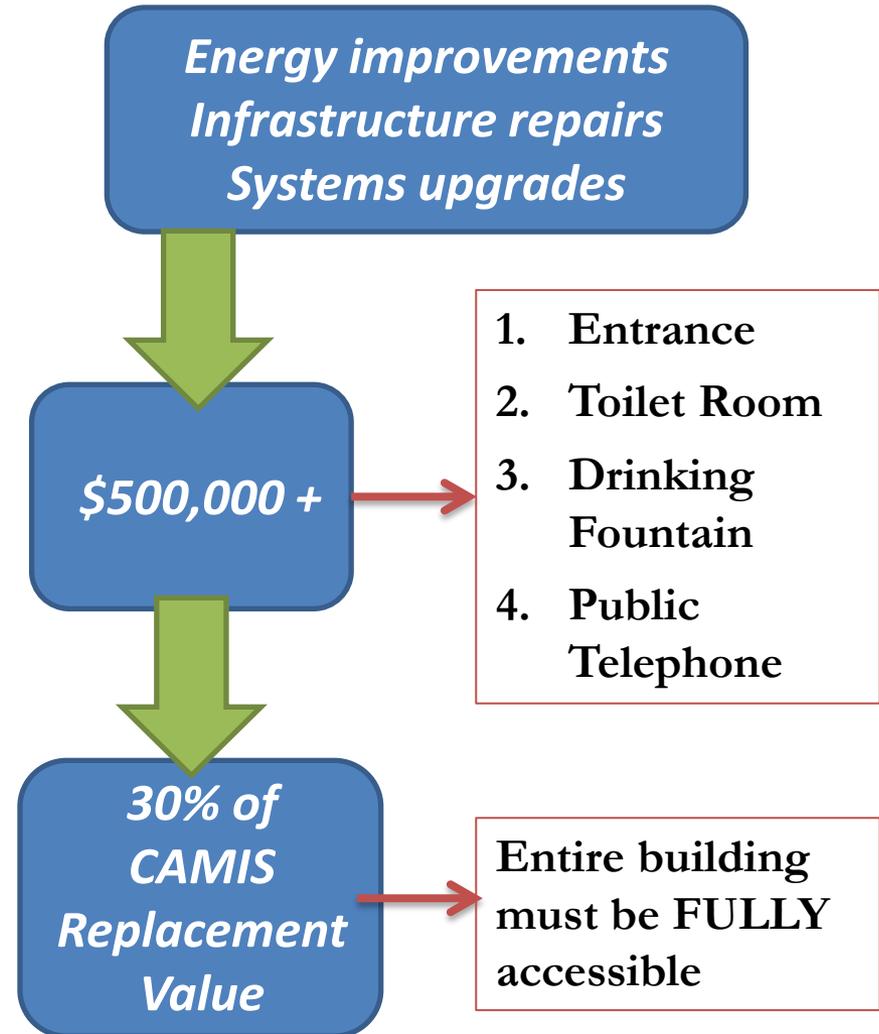


# Accessibility

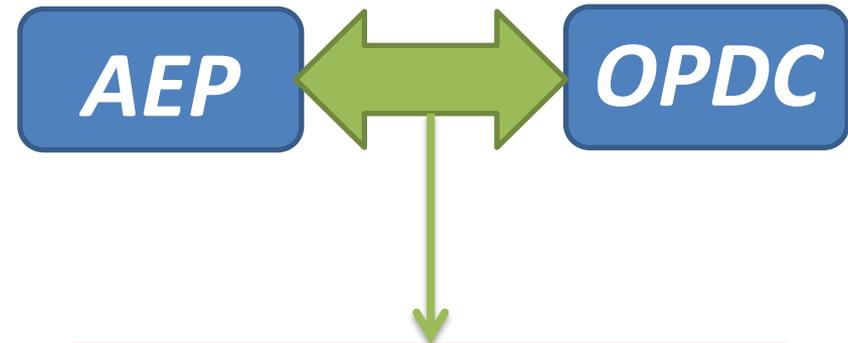
*Chris McIntosh, DCAMM*

- Part of Statewide Accessibility Initiative, DCAMM projects are reviewed for compliance with ADA and MAAB.
- Construction and energy work affect ADA and MAAB compliance – improvements must be made based on work being performed

## State MAAB Requirements



- Partnership was established between AEP and OPDC teams to better coordinate accessibility work at state facilities
- Teams meet monthly to discuss project accessibility issues and updates

