



[www.offshorewindma.com](http://www.offshorewindma.com)

**Massachusetts Wind Working Group Meeting**  
**April 29, 2015**

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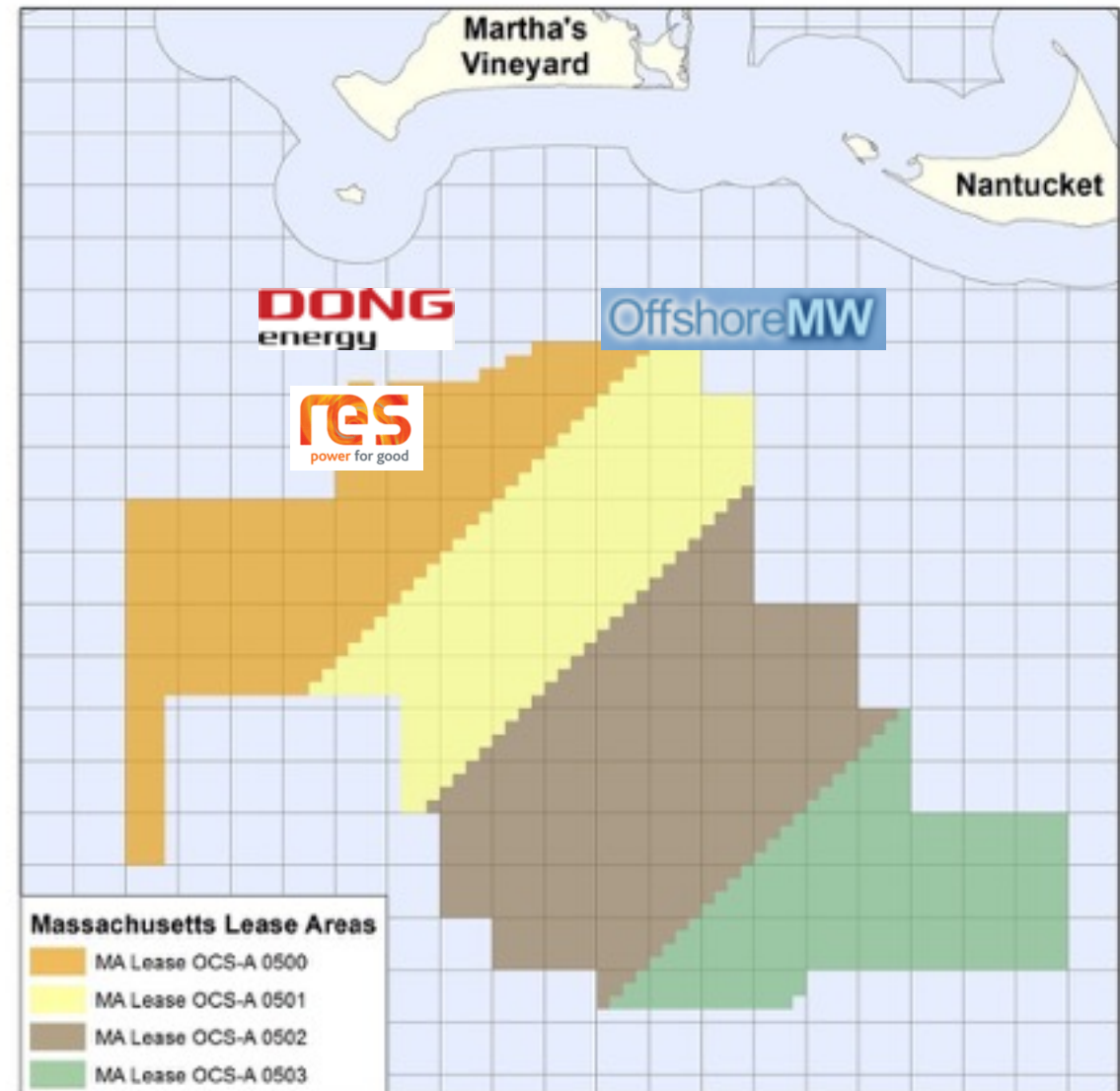
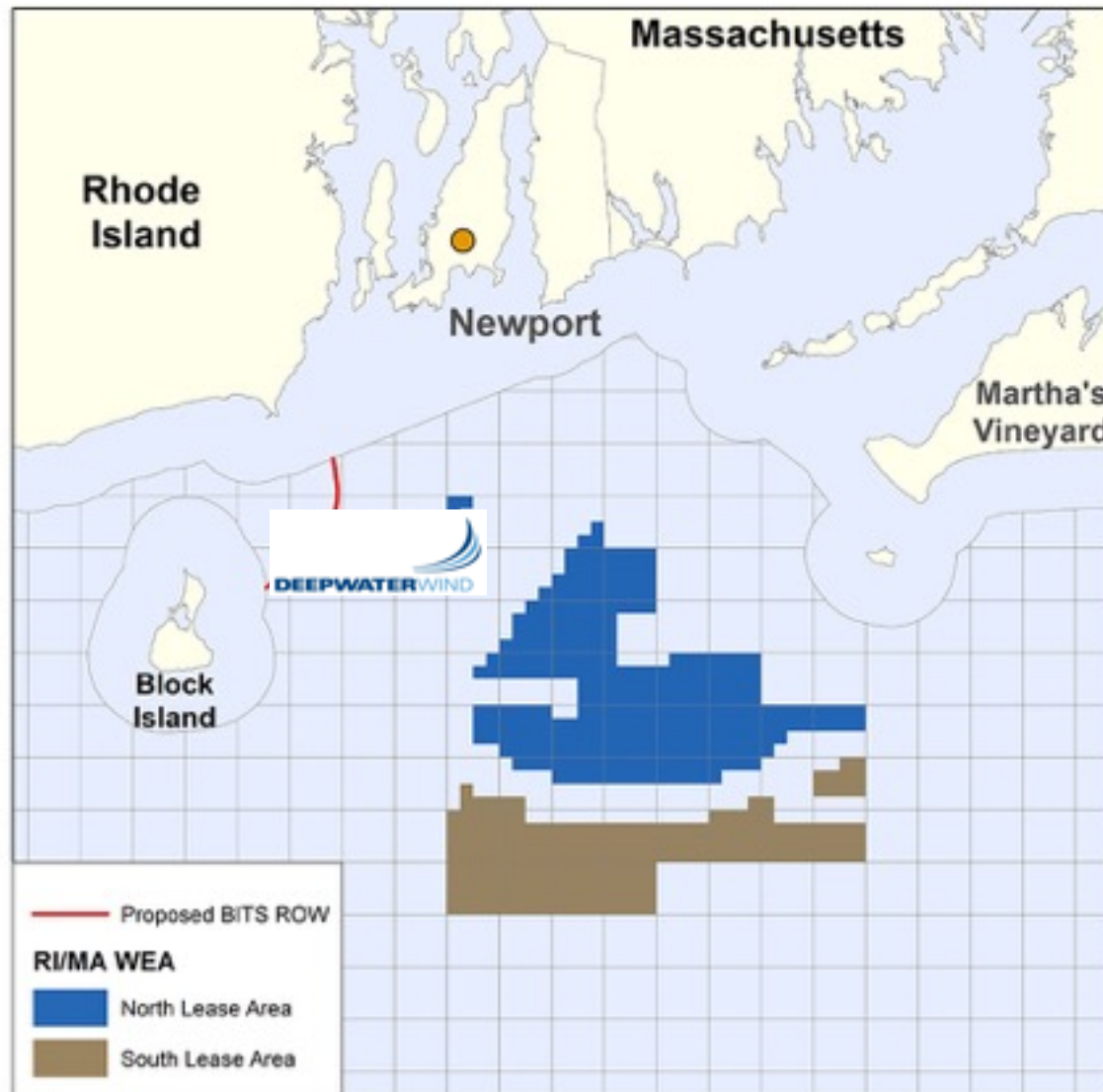
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# Offshore Wind Prerequisites

