

**Synapse**  
Energy Economics, Inc.

## EE in Wholesale Markets

Policies for Energy Provider Delivery of Energy Efficiency  
North American Regional Policy Dialogue

April 18, 2012

Doug Hurley

## ***Energy System modeling, analysis, expert testimony, and stakeholder representation for...***

- Consumer Advocates and Public Interest Groups in more than 25 states
  - More than 20 PUCs and Attorneys General
  - Over 40 Environmental Groups and Foundations
- 
- NEPOOL Representation for Consumer Advocates, Energy Efficiency, Renewable Generation, and Environmental Advocates

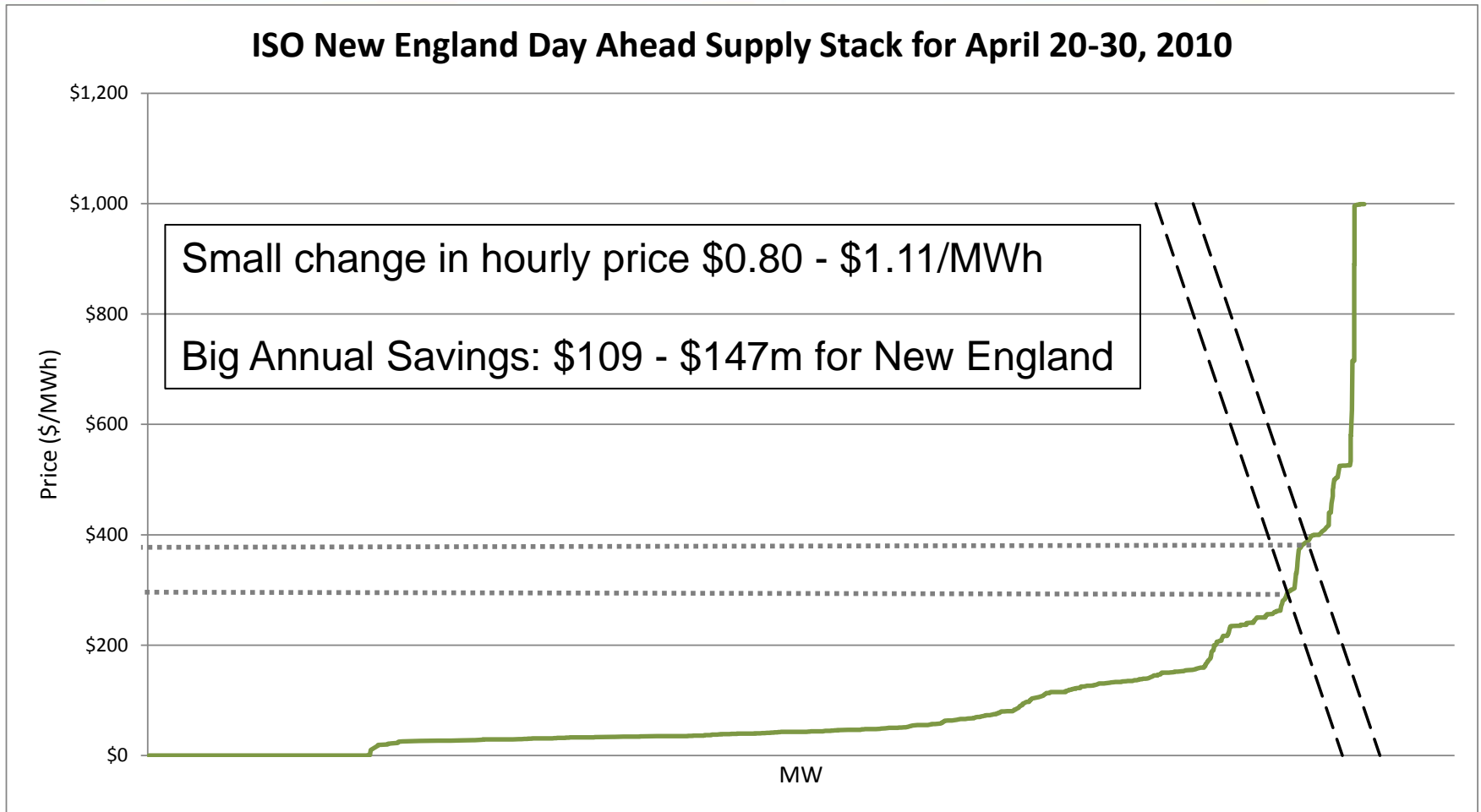
# Capacity Market Revenues and EE Budgets

Year	Annual EE Budget (\$m)	Approx. FCM Revenue (\$m)	% extra from FCM
2009	\$ 353.4	\$ 26.4	7%
2010	\$ 535.2	\$ 28.5	5%
2011	\$ 886.3	\$ 24.6	3%
2012	\$ 1,029.4	\$ 24.12	2%

**Notes:**

1. Annual Budget from ACEEE 2011 Scorecard, Table 4.
2. Estimated FCM revenues from public data. Does not account for over/under delivery, pro-ration, or multi-year prices.

