

# New Hampshire EERS Stakeholder Meeting

August 27<sup>th</sup>, 2015

**NHSAVES**  
*we all win*



**SAVE THE PLANET, SAVE @ HOME.**  
SAVE ENERGY AT HOME. HELP PROTECT YOUR FAMILY'S FUTURE.



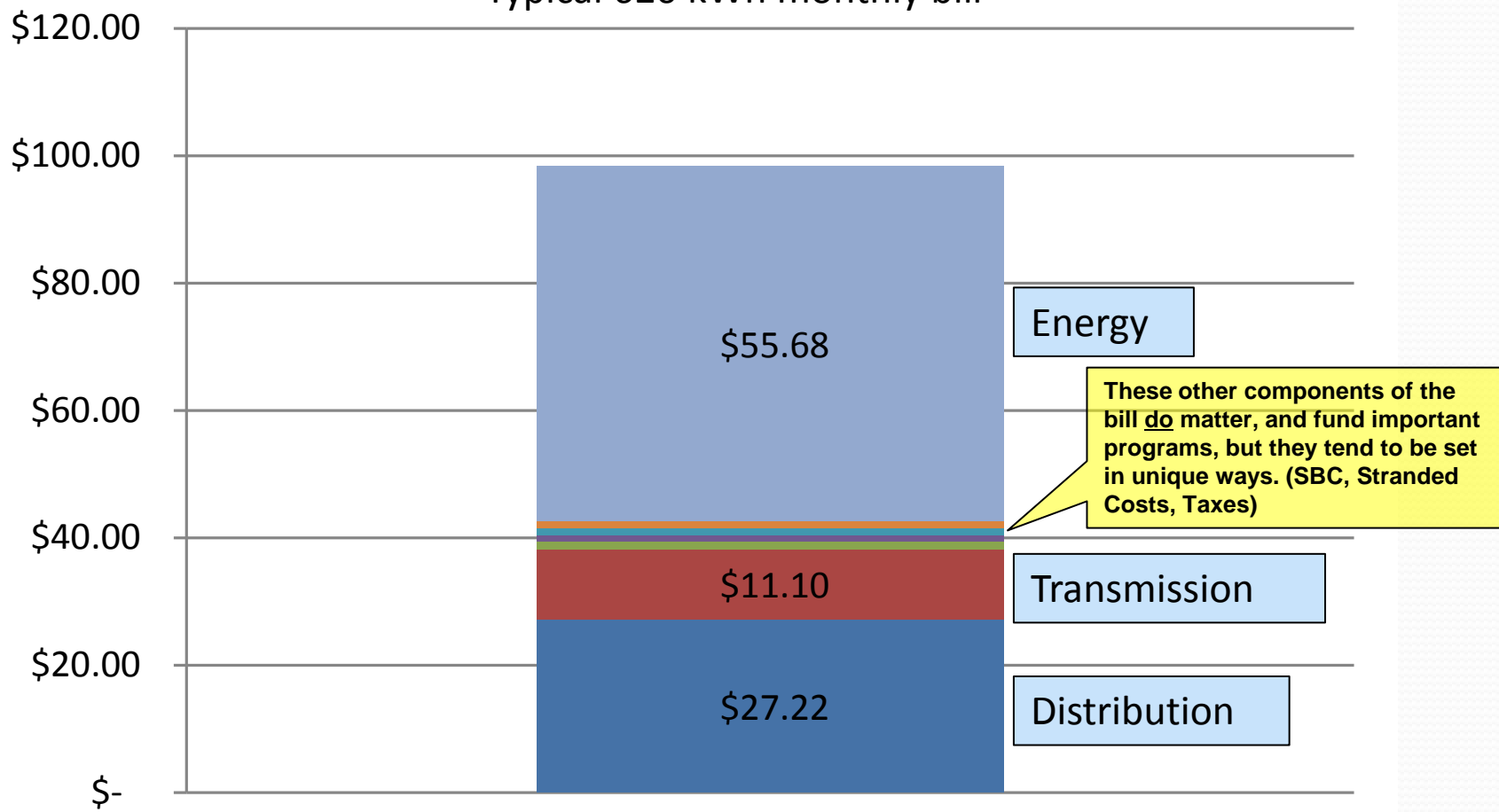
**SAVE ENERGY. SAVE @ MUNICIPALITIES.**  
SAVE ENERGY AND USE THE EXTRA RESOURCES TO IMPROVE YOUR TOWN'S ROADS.