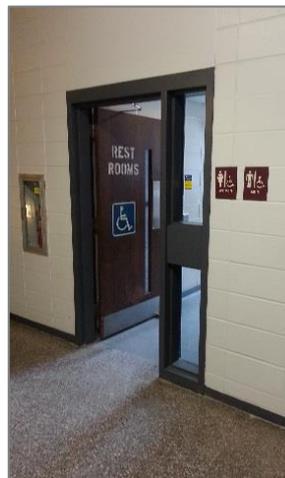


- **Progress and status of existing projects**
- **Costs of potential measures**
- **Status of accessibility evaluations**
- **Plans for future accessibility improvements**

- DCAMM is fully committed to improving access for *all users* of state facilities

## Partnership results:

- Lean coordination between energy and design teams
- More complete data on work being done at facilities
- Faster track to completion of accessibility work



*Problems found include non-compliant signage related to accessible restrooms and automatic door openers, and a ramp to accessible entrance missing a handrail.*

## **Spotlight** – Workforce Advisors’ Meeting

*Kevin Doyle, New England Clean Energy Council  
(NECEC)*

# What was the goal of the meeting?

Goal: Seek ideas and questions from advisors about:

- (a) Increasing participation of M/WBEs
- (b) Increasing employment of women and minorities
- (c) Improving state government systems to serve clients better



# What were the key recurring themes?

- Keep leadership focused on diversity & M/WBE outcomes
- Encourage coordination among agencies & stakeholders
- Balance incentives and penalties to meet and exceed goals
- Share info about existing programs and best practices
- Use IT, outreach, and social media more creatively



## M/WBE participation: Information Access

For improving quality of, and access to, needed information:

- Create a central repository for “winning proposals” and promote it actively.
- Offer more “meet and greet” events for contractors to meet subcontractors.
- Place links to pre-sorted M/WBE firms directly within RFPs posted by DCAMM.
- Create and widely distribute an easy to read “how-to” guide to M/WBE process.
- Provide active matching service for M/WBEs to meet Primes, and vice versa.
- “Mine data” from the whole [www.mass.gov](http://www.mass.gov) site and use the data creatively.
- Knit together all resources in one place and make visible to everyone.
- Provide training, both in person and online, to participants on make matches.

## M/WBE participation: Increasing number of M/WBEs

For raising the number of M/WBEs in needed categories:

- Support more firms by using direct assistance from public/private partnerships – not just information that there might be a business opportunity, but also financial help.
- Offer coaching and matching of aspiring entrepreneurs with experts to increase the readiness of firms and individuals to take the next step in the development of their business.
- Survey firms and individuals to ask: *“Is SDO or DCAMM Certification an unduly difficult challenge for minority and woman-owned businesses?”*



## Increasing workforce diversity: **Improve outreach campaigns**

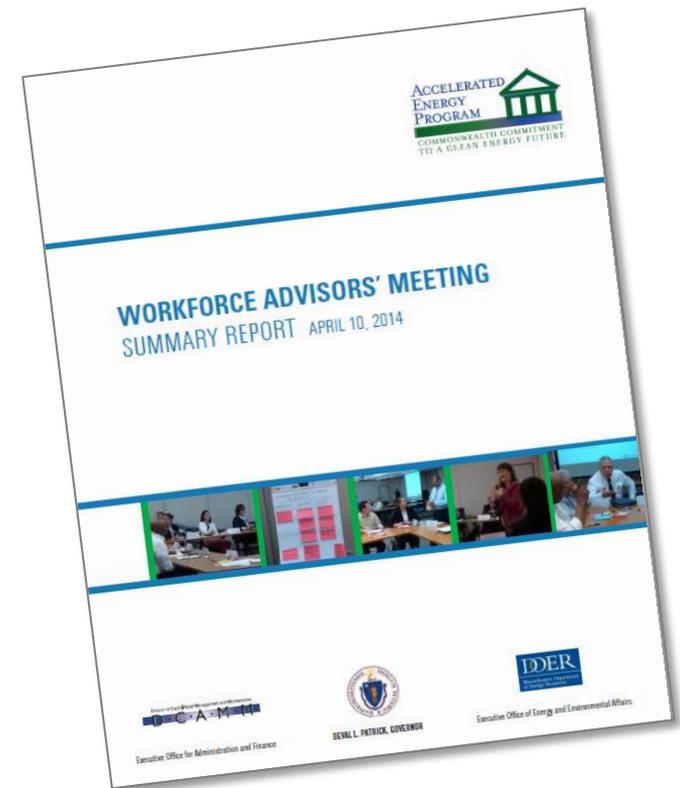
- Outreach to young people using the mediums they're comfortable with.
- Put a “gender lens” on outreach expected to attract women.
- Identify and partner with organizations who target the audience.
- Ask people from target group if messages/messengers are welcoming.
- Provide free training to AEP contractors on diversity outreach.
- Use women and people of color in the trades/professions as mentors.