There are five key prerequisites for offshore wind markets to emerge:

- Federal and state policy
- Competitive ocean leasing process
- Specialized infrastructure
- Competitively-bid longterm contracts
- Private sector partners

# Federal Permitting: Wind Energy Areas



**BOEM**  
BUREAU OF OCEAN ENERGY MANAGEMENT



# Specialized Infrastructure



125 BROAD STREET, 5TH  
FLOOR  
BOSTON, MASSACHUSETTS  
OFFICES NATIONWIDE

MASSACHUSETTS MARINE COMMERCE TERMINAL

TERMINAL CONSTRUCTION JANUARY 2015



MASSACHUSETTS  
CLEAN ENERGY  
CENTER

## Private Sector Partners



**DEEPWATER**WIND

Offshore**MW**





# Deepwater Wind: Project Financed

The screenshot shows the Deepwater Wind website. The header is dark blue with the company logo and navigation links: PROJECTS, NEWS, MEDIA CENTER, ABOUT, and CONTACT. Social media icons for Facebook and Twitter are on the right. The main banner features a large image of a wind turbine at sea. Overlaid on the right side of the banner is a white box with the text "Block Island Wind Farm Fully Financed" in blue and green. A "Read More" button is at the bottom right of this box. Below the banner is a "Join our mailing list" link. The "PROJECTS" section includes two maps: one for the Block Island Wind Farm (showing CT, RI, and NY) and another for Deepwater One (showing NY, MA, CT, RI, and NJ). The "PROJECTS BY AREA" section has buttons for Block Island, New England, Long Island, and New Jersey. A "NEWS" section is partially visible at the bottom. On the right side of the banner, there is vertical text: "Alstom/Johan Roggemus".

DEEPWATERWIND®

PROJECTS NEWS MEDIA CENTER ABOUT CONTACT

f t

Block Island Wind Farm Fully Financed

Read More

Alstom/Johan Roggemus

Join our mailing list

PROJECTS

PROJECTS BY AREA

Block Island New England Long Island

New Jersey

NEWS

Deepwater Wind is the U.S. leader in offshore wind power — increasing American energy independence with large-scale wind farms in deep ocean waters, where they are virtually invisible.