# Agenda

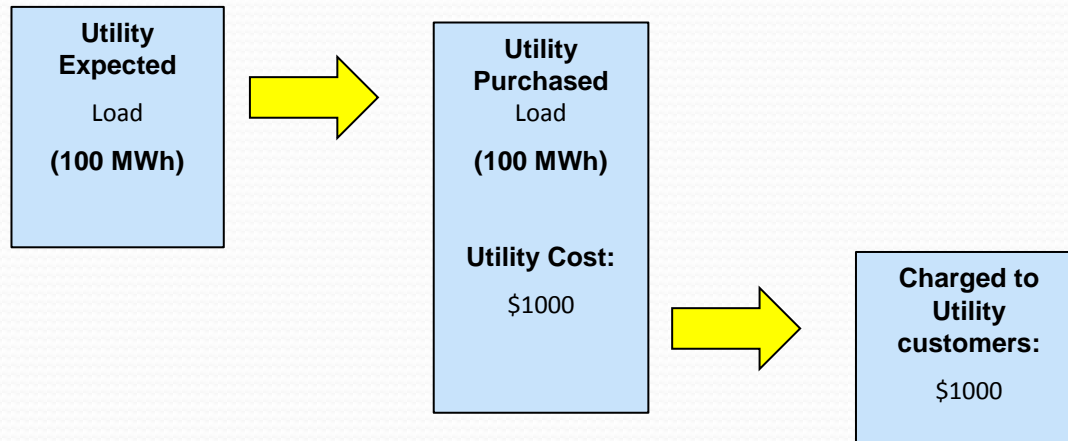
- Rates
- Demand

A customer's bill breaks down into three primary pieces – energy, transmission and distribution.

Typical 620 kWh monthly bill



The energy portion of the bill is a pass-through. The Utility buys exactly as much energy as needed. Customers are charged the Utility's cost, and no more.\*



\*Does not currently apply to Eversource because of owned generation

The transmission portion of the bill is also based on costs, but includes a return on investment. The New England utilities pool the costs and recover from all New England customers through ISO-NE.



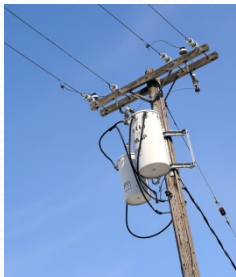
Federal Energy  
Regulatory Commission



Calculation performed annually

<b>Cost to build lines &amp; substations</b>	<b>\$ 1B</b>	<b>"Rate Base"</b>
<b>FERC Regulated Return</b>	<b>x 10%</b>	<b>"ROE"</b>
	<hr/>	
	<b>\$ 100m</b>	
<b>Operations &amp; Expenses</b>	<b>\$ 10m</b>	
	<hr/>	
<b>Revenue Requirement</b>	<b>\$ 110m</b>	
<b>New Hampshire's share</b>	<b>x 9%</b>	
	<hr/>	
<b>Charged to NH Customers</b>	<b>\$ 9.9m</b>	
<b>Forecasted NH Load</b>	<b>/ 10,000,000 MWh</b>	
<b>Rate</b>	<hr/>	
	<b>0.10 cents/kWh</b>	

The distribution portion of the bill is also based on costs, and includes a return on investment, and is utility-specific.



Calculation performed in each rate case

<b>Cost to build lines &amp; substations</b>	<b>\$ 1B</b>	<b>“Rate Base”</b>
<b>PUC Regulated Return</b>	<b>x 10%</b>	<b>“ROE”</b>
	<hr/>	
	<b>\$ 100m</b>	
<b>Operations &amp; Expenses</b>	<b>+ \$ 10m</b>	
	<hr/>	
<b>Revenue Requirement</b>	<b>\$ 110m</b>	
<b>Utility’s share</b>	<b>x 100%</b>	
	<hr/>	
<b>Charged to Utility Customers</b>	<b>\$ 110m</b>	
<b>Forecasted Utility Load</b>	<b>/ 10,000,000 MWh</b>	
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<b>Rate</b>	<b>1.1 cents/kWh</b>	

NOTE: Numbers here are illustrative, intended to demonstrate calculation.