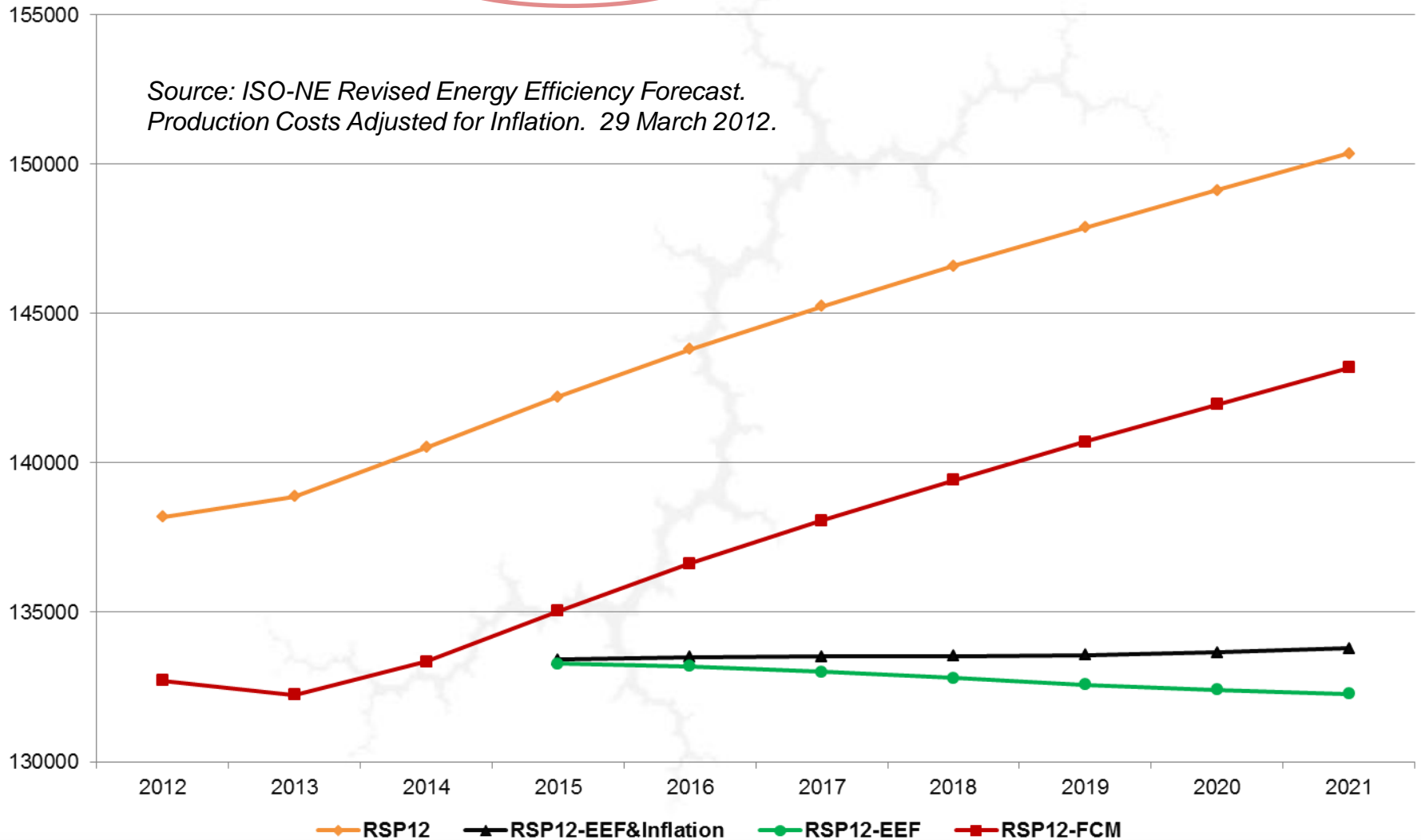
# EE Impact on Wholesale Market Price



