

# Demand Response In New England

PLMA  
New York, New York  
November 8, 2006

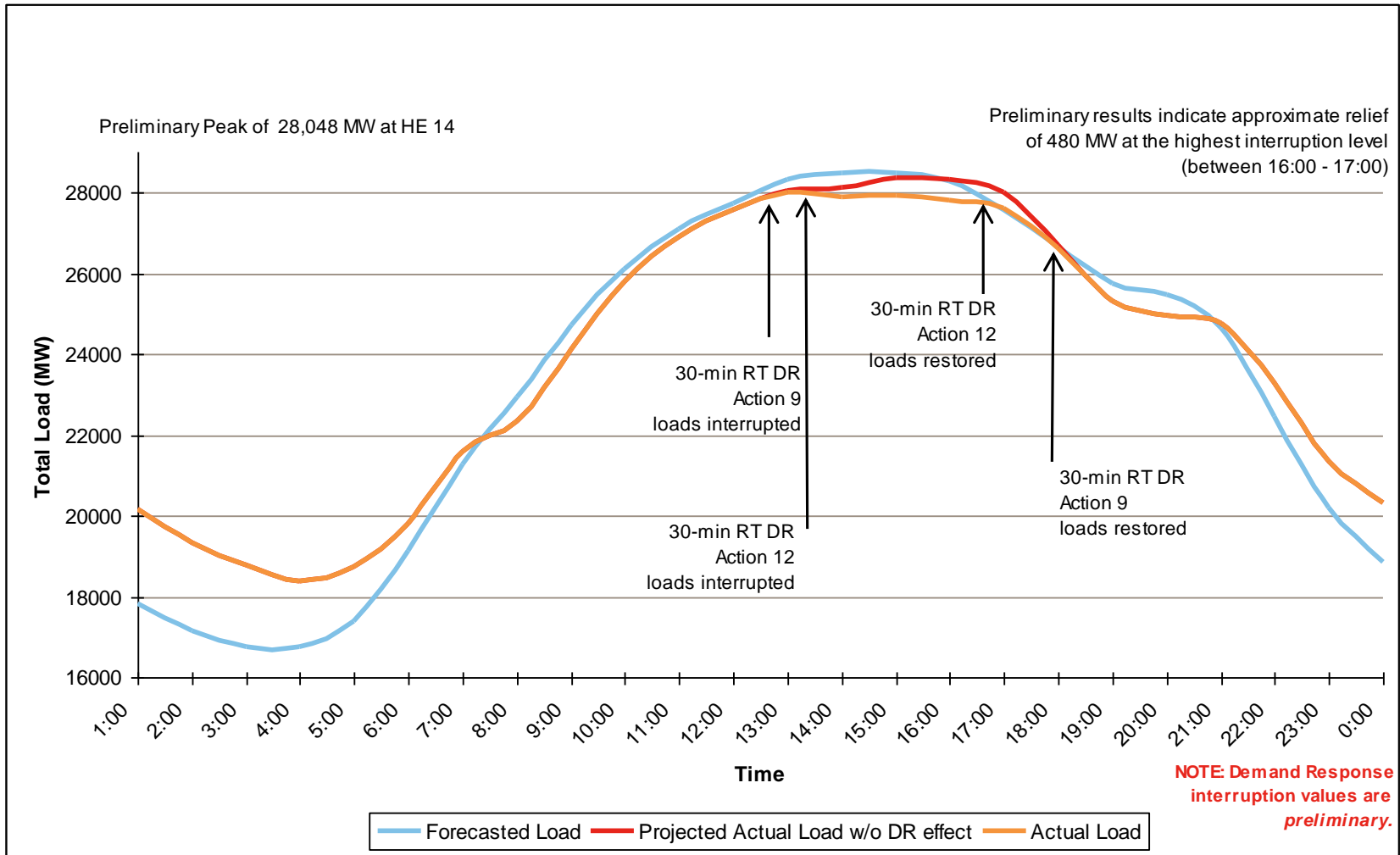
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# Discussion Items

- Demand Response Performance on August 2, 2006
- Demand Response Reserve Pilot
- Demand Response in Forward Capacity Market (FCA)