## **And Other Ideas to Achieve Diversity Goals ....**

- Use existing internship, pre-apprenticeship, training, apprenticeship and scholarship programs;
- Don't forget about adult learners and “re-trainers”;
- Connect with existing government policy initiatives

# Next Steps

- Complete contractor survey and study of methods currently used to recruit and hire women for non-traditional trades and careers.
- Complete review of suggestions from meeting and identify ideas that deserve further consideration and action, especially those of value to state government beyond the AEP.
- Complete and post additional case studies of successful recruitment and utilization of M/WBEs by AEP and other DCAMM contractors.
- Schedule next Workforce Advisor Group meeting for Fall 2014.



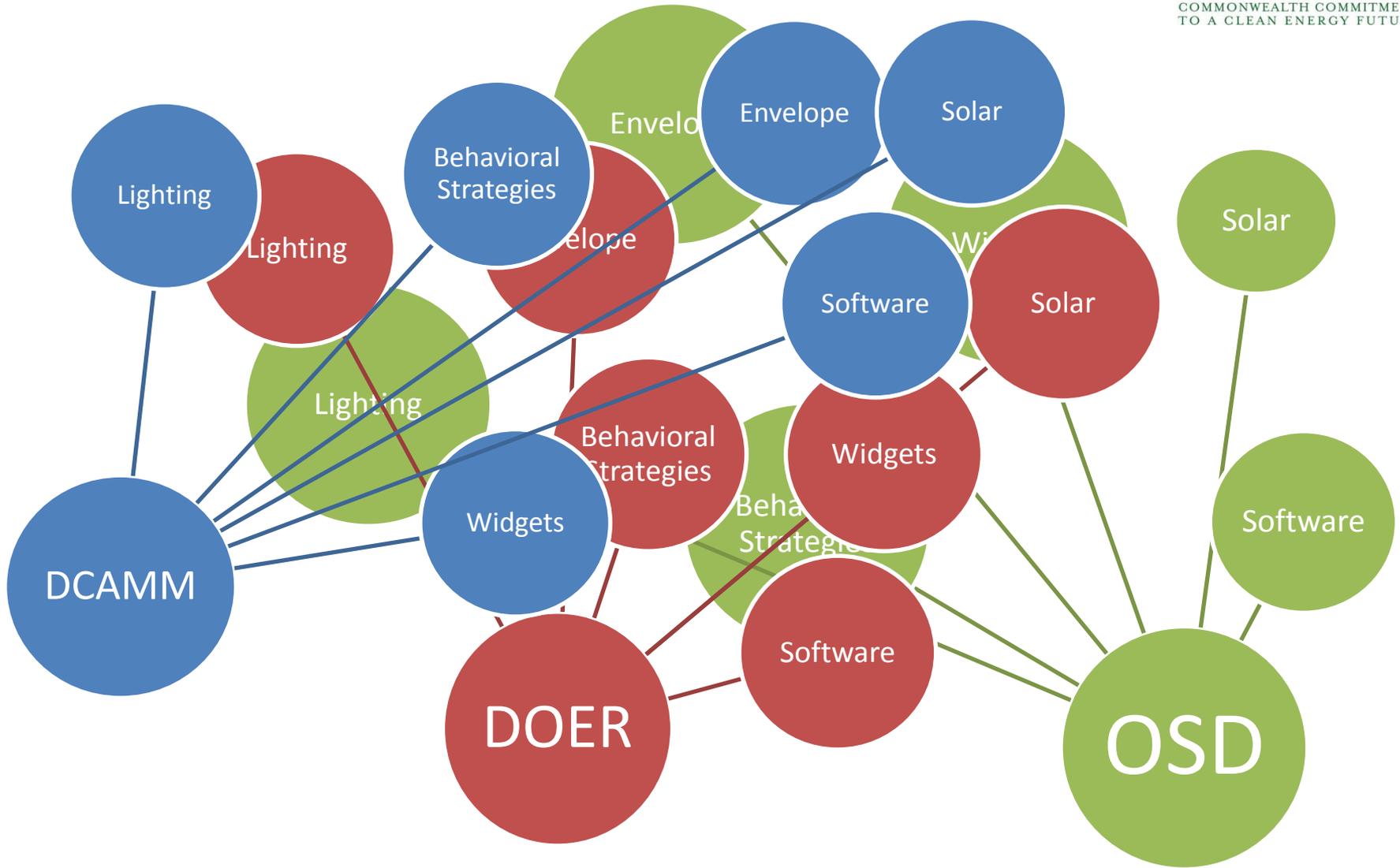
# Holyoke Community College TZNE

*Kate Maiolatesi, Professor*

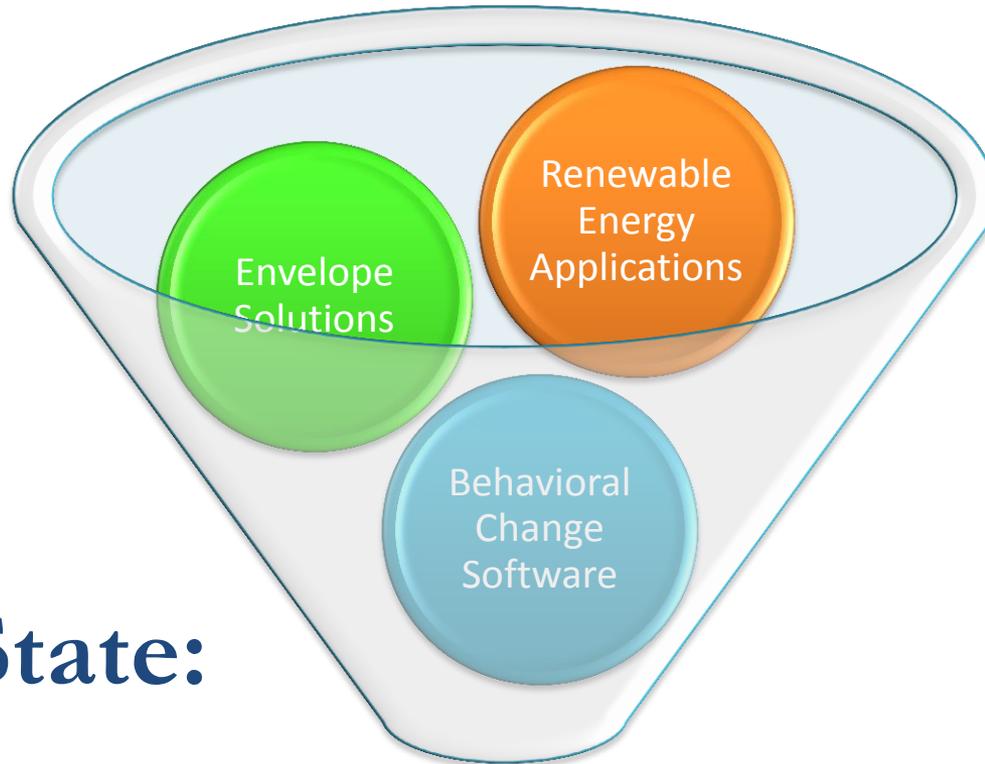
*Sadie Higgins & Antonios Pitaridis, TZNE Interns  
(funded through MassCEC)*

# Spotlight – Innovative Technology Vendor Intake Webform

*Stephen White, DCAMM*



## Prior State:



## Future State:



**Shared Web-based  
Clean Energy Innovative Technology Database**

**Mass.gov** State Offices & Courts | State A-Z Topics | State Forms | No Active Alerts | Skip to main content | English

The Official Website of the Executive Office of Energy and Environmental Affairs

## Energy and Environmental Affairs

Search... in Energy & Environment SEARCH

Agriculture | Energy & Utilities | Environmental Protection | Fisheries, Wildlife & Habitats | Recreation & Conservation | **Services & Assistance** | Agencies

EEA Home > Services & Assistance > Guidance & Technical Assistance > Leading by Example > Clean Energy Innovative Technology Intake

### Clean Energy Innovative Technology Intake

The Commonwealth of Massachusetts manages more than 80 million square feet of buildings at hundreds of sites that annually consume more than 1 billion kilowatt hours of electricity, 6.5 million gallons of heating oil, and 70 million therms of natural gas, and create one million tons of greenhouse gas emissions per year.

