

# CLEANENERGYRESULTS

## Advancing Renewable Energy and Energy Efficiency in the Commonwealth

An Innovative Partnership:

**The Massachusetts Department of Environmental Protection**

**The Massachusetts Department of Energy Resources**

**Catherine Finneran, MassDEP Clean Energy Director**

MassDEP State Implementation Plan Steering Committee

March 29, 2012

# Massachusetts & Clean Energy

- Top Priority for Patrick Administration
- Global Warming Solutions Act
  - Comprehensive Program -> Climate Change
  - Goal 10 -25 % Below 1990 GHG levels by 2020
- Green Communities Act
  - Supports Development of Clean Energy Resources
  - Expands Efforts to Promote Energy Efficiency

# MA Clean Energy Goals

- 15% MA Electricity Supply from Renewable Sources by 2020
- Solar: 250 MW installed before 2017
- Wind: 2,000 MW Installed by 2020
- DOER Year In Review (as of 12/31/11)
  - Solar: 72 MW (10x increase since 2007)
  - Wind 44 MW (from 3.5 MW in 2007)

**\*MA Ranked #1 in Energy Efficiency\***

(American Council for an Energy Efficient Economy)

# Clean Energy Results Program

- New Chapter in Integrating Energy and Environment
- New Role for MassDEP
- Unique MassDEP/DOER Partnership
- Launched November 16, 2011



# Why is the Program Needed?

- Support Meeting Commonwealth Clean Energy Goals
- Promote Clean and Efficient Sources of Energy at MassDEP Regulated Sites
- Maximize MassDEP's Unique Expertise to Overcome Permitting & Siting Obstacles
- Address Public Health Concerns and Misconceptions Using Sound Science

# What Projects are Targeted?

- \* RPS/APS, including:
  - Solar Photovoltaic
  - Wind
  - AD/CHP
  - Sustainable Biomass
  - Landfill Gas
- \* Energy Efficiency
- \* Energy Conservation



# Program Elements

## **1. Project-Specific Support and Coordination**

- Permitting/Compliance Assistance
- Regulatory and Financial Assistance

## **2. Regulatory Review and Streamlining**

- Remove Regulatory Barriers
- Financial Incentives

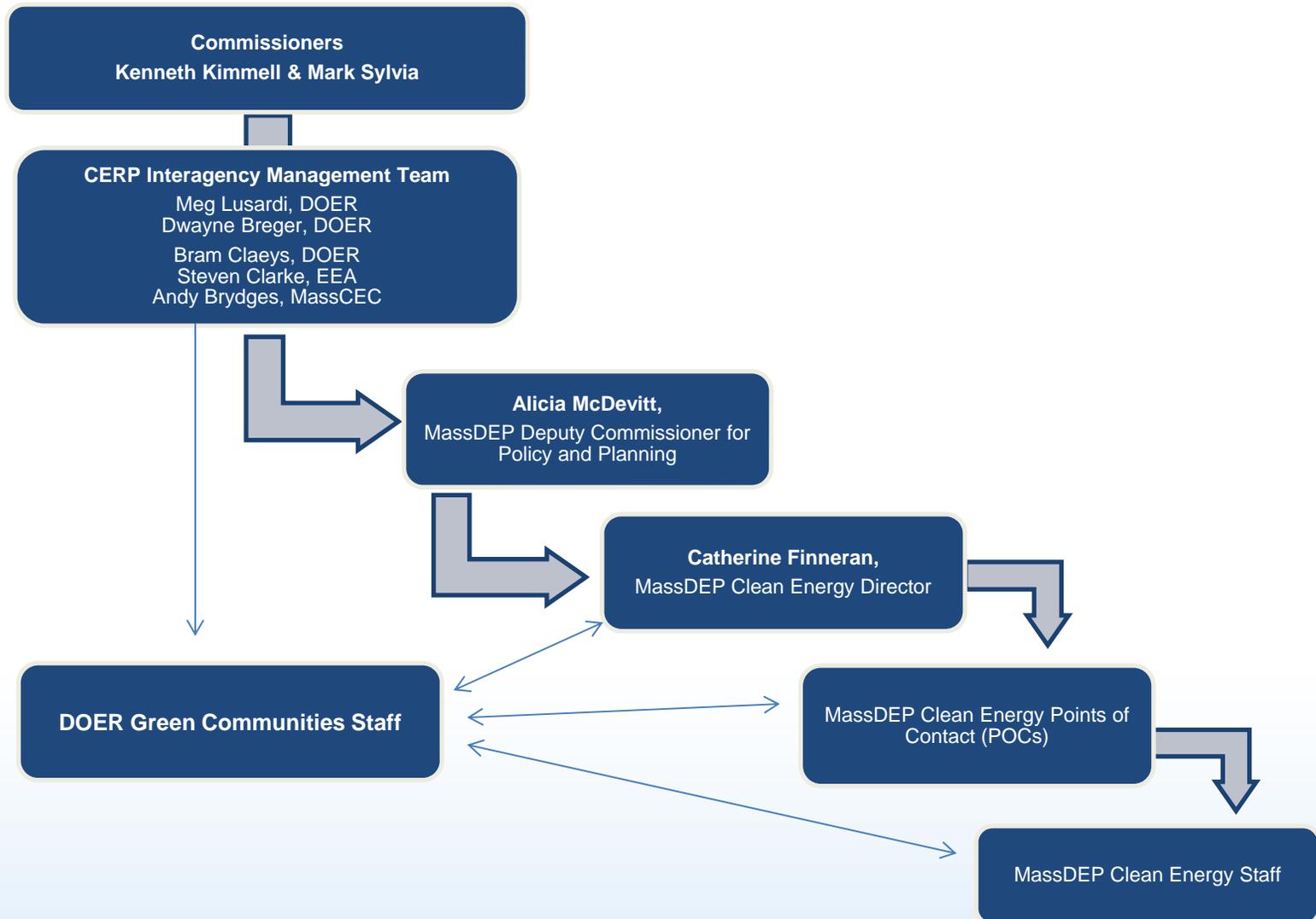
## **3. Broad Public Education and Engagement**