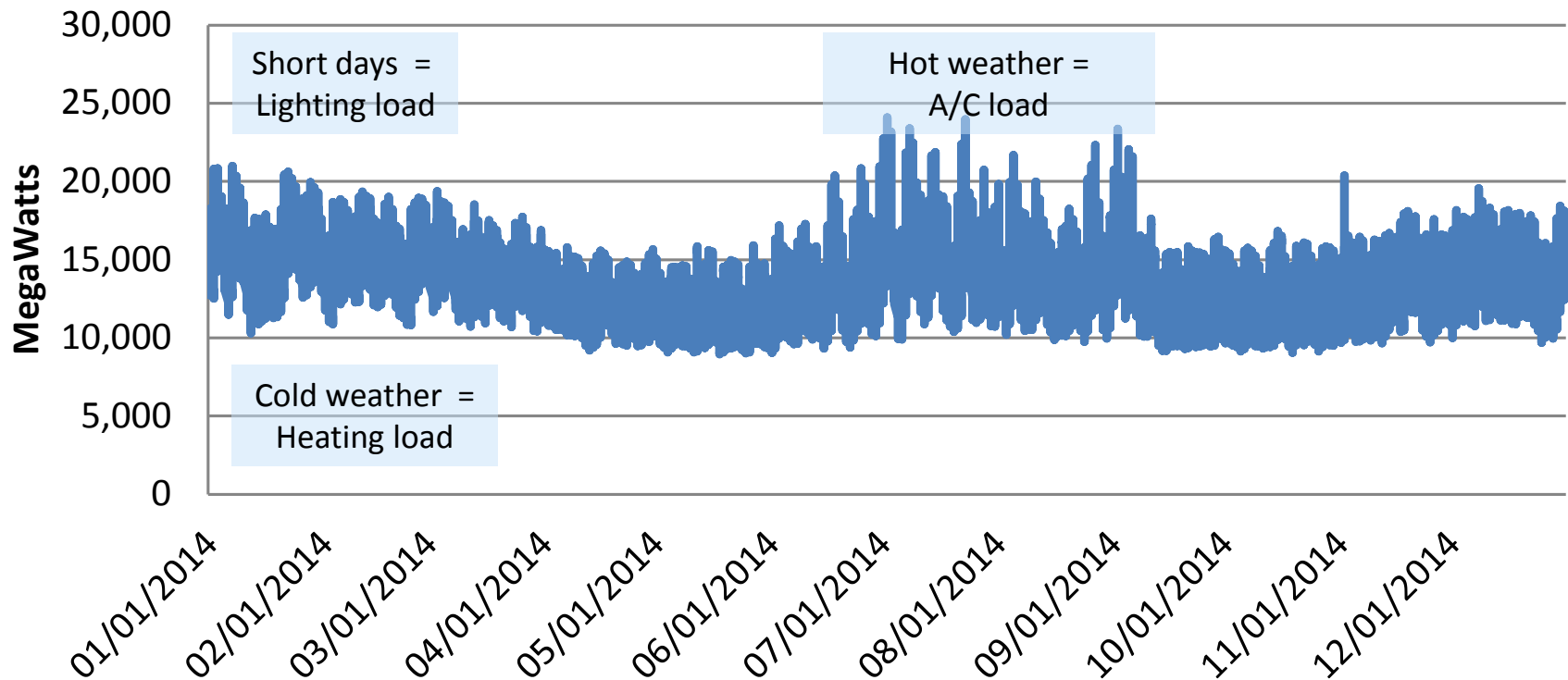
# Agenda

- Rates

- Demand

Demand is energy use at an instant in time. Over the course of a year, changes in demand are driven primarily by daylight and weather.