The Accelerated Energy Program ("AEP") was launched in January 2012 to accelerate the implementation of energy and water projects across the Commonwealth and help meet the goals of Executive Order 484. As part of the AEP, DCAMM, in coordination with the Department of Energy Resources and partner state agencies, will retrofit 700 sites encompassing thousands of buildings throughout the Commonwealth.

If your company has an innovative, clean energy technology, product or service that you feel can support efforts to achieve Commonwealth clean energy goals, please complete the Intake Form (located in the Intake Form link in the MORE INFORMATION column at the right). The information you provide on this form will help us determine the applicability of your innovative technology to state facilities and operations.

The Commonwealth of Massachusetts applauds your efforts in developing a product or service which has the potential to help the state meet its energy efficiency and greenhouse gas reduction goals and thanks you for your interest in making your technology available to Commonwealth agencies.

For more information click on the links located in the right hand column.

**More Information**

- Clean Energy Innovative Technology Intake Form
- Directions for Filling Out the Form

**Participating Agencies**

- DOER, Leading by Example Program
- DCAMM, AEP Program
- OSD, Environmentally Preferred Products Program

<http://www.mass.gov/eea/grants-and-tech-assistance/guidance-technical-assistance/leading-by-example/clean-energy-innovative-technology-intake.html>

# Clean Energy Innovative Technology Intake Form

- Company Information
- Supplier Diversity Program Information
  - ✓ M/WBE
  - ✓ SDVOBE
  - ✓ Small Business Enterprise
- Technology Information
  - ✓ ECMs
  - ✓ Technology Readiness Level
- Technology Benefits
  - ✓ Payback Timeframe
  - ✓ Utility Incentives
- Additional Information

Fields Marked with a \* are required

[Click here for Technology Intake Form instructions](#)

\* Today's Date

----- Company Information -----

\* Company

Address

\* City

\* State

\* Zip

\* Primary Contact Name

\* Email

\* Phone

Website

----- Massachusetts Supplier Diversity Program (SDP) -----

Minority-owned Business Enterprise

Woman-owned Business Enterprise

Service-Disabled Veteran-Owned Business Enterprise

Small Business Enterprise

----- Technology Information -----

\* Technology Name

\* Technology Description

\* Energy Conservation Measure

\* ECM Sub-Measure

\* Technical Readiness

Third Party Evaluations / Certifications

Permits or Licenses

Product Cost or Range

Cost Description

----- Technology Benefits -----

Payback (yrs)

Utility Incentives

Energy Savings / Other Benefits

Maintenance or Other Operational Needs

----- Additional Information -----

Additional Information

Pilot Demonstration

Upload Product Brochure   (100MB Max)

Upload Cut sheets/specs/Diagrams   (100MB Max)

Upload Additional Files   (100MB Max)

# Technology Readiness Level (TRL)

Technology Readiness Level (TRL)	Description
TRL 9. Technology Proven In Operation	Actual application of technology is in its <b>final form</b> . Technology proven through successful operations.
TRL 8. Technology Demonstrated	Technology is <b>proven to work</b> . Actual technology completed and qualified through test and demonstration.
TRL 7. Prototype Near Operational System	Prototype near or at planned operational system. Requires demonstration of an actual system <b>prototype in an operational environment</b> .
TRL 6. Prototype Tested in Lab	Prototype system is tested in a relevant environment. Examples include testing <b>a prototype in a high-fidelity laboratory environment</b> or in simulated operational environment.
TRL 5. Technology Ready for Testing	The basic technological components are integrated with reasonably realistic supporting elements so it can be tested in a simulated environment. Examples include “high fidelity” laboratory integration of components.
TRL 4. Technology Integrated	Basic technological components are integrated - Basic technological components are integrated to establish that the pieces will work together.
TRL 3. R&D Initiated	Active research and development is initiated. This includes analytical studies and laboratory studies to physically validate analytical predictions of separate elements of the technology. Examples include components that are not yet integrated or representative.
TRL 2. Invention Started	Invention begins. Applications are speculative and there may be no proof or detailed analysis to support the assumptions. Examples are limited to analytic studies.
TRL 1. Scientific Research Started	Scientific research begins translation to applied R&D. Scientific research begins to be translated into applied research and development. Examples might include paper studies of a technology’s basic properties.