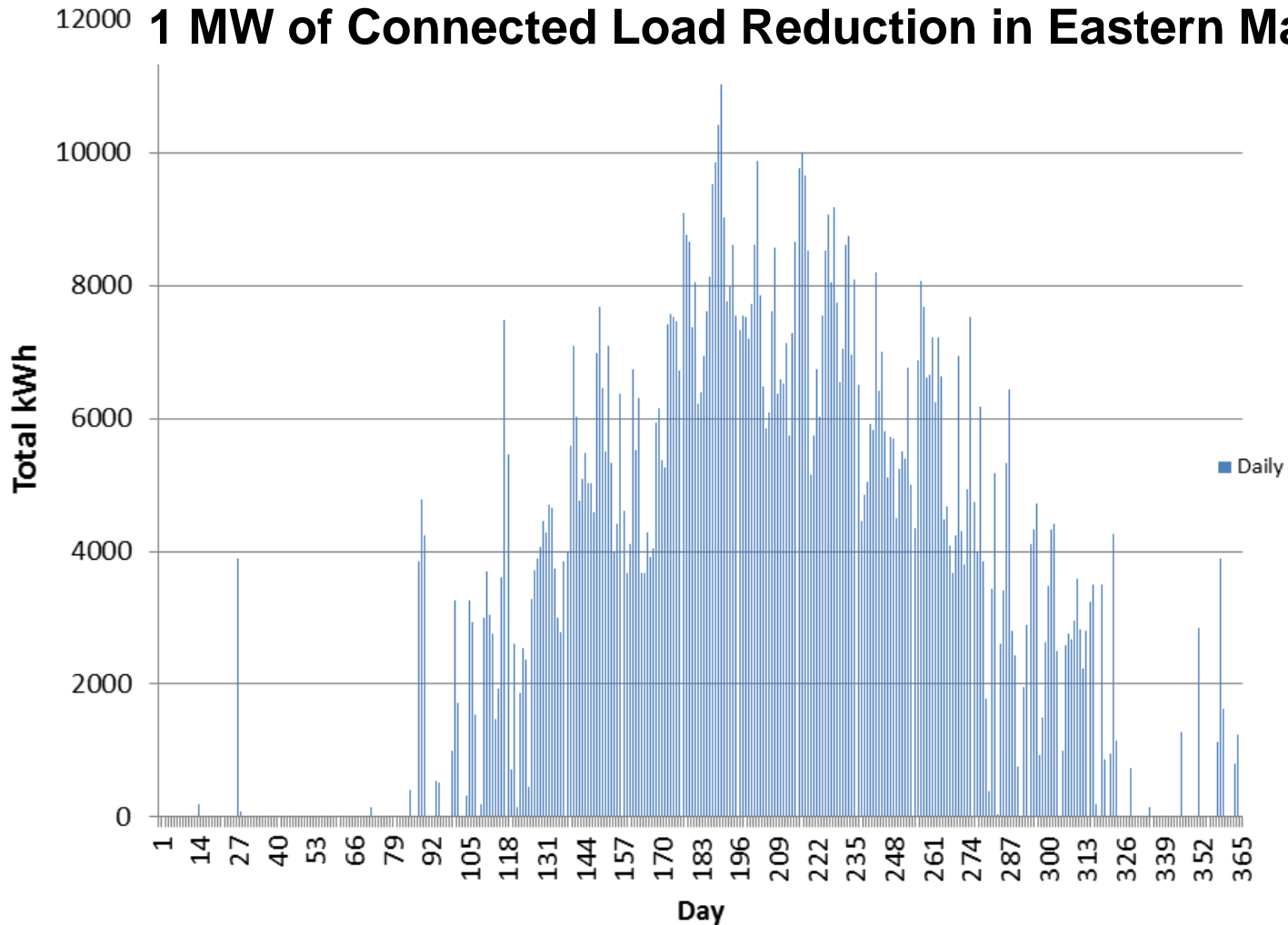
Single clearing price market. ALL cleared resources get paid the same price.

