

# Meeting Massachusetts RPS Goals

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*Northeast  
Sustainable  
Energy  
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*Boston*

# Meeting Massachusetts RPS Goals

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Flexibility Features

Compliance, from struggle to success, 2003-2009

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# MA RPS Background

## DOER Mission

***Creating a **greener** energy future --  
economically and environmentally:***

- all available cost-effective energy efficiencies
- greener energy resources
- reliable supplies and improved relative cost
- clean tech companies and clean energy jobs

# MA RPS Background

## What is Mass RPS?

- Each Retail Electricity Supplier in MA must obtain a specified % of electricity from RPS Class I qualified Generation Units.
- Each Supplier documents each July 1<sup>st</sup> its ownership of “**RECs**” from such Units in amount equaling specified % of MA retail sales for previous year.
- Each **REC** is minted at NEPOOL GIS & is coded for the “**RPS Class I Attributes**” of one MWh from a qualified Gen Unit.
- **% obligation** rises each year: 0.5% in 2003 rose by ½% per year to 4% in 2009. Now rises by 1% per year. 6% in 2011, etc., etc.
- **Alternative Compliance Payment (ACP)** in \$/MWh to MassCEC in lieu of sufficient RECs. Funds used under DOER oversight to help finance development of new renewable generation.

# MA RPS Background

## What are the Goals of MA RPS?

- Regulation-mandated annual increase in demand for electricity from new renewables provides market incentive for growth in new renewables – wind, PV, landfill methane, etc.
- Renewables development creates jobs for project design, construction, maintenance, etc., within MA and the region.
- Increased activity brings development costs down.
- Renewable generation displaces fossil generation, resulting in lower emissions of ozone-precursor air pollutants and global warming gases, and as well as other environmental benefits for MA, the region, and wherever fossil fuels are extracted.
- Renewables Portfolio provides buffer from fossil fuel price spikes & supply interruptions.

# MA RPS Background

## MA RPS History

- 1997 MA Electricity Restructuring Act enacted in November
- 2002 RPS Regulations promulgated in April
- 2002 Early Compliance Year
- 2003 First year of Retail Supplier compliance
- 2007 Regulations revised
- 2008 Green Communities Act enacted in July
- 2009 New Regulations for RPS Class I & II
- 2010 Regs revised for Solar Carve-Out in Class I
- 2010 Biomass sustainability issue addressed
- 2011 Awaiting issuance of proposed final Regs re biomass

# MA RPS Background

## RPS Class I Scope

- **Eligible resources/technologies:**

Solar PhotoVoltaic	Landfill methane	Wind
Small, low-impact Hydro-electric (as of 1/09)	Low-emission, advanced Biomass power conversion technologies w/ eligible biomass fuels [currently under review]	Fuel Cells using eligible renewable fuel

- **Vintage:**

- Commercial operation started on/after 1/1/98 *or*
- Output from incremental additions to pre-1998 Units

- **Location:**

- Anywhere in the ISO New England Control Area (New England grid), including behind-the-meter
- In adjacent Control Areas (NY, Quebec, New Brunswick [incl. Nova Scotia, PEI]) provided electricity is transmitted into ISO-NE

# Meeting the Goals

## Regional Attribute Tracking System

- New England Power Pool Generation Information System (**NEPOOL GIS**), established in 2002, simultaneously with MA RPS.
- Accounts established by for all participants in ISO-NE grid.
- Records **all** electricity generated in ISO-NE & transferred from generators to retail suppliers.
- Electronic, serial-numbered Certificates (including RECs) are minted at one per MWh, coded with attributes of the Gen. Unit.
- LSEs must match retail load served each quarter with certificates acquired from generators.
- Each certificate can end up only in one account, so no double-counting, ease of documenting RPS compliance for each state.