## DOER Updates

*Eric Friedman, Director, Leading by Example Program,  
DOER*

# Agenda

- EV and AFV Opportunities
- Changes to solar programs
- Grants for state facilities
- Fuel Efficiency Standard
- LBE Awards



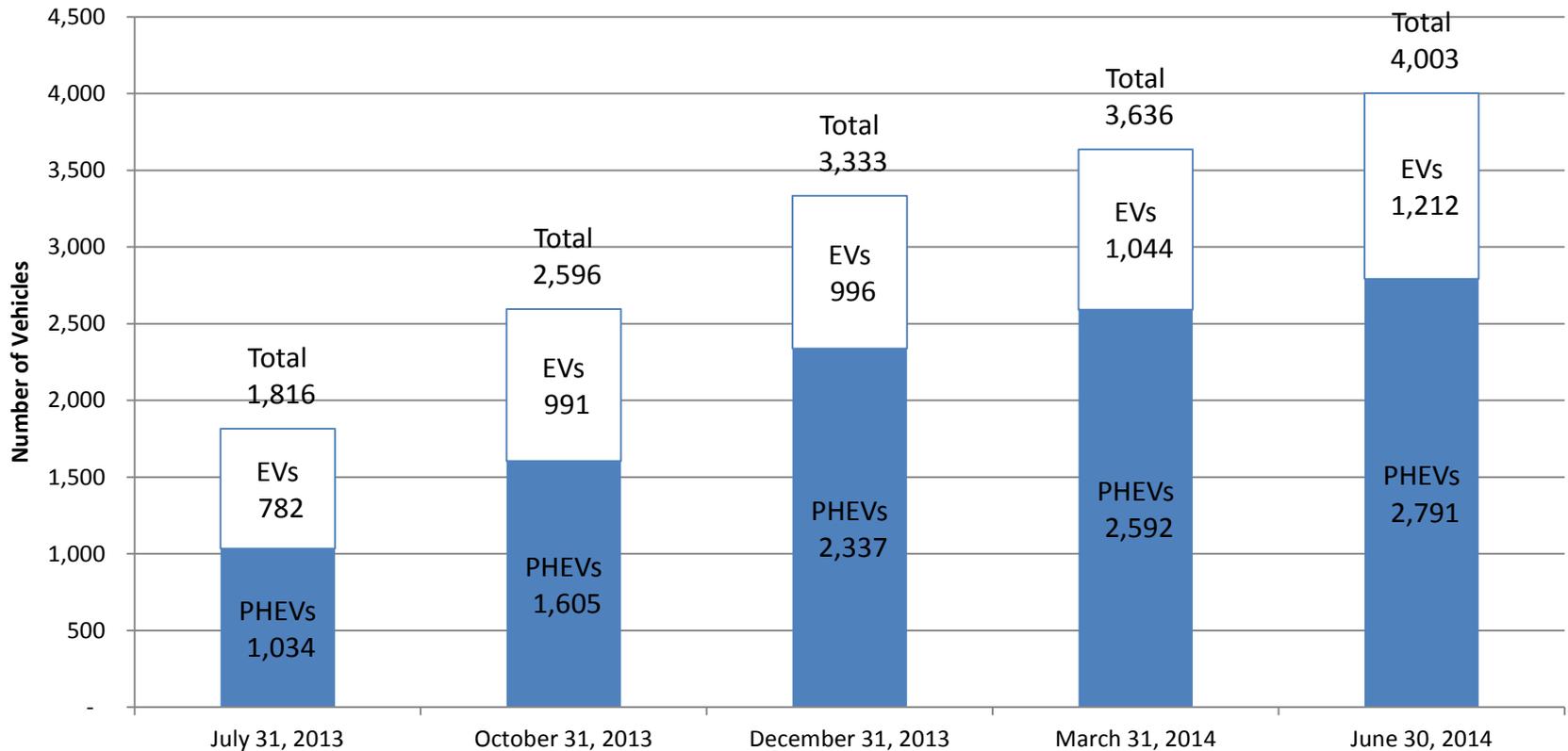
## Mass. Electric Vehicle Incentive Program–MassEVIP