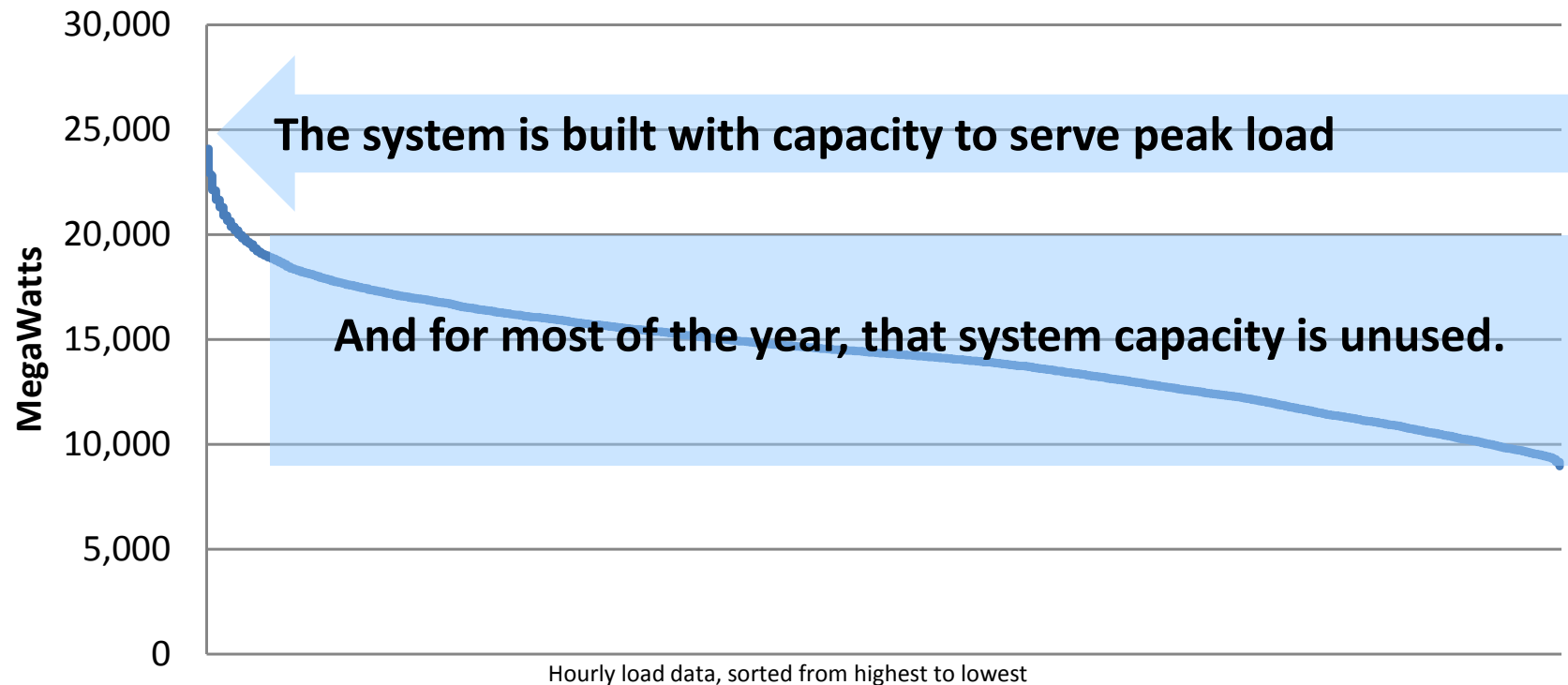
## ISO-NE 2014 Hourly Load





Demand is relevant because it drives our capital costs as a utility.

## ISO-NE 2014 Hourly Load



*Key Point: The cost of our system is driven by the load of only a few hours each year.*

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we all win

New Hampshire's energy and demand trends are similar to New England, although slightly flatter for energy, and more down for demand.