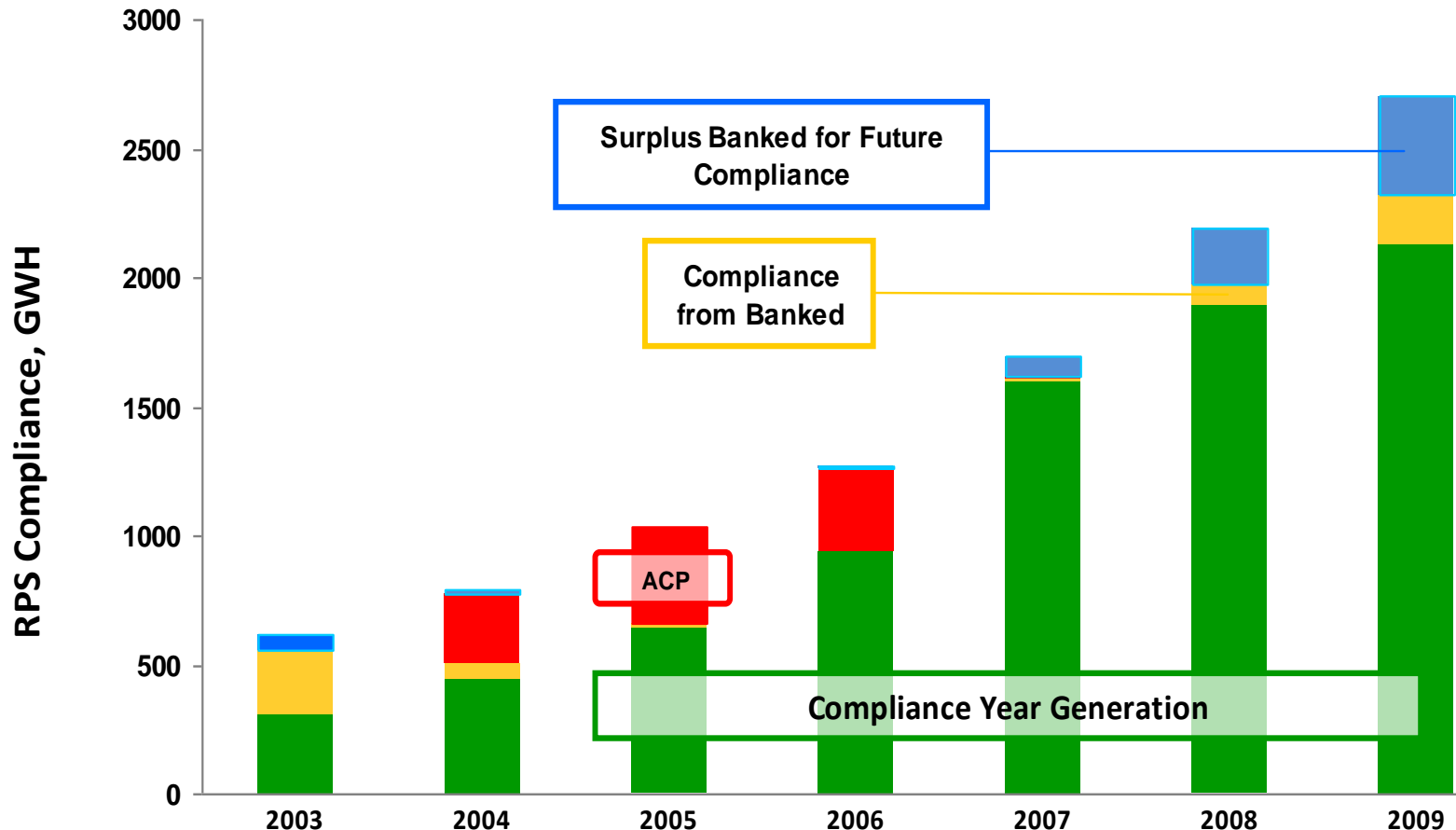
# Meeting the Goals

## Flexibility Features

- Imports: RECs minted for electricity imported from MA RPS-qualified generators in adjacent “control areas” (power grids), with some conditions.
- Inter-quarter REC banking: RECs can be banked in Generator’s NEPOOL GIS account from quarter to quarter within the year, but must be sold and “settled” by the end of 4<sup>th</sup> quarter trading period.
- Inter-year surplus REC Banking: A retail supplier can bank its surplus RECs (limited to 30% of its obligation for the year in which generated) up to two years for future compliance.