- **Governors Announce Bold Initiative to Put 3.3 Million Zero-Emission Vehicles on the Road by 2025**
- \$2.5 million made available in 2013
- Open to municipalities, public universities and colleges, state fleet
- \$7,500 for full battery electric vehicle and \$5,000 for plug-in hybrid electric vehicle
- Up to \$15,000 for Level 2 Chargers
- Next Round coming soon



# Electric Vehicles in Massachusetts

Massachusetts Electric (EV) and Plug-in Hybrid Electric (PHEV) Vehicles  
(Change over 11 Months: EVs: 55%; PHEVs: 170%; Total: 120%)



Massachusetts Department  
of Energy Resources

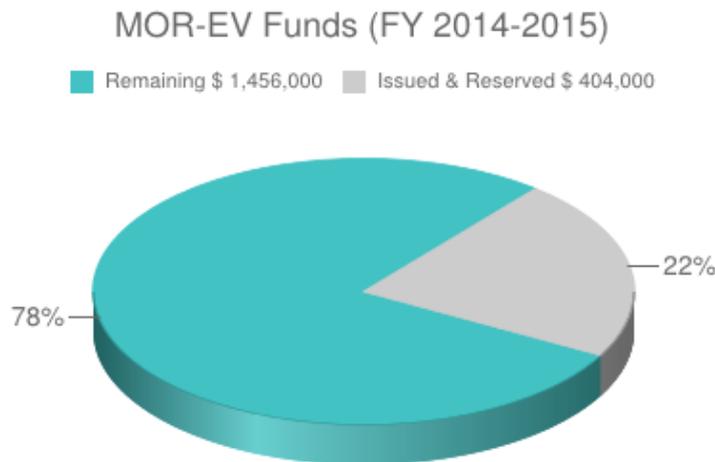
# Workplace EV Chargers Grants

- Launched in June 2014 with \$1.4 million
- Open to employers with 15 or more employees in a non-residential workplace
- Incentives covering 50% (up to \$25,000) of hardware costs for Level 1 and Level 2
- DEP Contacts:
  - ✓ Sejal Shah: ([sejal.shah@state.ma.us](mailto:sejal.shah@state.ma.us)) or 617-556-1015
  - ✓ Richard Blanchet ([richard.blanchet@state.ma.us](mailto:richard.blanchet@state.ma.us)) or 617-654-6585



# Rebates for Electric Vehicles (MOR-EV)

- Goal to increase the use of electric vehicles for individuals
- \$2 million program funded by EEA and DOER
- \$1500 rebate for plug-in hybrid light-duty vehicles
- \$2,500 rebate for the purchase or lease of zero-emission vehicles
- Can be coupled with federal tax credit of up to \$7,500
- <https://mor-ev.org/> for list of eligible vehicles and application
- Funds available until they run out



Get a Mitsubishi i-Miev for as low as \$12,995



**DOER**

Massachusetts Department  
of Energy Resources

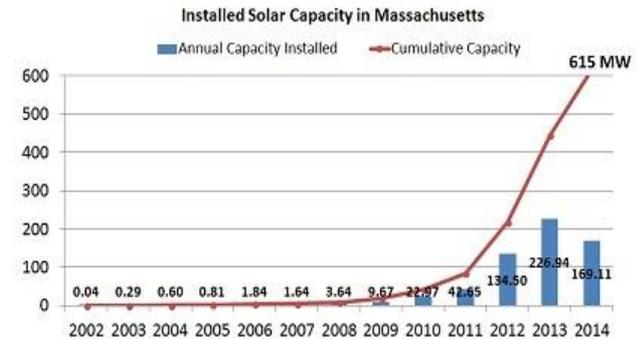
# Clean Vehicle Program - Grants

- Replace more than 200 public and private vehicles powered by gasoline and diesel with alt fuel vehicles
- Grants will cover the differential cost for clean fuels for a variety of vehicles and technologies
  - Battery Electric Buses with Wireless Charging
  - Battery Electric Shuttles and Medium Duty Trucks
  - Hybrid Technology Conversion for Light Duty Vehicles
  - Hybrid Technology Conversion for Medium and Heavy Duty Vehicles
- Grant opportunities posted on Commbuys and DOER website



# Renewable Energy Updates

- No comprehensive legislation
- Bill raised net metering caps 2% for public and 1% for private and creates a Task Force to address 1600 MW goal
- New incentive program allows for larger cap of 1,600 MW
- Incentives decline over ten years
- Different incentive levels to different project types– e.g. canopies get higher incentive than ground mounted
- Installation of >650 kW projects that export majority of power will be managed on a two year schedule and get lower incentives