# EE in Transmission Planning

## ISO-NE Annual Energy RSP12 Forecast (GWh)

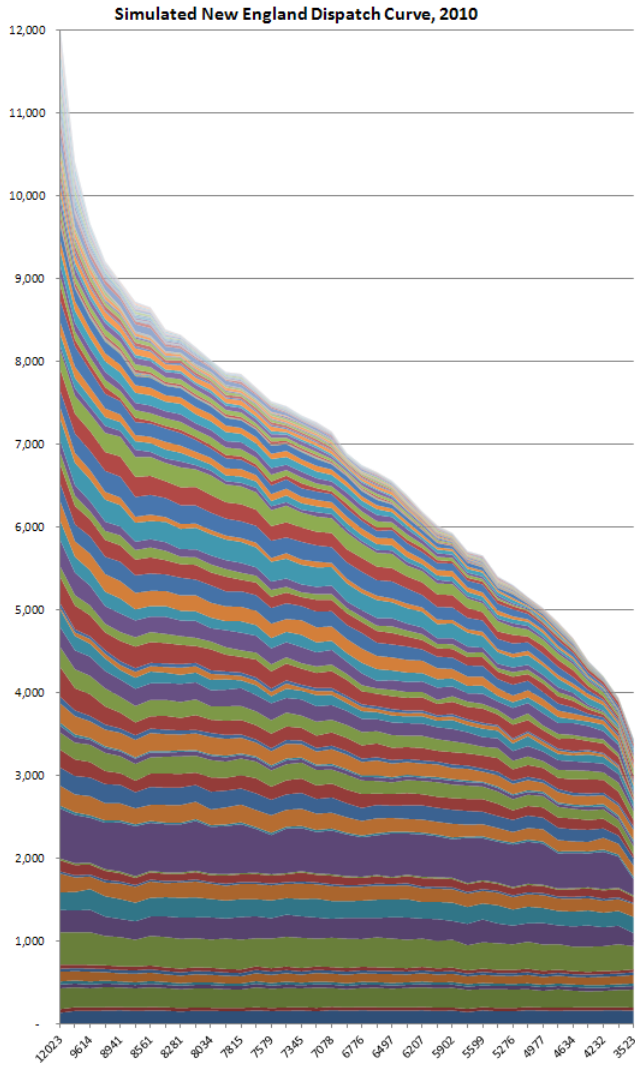


## NEEP EM&V Form / KEMA C&I HVAC Savings Tool 1 MW of Connected Load Reduction in Eastern Mass

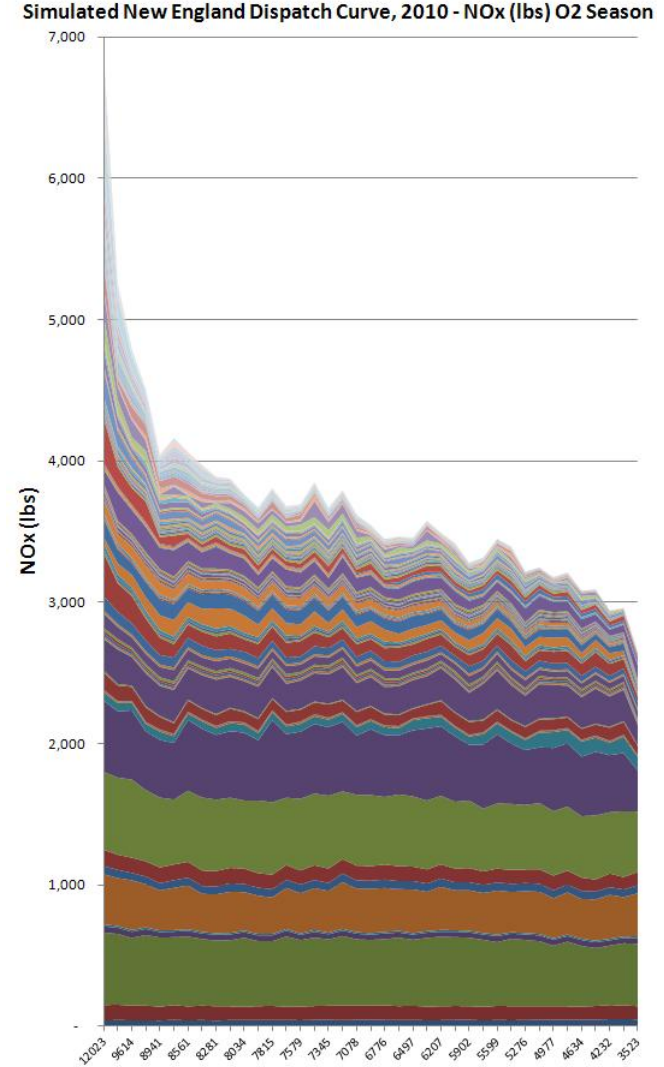


# Statistical Dispatch Model

## Simulated Dispatch Curve (Generation / Emissions)



- Potter 3
- Montville 6
- Stony Brook 4
- Stony Brook 2
- Newington 1
- Devon 13
- Stony Brook 1
- South Boston Combustion Turbines A
- Devon 14
- Bellingham 1
- Montville 5
- Milford Power, LP 1
- P L Bartow 4A
- P L Bartow 4A
- Pittsfield Generating 3
- William F Wyman 3
- Stony Brook 3
- William F Wyman 1
- Dighton 1
- West Springfield 3
- New Haven Harbor NH81
- Wallingford Energy CT03
- Middletown 2
- Ocean State Power 1
- Norwalk Harbor Station 2
- Ocean State Power II 4
- Manchester Street 9
- Wallingford Energy CT05
- Wallingford Energy CT04
- Wallingford Energy CT02
- Lake Road Generating Company LRG3
- Lake Road Generating Company LRG2
- Maine Independence Station 1
- Kendall Square 4
- ANP Bellingham Energy Company, LLC 2
- Westbrook Energy Center 2
- Milford Power Company LLC CT02
- Rhode Island State Energy Partners RISEP1
- ANP Blackstone Energy Company, LLC 2
- Milford Power Company LLC CT01
- NAEA Newington Energy LLC 1
- ANP Blackstone Energy Company, LLC 1
- J C McNeil 1
- Rumford Power 1
- Mystic 93
- Salem Harbor 2
- Androscoggin Energy CT03
- Granite Ridge Energy 1
- Granite Ridge Energy 2
- Androscoggin Energy CT02
- Pratt & Whitney, East Hartford 1
- Androscoggin Energy CT01
- Brayton Point 1
- Bridgeport Harbor Station BHB3
- Algonquin Power Windsor Locks, LLC GT1
- MIT Central Utility Plant 1
- Brayton Point 2
- Bucksport Clean Energy GEN4
- Cleary Road 8
- Capitol District Energy Center GT
- Pawtucket Power Associates, LP 1
- Cleary Road 9
- Bridgeport Harbor Station BHB2
- Devon 11
- Pittsfield Generating 1
- Pittsfield Generating 2
- Brayton Point 4
- Devon 12
- South Boston Combustion Turbines B