# Meeting the Goals

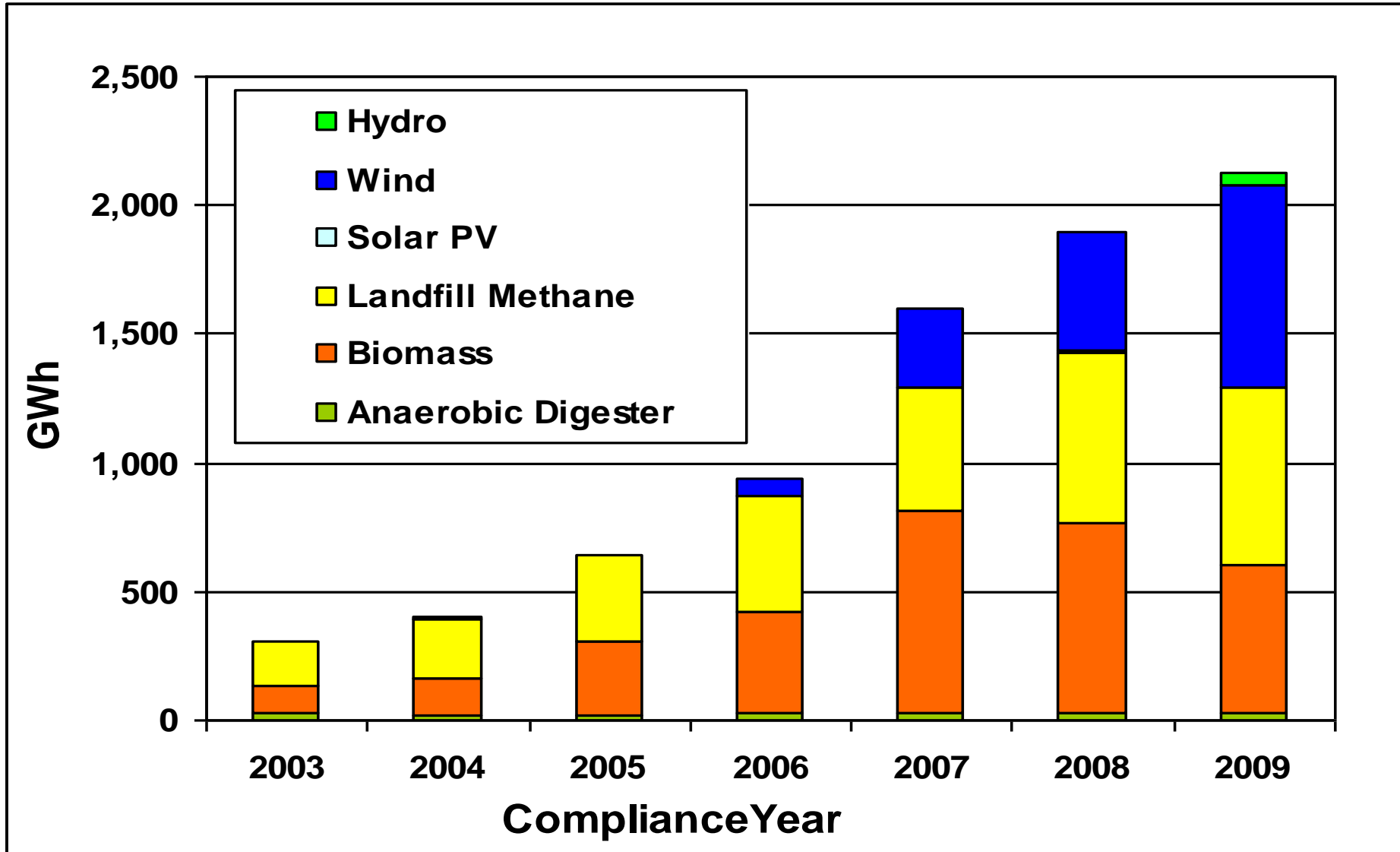
## Compliance 2003-2009



Surplus Banked	61	20	1	9	81	211	386
ACP Compliance	0	265	368	323	11	1	0
Compliance from Banked	255	61	20	2	7	81	190
Compliance Year Generation	304	445	645	939	1600	1896	2130