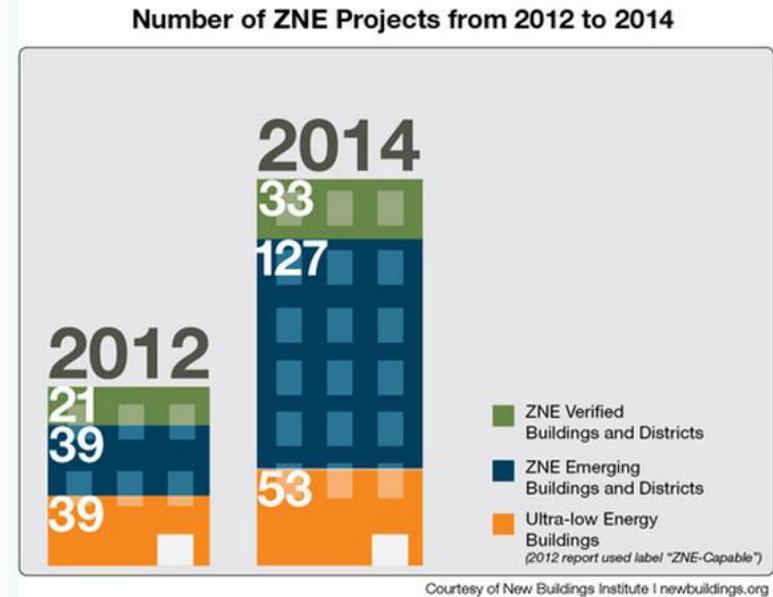
In May 2013, the Patrick-Murray Administration met its 2017 goal to have 250 MW of solar power installed in Massachusetts. The Administration has set a new target of 1600 MW for 2020. The above figures represent the cumulative amount installed as of August 1, 2014.

*Creating a Cleaner Energy Future for the Commonwealth*



# Pathways to Zero Grant Program

- \$2.5 million grant program for public and private buildings striving for ZNE
- 42 Total applications received
  - Construction: 32
  - Feasibility & Design: 10
  - Commercial: 20, Residential: 22
- Grant dollars requested: \$7.7 million
- Awards by end of September



# LBE Renewable Thermal Grants

- Two new grants approved:
  - \$100,000 for 60KW CHP at Worcester State University new dormitory/dining hall
  - \$50,000 for pre-feasibility studies at four DFG sites to evaluate pellet boilers and air source heat pumps
- In discussion with DCR, Trial Courts, Military Div. about possible projects
- Grant Deadlines Extended
  - Feasibility grant applications due 10/15/14
  - Project grant applications due 12/31/ 14
- \$2 million still available
- Bill passed to provide incentives to renewable thermal projects



# LBE Solar Canopy Grant Program



\$1.5 Million grant opportunity for solar PV at parking lots, garage roofs, and pedestrian walkways on state owned land

- \$0.50/ watt up to \$500,000 per project
- Projects over 200 kW capacity
- Some on-site state consumption required
- Require minimum # of EV charging stations depending on array size
- Posted on LBE website



<http://www.mass.gov/eea/grants-and-tech-assistance/guidance-technical-assistance/agencies-and-divisions/doer/doer-procurements.html>

# EEMS Contract Update

- EEMS contract with EnerNOC expires at the end of August
- DOER and DCAMM working to identify funding to extend the contract for an additional 6 months
- DOER hiring consultant to assist with evaluation and recommendations
- Next procurement for EEMS will be managed by DCAMM
- EEMS User Survey released last week

# Fuel Economy Standard for State Fleet

- Green Communities Act of 2008 requires new fuel efficiency standard
- Inter-agency team drafting new standard
- Establish average MPG standard for annual agency vehicle purchases
- Create Standard in Two Categories
  - Passenger cars
  - Light-duty trucks (pick-ups, SUVs, vans)
- Minimum purchases of EVs and Electric Plug-ins
- Provide for flexibility across categories and years



# LBE Awards

- LBE Awards provide an opportunity to recognize the efforts of state agencies, public colleges and universities, and municipalities
- Annual awards ceremony occurs at the State House in October
- Applications due **September 16**, posted on LBE website



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# Questions and Answers

# Thank you!

We greatly appreciate your time, guidance & feedback.

Next Meeting is **November 14**, 2014