- Coordinated Outreach (DOER, MassCEC)
- Communicate Project Benefits/Address Misconceptions



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## Program Management Structure



# CERP Activities and Goals

- Wastewater and Drinking Water Utilities
- Organics to Renewable Energy
- Environmentally Challenged Land
- Clean Energy Support Teams
- Wind

# MassDEP Role

- Responsible for Safe Drinking Water/Reliable Wastewater Treatment
  - 370 Water Utilities
  - \$150 Million/Year in Energy Costs
  - 1 Billion kWhs Used



# 2007 Energy Pilots

## 14 Pilot Facilities: Recommendations



Efficiency: **Save \$2M / Year**

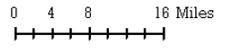
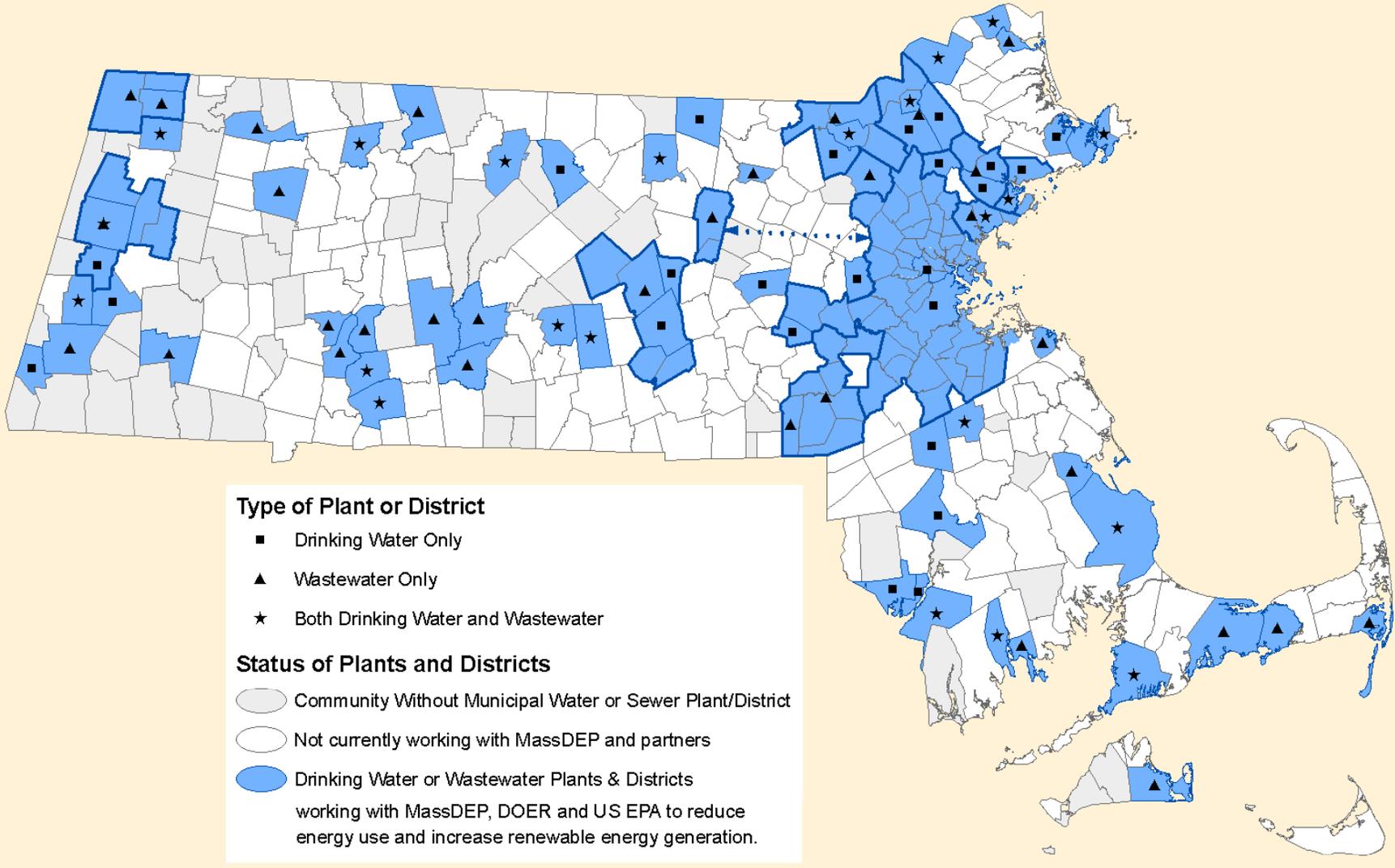


Green Power: **Save \$1.7M / Year**

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# Drinking Water and Wastewater Plants and Districts

## Working with MassDEP, DOER, and U.S. EPA to Address Energy Use



Map provided by DOER  
7-22-11\_jpfister

# Organics to Renewable Energy

## CERP 2020 Goals:

- Divert an additional 350,000 tons per year of organic material from landfills and incinerators
- Increase energy production from aerobic and anaerobic digestion to 50 megawatts (375gh/year)

# Steps to Reach Goals

- Regulatory Amendments
  - Solid Waste Assignment and Wastewater Treatment
