



# Forward Capacity Market Redesign in New England

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*New England Electricity Restructuring Roundtable:  
Improving Capacity Markets to Enhance Reliability*

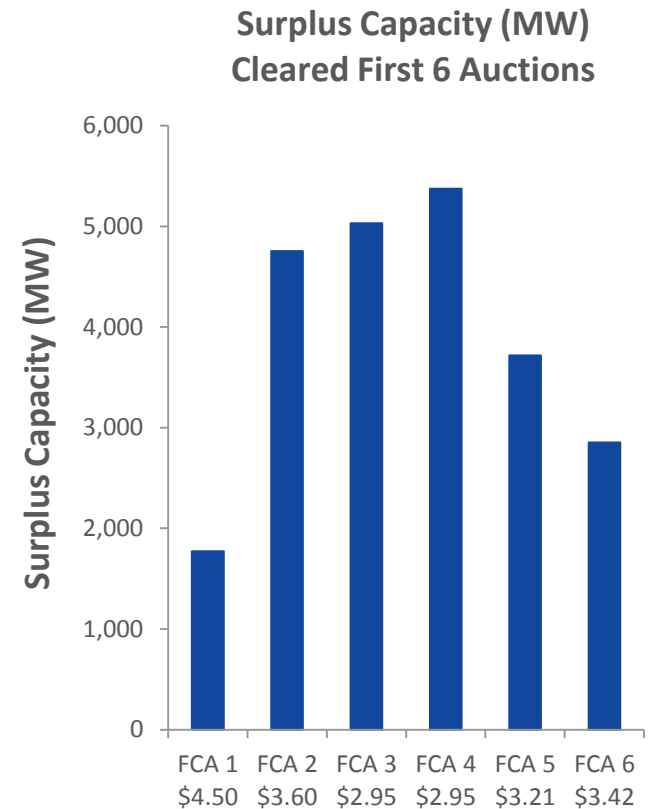
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# New England's Capacity-Market Experience

- Capacity market is well established in New England
  - ISO New England has conducted six Forward Capacity Auctions (FCAs), and numerous reconfiguration auctions, to procure resources needed for the June 2010 – May 2016 timeframe
- Capacity prices have hit the floor for all auctions due to surplus capacity
- Incremental changes are needed to fulfill original objectives and meet new challenges for the region



All Auctions Cleared at  
Floor Price (\$/kW-month)

# Benefits of the Forward Capacity Market

- Ensures resource adequacy for the six-state region
  - Without Forward Capacity Market (FCM), there is no mechanism to ensure the region meets reliability targets
- Eliminates use of costly reliability agreements, which had proven frustrating to the ISO, states, most market participants and the Federal Energy Regulatory Commission (FERC)
- Allows participation by wide range of resource types



# Limitations of the Existing Market Design

- Intended to send locational price signals, but prices have essentially cleared the same across the region due in part to limited modeling of capacity zones
- Lacks adequate incentives for resources to perform during critical periods of system operation
- Timing of capacity market is not well aligned with longer-term horizon of system planning
- Does not adequately incorporate reliability needs identified in the transmission planning process, which limits opportunities for market resources to solve transmission reliability problems



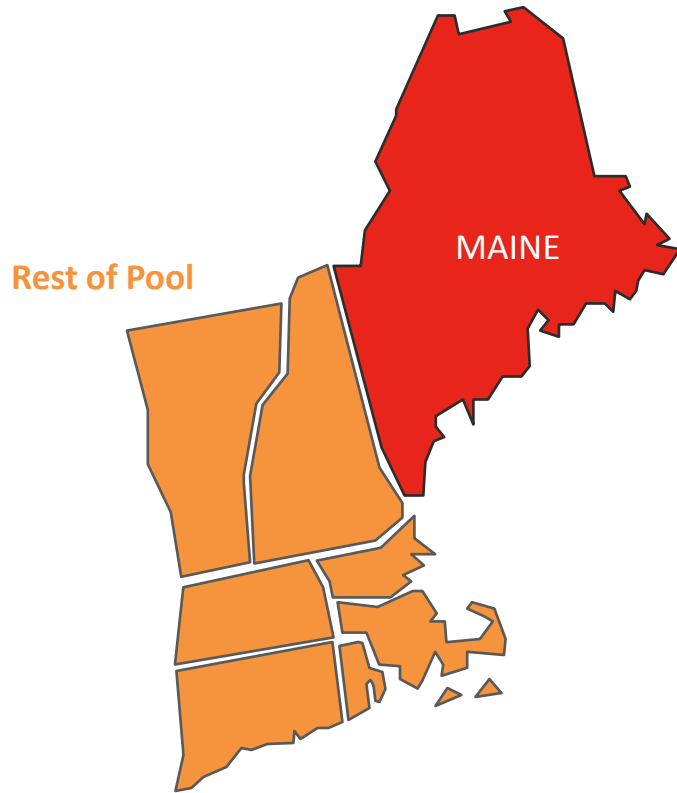
# What's the Status of Proposed Changes?