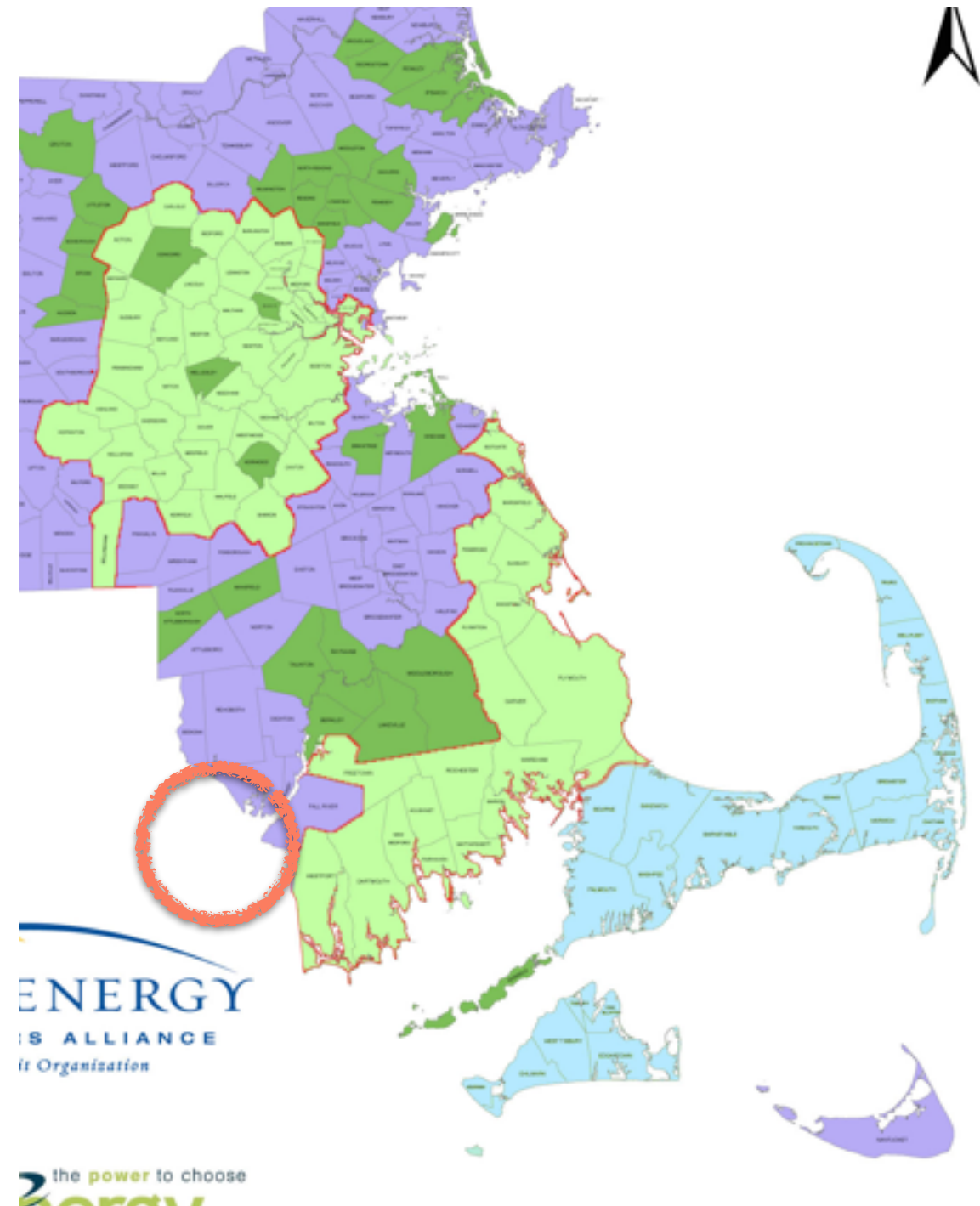
# Competitively-bid Longterm Contracts

## An “Act to Promote Energy Diversity”

Speaker Pro Tem Patricia Haddad

In the context of **8,300MW** of retirements, MA's existing RPS, and the need to diversify our energy mix, Rep. Haddad's goals are to *a. create a legislative starting point for better grid reliability, b. price stability, c. encourage a new industry and d. enable a cleaner future for our children and grandchildren*; the Bill:

- **2,000MW** of competitively procured Off Shore wind power, every 12-24 months, over more than a decade;
- Aid to small Massachusetts based hydro providers;
- **1,400 MW** of shared transmission capacity to deliver hydro from Canada and
- **600MW** onshore wind in Maine;
- Expansion of natural gas pipeline.