- Infrastructure for Organics Diversion
  - Address Collection Barriers
  - Establish Waste Ban (Commercial/Institutional Food Waste)
- Project Siting
  - Identify Appropriate Locations



# Environmentally Challenged Property

- Achieve 50+ MW of Clean Energy on Closed Landfills, Brownfields, and Superfund Sites (by 2020)
- Promote the Use of Green Remediation



WMECO Pittsfield

# Clean Energy on Closed Landfills

- Total 46+ MW permitted since 7/10
- Progress: 30+ MW Permitted Under CERP since 7/11
  - 9 Projects permitted in December alone!



Easthampton Landfill 2.3MW- Photo Courtesy of Borrego Solar Systems, Inc.

# Brownfields



**Brockton Brightfields Site**

## Progress:

- 14+ MW Sited on Brownfields
- 5+ Superfund Sites Evaluated for Green Remediation
- Liability Guidance Developed

# Clean Energy Support Teams

- Proactive Outreach with DOER to Municipalities and Other Parties
- Provide Information On:
  - Permitting Requirements
  - Environmental Regulations and Standards
  - Technical Assistance
  - Financial Incentives

# CERP Goals: Wind

- Wind Turbine Health Impact Study: Report of the Independent Panel
- Review MassDEP Noise Policy Guidance Relating to Wind Turbines

# For More Information

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