### Overall Observations:

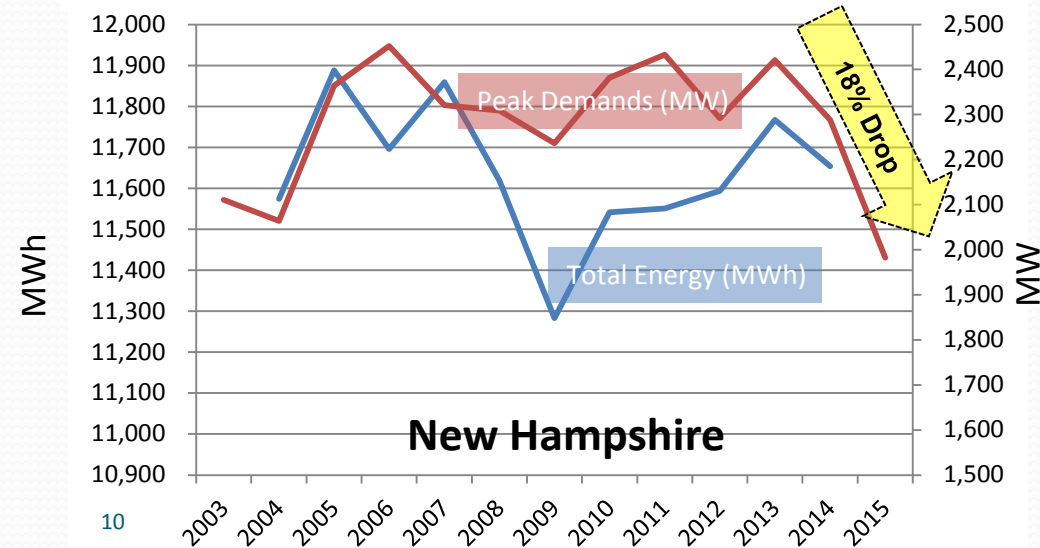
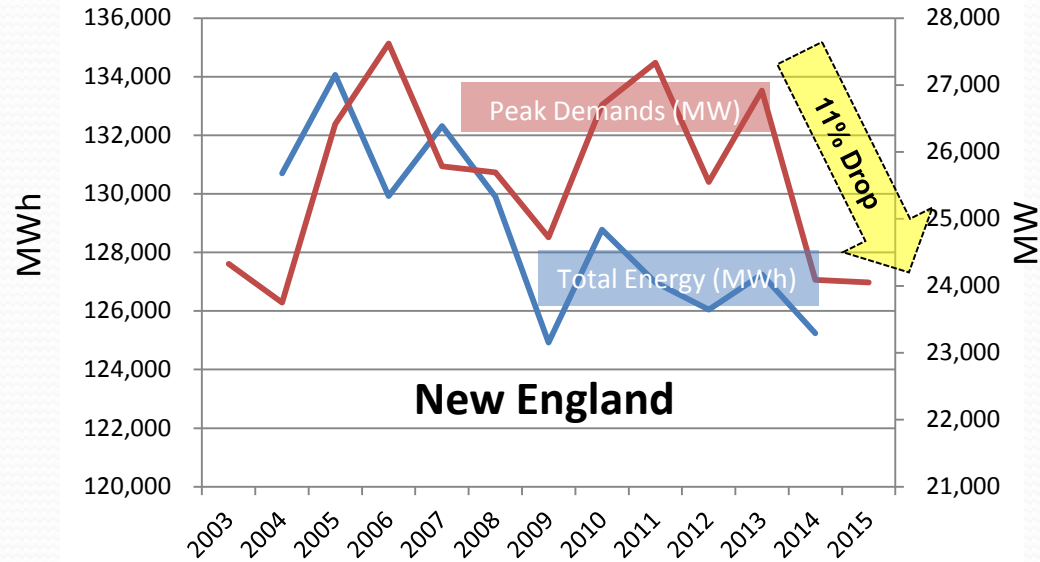
- The data is 'noisy.'
- The last decade has seen historic volatility in the two critical drivers of energy use: economic conditions and weather.

### New England Observations:

- Demand is relatively flat
- Energy use is declining

### New Hampshire Observations:

- Largely similar to New England
- Demand may be trending down
- Energy use is flatter than New England