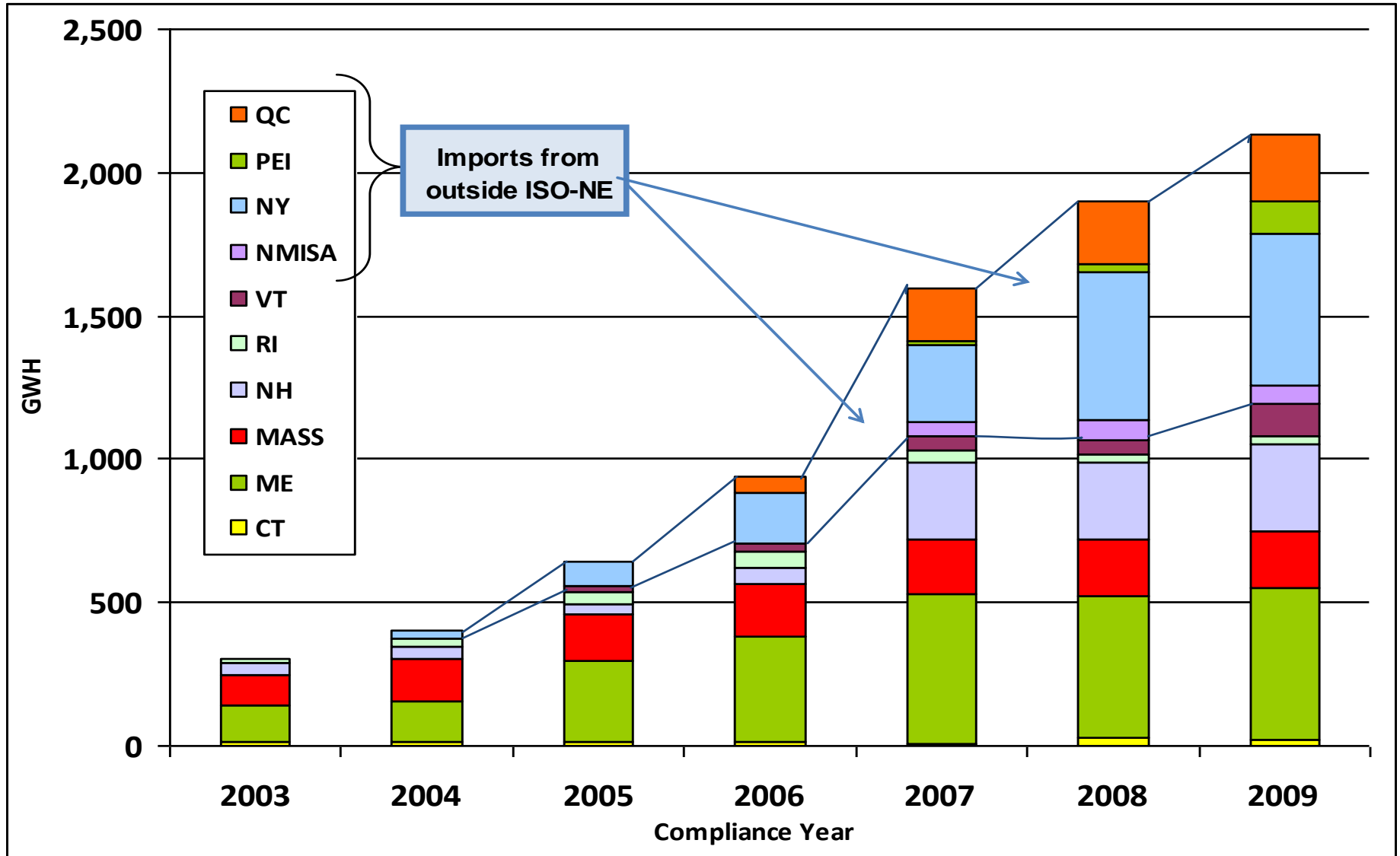
# Meeting the Goals

## Compliance by Generation Type, 2003-2009



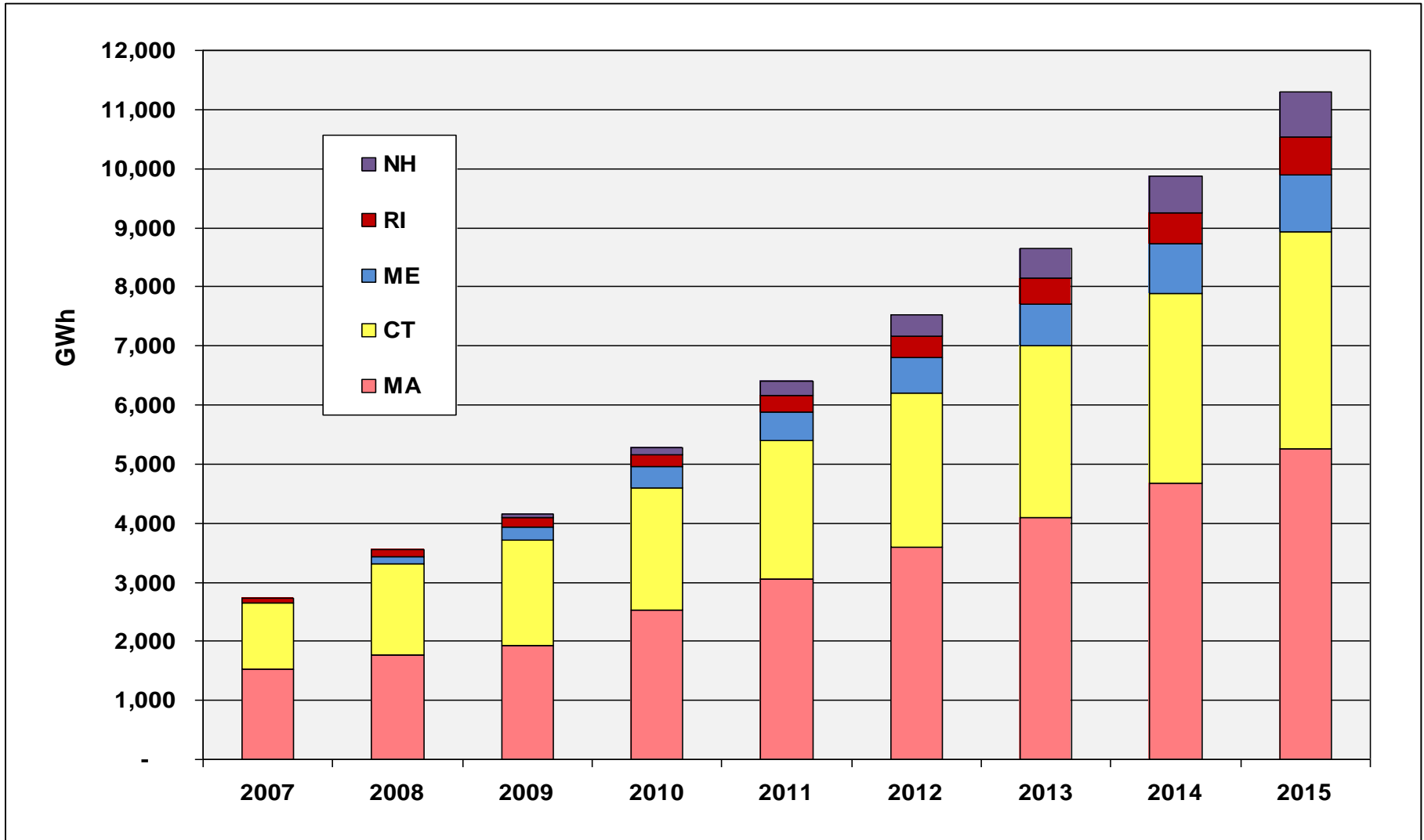
# Meeting the Goals

## Compliance by Generation Location, 2003-2009



# Meeting the Goals

## Growing REC Demand in Multi-State Market



# Meeting the Goals

## Challenges to Success

- Siting
- Financing