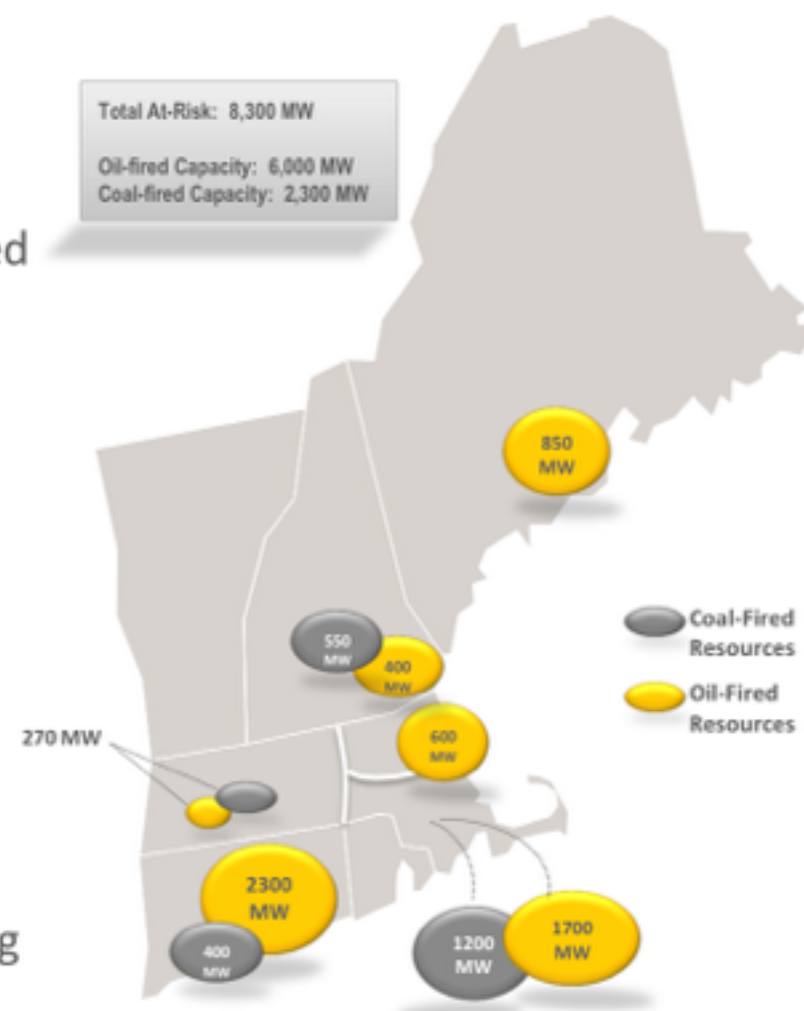
# Existing Capacity Retirements



## Primary Concerns & Other Issues Addressed by the Study

- Objective
  - Evaluate reliability impact associated with the assumed retirement of 28 coal- and oil-fired resources with 8,300 MW of capacity by 2020
- Primary Concerns
  - Resource Adequacy
  - Load-Resource Energy Balance
  - Area Transmission Security
- Another Issue
  - Consequence of constraints impacting deliverability of existing capacity resources to load