- Lowell Cogeneration Company 1
- Waters River 2
- P L Bartow 4A
- Alfred L Pierce Generating Station AP-1
- William F Wyman 2
- Middletown 4
- William F Wyman 4
- Salem Harbor 4
- Middletown 3
- General Electric Aircraft 5
- Ocean State Power II 3
- Norwalk Harbor Station 1
- Ocean State Power 2
- Manchester Street 10
- Arvah B Hopkins 2A
- Dartmouth Power 1
- Wallingford Energy CT01
- West Springfield CTG2
- West Springfield CTG1
- Lake Road Generating Company LRG1
- Maine Independence Station 2
- Mystic 7
- Bridgeport Energy BE1
- Canal Station 2
- Westbrook Energy Center 1
- ANP Bellingham Energy Company, LLC 1
- Bridgeport Energy BE2
- Berkshire Power 1
- NAEA Newington Energy LLC 2
- Fore River Station 11
- Fore River Station 12
- Salem Harbor 3
- Mystic 81
- Canal Station 1
- Mystic 94
- Salem Harbor 1
- Millennium Power Partners 1
- Mystic 82
- Brayton Point 3
- Mount Tom 1
- Tiverton Power 1
- Merrimack 2
- Schiller 6
- Merrimack 1
- Schiller 5
- Schiller 4



# Common Arguments, and retorts

Argument you'll hear	A good retort
Cannot be dispatched by the operating room, so not valuable as capacity.	Neither are numerous other types, including nuclear, some coal plants, other self-scheduled units, and yet we pay them for capacity.
Would be built anyway, so they don't need the money.	So would many resources that make plenty of money on energy revenues, which includes nearly all baseload and most intermediate units.
EE is state funded, so they don't need wholesale market revenues.	So are any resources that get built under state RFPs. Absence of due wholesale market revenues make them appear falsely more expensive.
Can't tell what you're getting.	Appropriate M&V will handle this issue (and is almost always conservative).
"You mean we're gonna pay for curly light bulbs?"	Yes. And you'll pay less than you would have for a new power plant.



[www.synapse-energy.com](http://www.synapse-energy.com)

Doug Hurley  
Paul Peterson  
Sarah Jackson