- ISO has a December 3, 2012 deadline to make a compliance filing to address key changes ordered by FERC:
  - Establish a Minimum-Offer Price Rule
  - Eliminate the auction floor price
  - Model additional zones
- Extensive stakeholder discussions have been underway, but without reaching consensus
- ISO plans to file market-rule changes in December to comply with existing FERC orders, while stakeholder discussions continue on longer-term enhancements identified through ISO's Strategic Planning initiative

# What's the Plan for Upcoming Auctions?

- FCA 7
  - Earlier this year, the states and over 90% of NEPOOL supported a motion to continue the rules in place for the sixth auction:
    - Modified capacity clearing price floor of \$3.15/kW-month
    - Four zones modeled:
      1. Connecticut
      2. NEMA/Boston
      3. Maine, and
      4. Rest of Pool
  - ISO will run FCA-7 in February 2013 for commitment year 2016–2017
- FCA 8
  - Implement changes to conform to FERC order
    - Minimum Offer Price Rule
    - Removal of price floor
- FCA 9 and beyond
  - Longer-term enhancements to capacity market

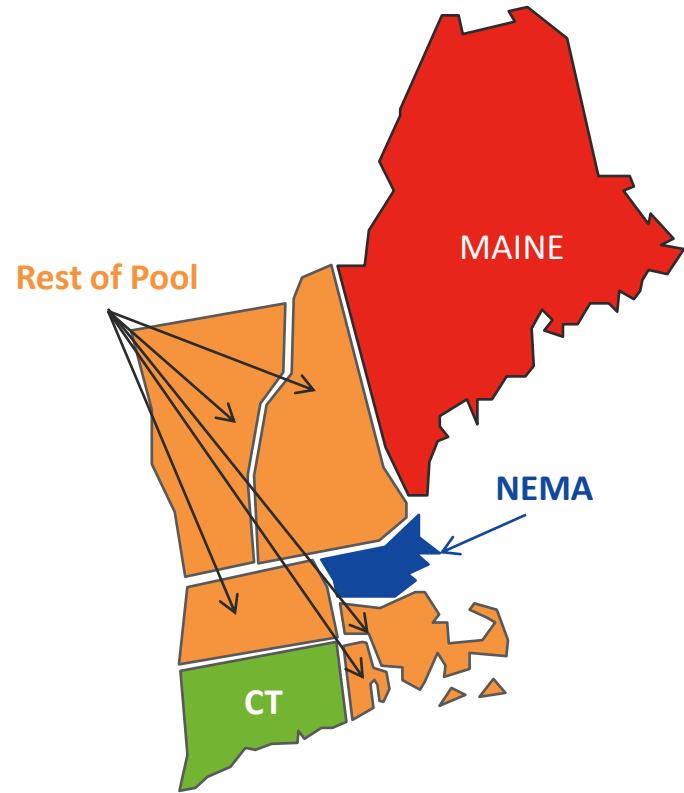
# Modeling Additional Capacity Zones



## Two Zones

2010–2016

FCA 1–6



## Four Zones

2016–2017

FCA 7

# Strategic Planning Initiative Identified

## *Five Challenges* for New England

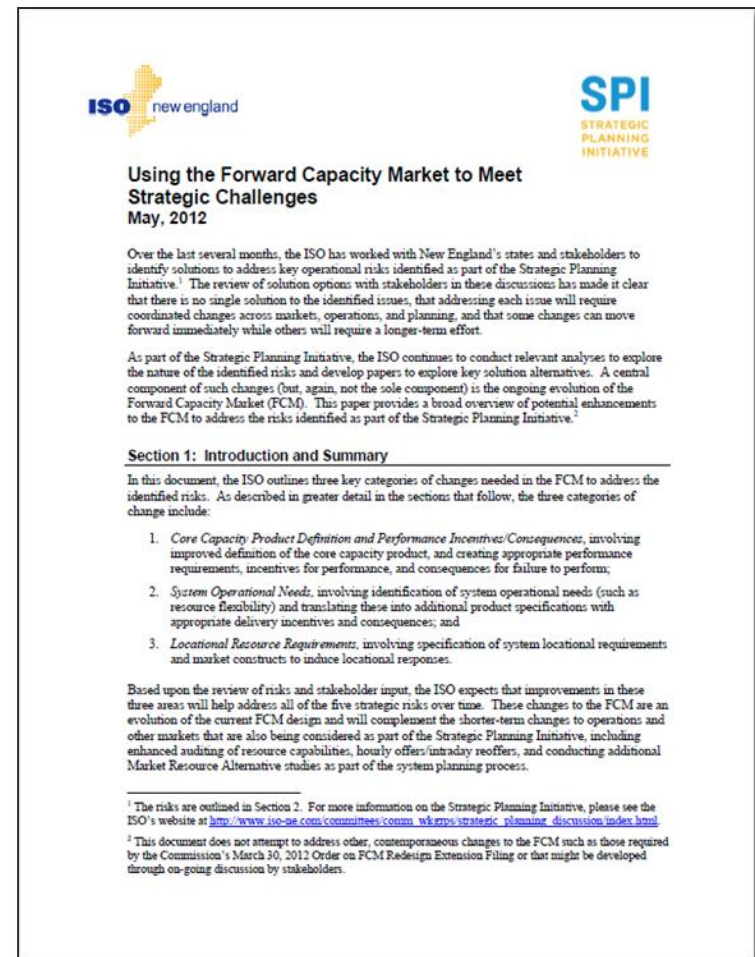
1. Resource performance and flexibility
2. Increased reliance on natural-gas-fired capacity
3. Retirement of generators
4. Integration of a greater level of variable resources
5. Alignment of markets and planning





# Forward Capacity Market Whitepaper

- In May, ISO released a whitepaper to outline potential enhancements to the FCM to address the risks identified in the Strategic Planning Initiative
- Whitepaper available on ISO's homepage, [www.iso-ne.com](http://www.iso-ne.com):
  - Key Projects: [Strategic Planning Discussion](#)



# Categories of Capacity Market Enhancements

*ISO recommendations should help region meet the five Strategic Planning Initiative challenges*

## Enhancement 1: FCA 9

Core capacity product definition and performance incentives

*Seeks to address challenges of:*

- Performance & flexibility