At-Risk Capacity Resources in New England





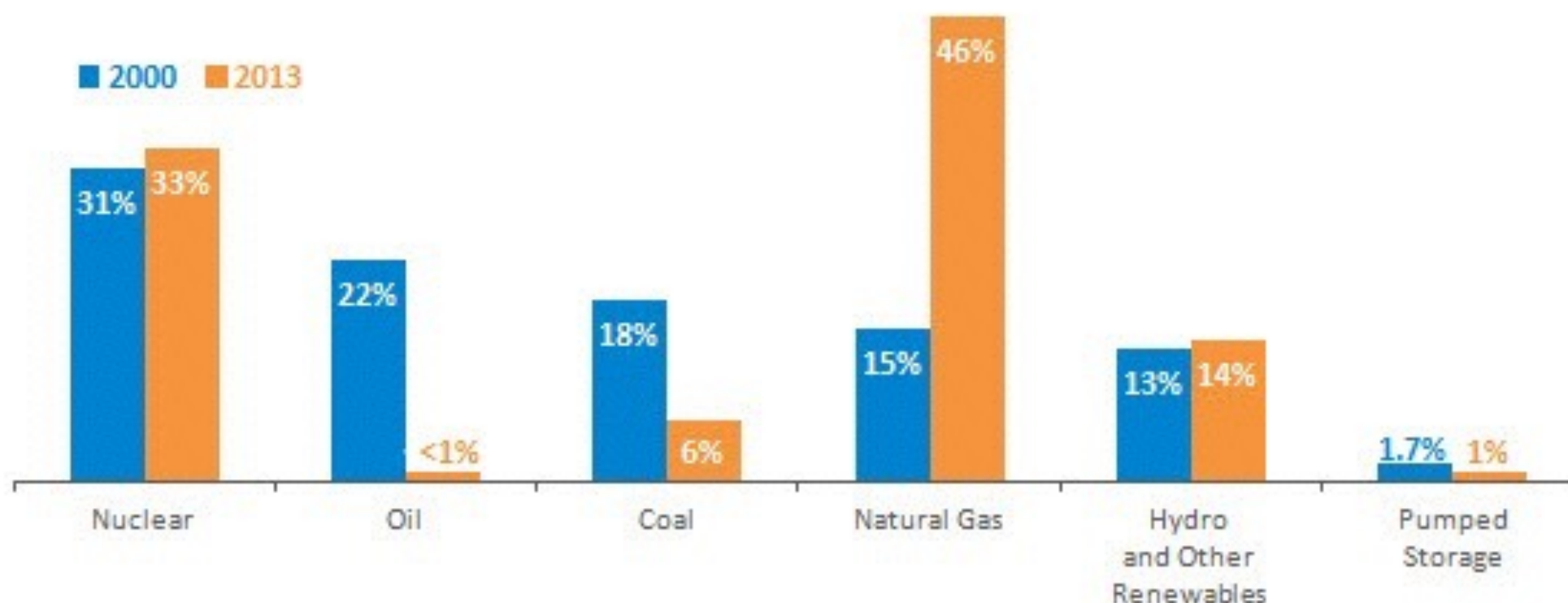
# Generational shift from oil / coal to Natural Gas



## Dramatic Changes in the Energy Mix

*The fuels used to produce New England's electric energy have shifted as a result of economic and environmental factors*

Percent of Total **Electric Energy** Production by Fuel Type  
(2000 vs. 2013)



# Massachusetts over-reliance on Natural Gas

**eia** U.S. Energy Information Administration Sources & Uses Topics Geography Search eia.gov

U.S. STATES  
**MASSACHUSETTS**

### QUICK FACTS

- Massachusetts hosts three liquefied natural gas import terminals. Only one has received imports since 2010, and it typically supplies about 20% of New England's demand for natural gas; all other natural gas comes by pipeline.
- One of the nation's two Northeast Home Heating Oil Reserve storage sites, which are intended to cushion the effects of disruptions in the supply of home heating oil, is located in Revere, Massachusetts.
- Massachusetts generated 63% of its electricity from natural gas and 12% from coal in 2013.
- In 2013, 9.3% of Massachusetts' net electricity generation came from renewable energy resources, primarily from biomass and hydroelectricity.
- Compared to the U.S. average, a greater proportion of Massachusetts residents (31 percent) use fuel oil as their main space heating fuel and a much smaller proportion of residents (10 percent) use electricity, according to EIA's Residential Energy Consumption Survey.

Last Updated: March 27, 2014

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# “Way” Offshore Wind

- **NIMBY:** Outside of view-shed
- **Ratepayer Impact:** Competition and higher capacity factor of turbines will positively affect pricing. Development of supply chain over time will drive down costs
- **Timing:** Development timeline just 4 - 6 years from date of successful contract award
- **Environmental Benefits:** Offshore wind will offset carbon emissions in to the atmosphere, mitigating the effects of global climate change.
- **Jobs:** Measurable economic benefit to Commonwealth.



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## Summary

- We are eager to tell the Massachusetts offshore wind story
- We are working with legislative leaders and the Baker administration on ensuring that offshore wind is a piece of the long term energy solution for the Commonwealth.
- Diversifying the energy portfolio of the Commonwealth is critical for grid reliability, price stability, and energy security.
- Join together to advocate for the Massachusetts offshore wind opportunity.
- Continue to work toward multi-state collaboration for longer term, sustainable renewables procurement.



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