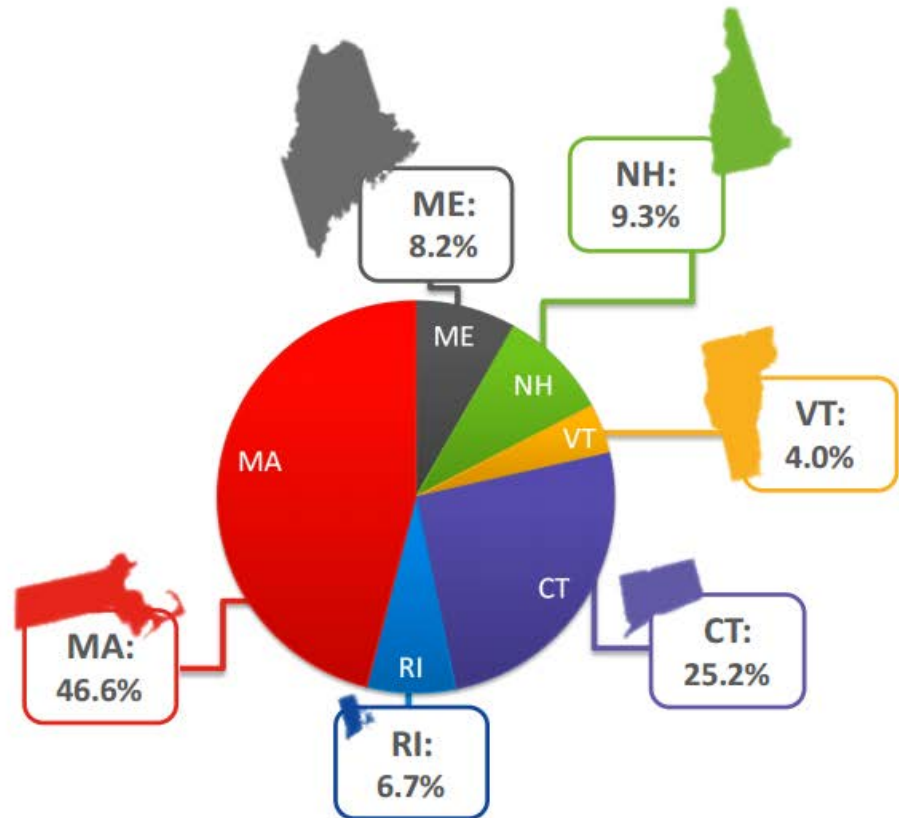


## Appendix: Transmission

- How are costs allocated in New England?
- How quickly is transmission growing in New England?

## How are Transmission Costs Allocated?

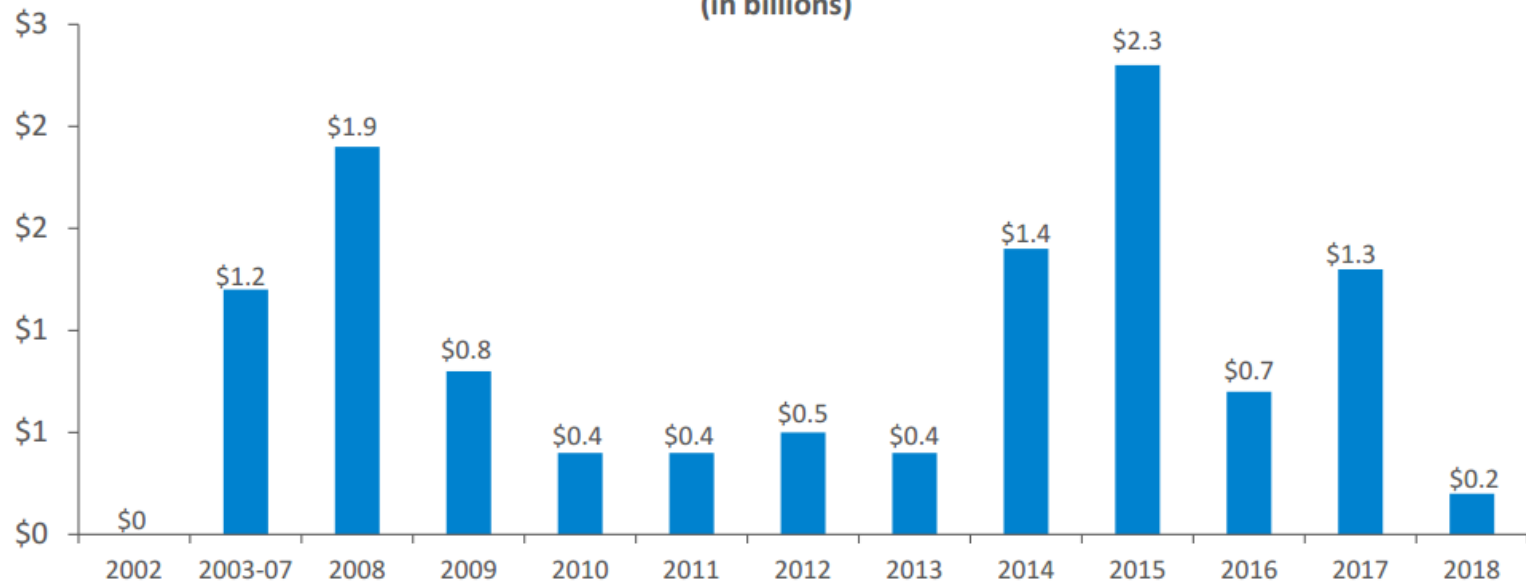
- The New England electric grid is a tightly interconnected system; each state shares in the benefits of reliability upgrades
- The amount of electricity demand in an area determines its share of the cost of new or upgraded transmission facilities needed for reliability



Source: 2013 Network Load by State

# New Transmission Investment in New England

**Annual Investment in Transmission to Maintain Reliability**  
(in billions)



<b>Cumulative Investment through 2014</b>	<b>\$7.0 billion</b>
<b>Estimated Future Investment through 2018</b>	<b>\$4.5 billion</b>

Source: ISO New England RSP Transmission Project Listing, October 2014  
Estimated future investment includes projects under construction, planned and proposed