- Natural gas
- Plant retirements



## Enhancement 2: FCA 10

System operational needs

*Seeks to address challenges of:*

- Performance & flexibility
- Natural gas
- Integrating variable resources



## Enhancement 3: FCA 10/11

Locational resource requirements

*Seeks to address challenges of:*

- Plant retirements
- Alignment markets/planning

# Enhancement 1: FCA 9

## *Core Capacity Requirements and Performance Incentives*

- Involves changes to the fundamental requirements (including payments and penalties) of a resource participating in FCM
- Obligation of core capacity resources need to better align with the needs of system operators
- Incentives
  - Incentives for resources to be available should be aligned with the costs of actions required to be available
- Penalties
  - Resources that are not available or do not respond when called should face penalties consistent with the costs they impose on the system

# Enhancement 2: FCA 10

## *System Operational Needs*

- Evaluate whether resource operational characteristics should be considered in the FCM
- Based on system operating needs, would ensure the purchase of a minimum or maximum quantity of resources with certain characteristics
- Consideration include changes made to core FCM resource performance incentives and whether operational needs are better satisfied through the FCM or closer to real time (*e.g.*, Forward Reserve Market)

# Enhancement 3: FCA 10/11

## *Locational Resource Requirements*

- Will require enhancement to the planning process and increased granularity in the locations modeled in the FCA
- Planning enhancements may build on New Hampshire-Vermont pilot study
- There may be a need to adjust the planning and/or auction timelines to better coordinate the information flows



# Upcoming Papers and Discussions

- ISO to release paper this fall outlining potential solutions to enhance resource performance
  - Paper will focus on:
    - How to improve upon shortage events as performance metrics
    - Appropriate incentives associated with performance during shortage events
- ISO to discuss Market Resource Alternatives with stakeholders as follow up to June discussion paper on Aligning Markets and Planning

# Questions