- Role of biomass as fuel
- Fiscal climate for investments
- Global commodity supplies and prices
- Federal actions ré taxes, energy, climate
- Political climate ré regulation, government incentives, market mechanisms

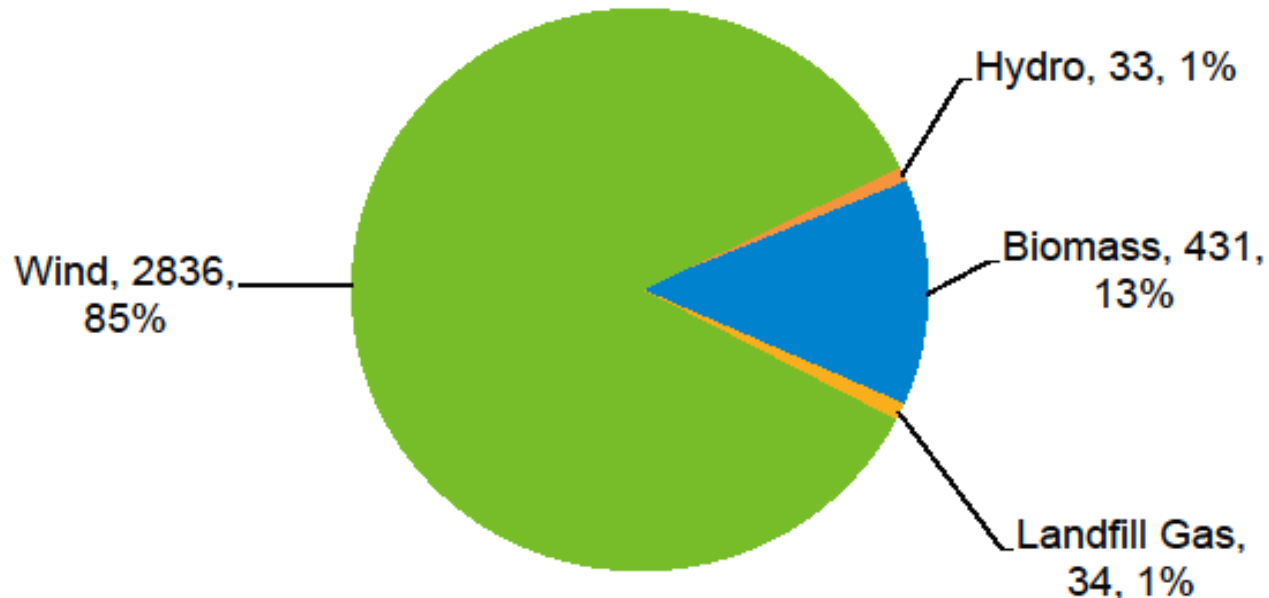
# Meeting the Goals

## Projects in the ISO New England Queue

### Renewable Projects Proposed by Fuel Type

+3,300 MW of Renewables in ISO Queue, Wind dominant fuel

MW Renewables in January 2011 Queue by Fuel Type



Includes: Landfill Gas, Hydro, Wind, Solar and Biomass. Pump Storage projects in the ISO Queue are not included.

# Meeting Massachusetts RPS Goals

## Conclusion/Discussion

### Contact Information

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