# System Load & Demand Response

August 2, 2006

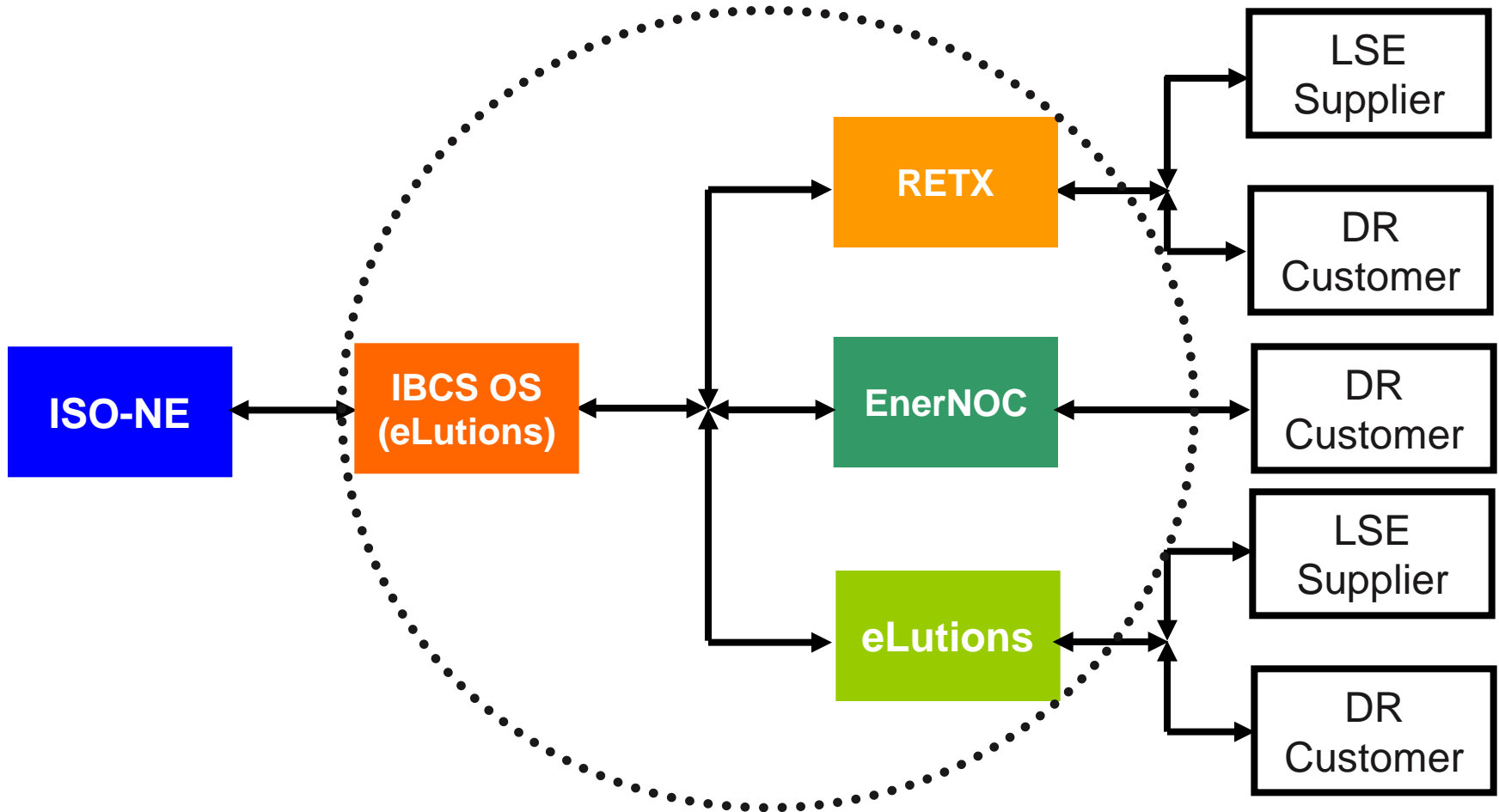


# Demand Response Reserve Pilot

# Demand Response Reserve Pilot

- Problem
- ***Some DR resources that are willing and able to provide reserve products may not be able to participate in the Ancillary Service Market***
  - 10-minute non-synchronized reserves
  - 30-minute operating reserves
- **ASM design requires reserve resources:**
  - $\geq 5$  MW
  - Receive dispatch instructions via a RIG
  - Comply with generator telemetry requirements
- **Typical (DR) resources are small and dispersed**
  - Most DR resources  $< 5$  MW
  - Cost of installing & maintaining RIG and telemetry not cost-effective or practical
- **DR resources have operating characteristics that differ from typical generators**

# ISO's View With IBCS OS



# DRR Pilot

## Objectives:

- Demonstrate whether customer loads can reliably provide:
  - 30-minute operating reserve
  - 10-minute non-synchronized reserve
- Determine requirements for:
  - communications, dispatch, metering, and telemetry sufficient for DR resources to provide reserve services
- Identify and evaluate:
  - lower cost communications and telemetry solutions that meet the requirements, and
  - are more suitable for DR reserve resources

## End State:

- Assuming acceptable DR resource performance, fully integrate DR resources into the market and system operations:
  - Modify market rules and requirements where necessary
  - Implement alternative dispatch and telemetry for DR resources
  - Upgrade System Operations and Settlement software where necessary
  - DRR Pilot terminates when integration is complete
- Assuming unacceptable DR resource performance, immediately terminate the DRR Pilot

# Participation in DRR Pilot

**Total RESOURCES: 52**

**MW: 22.460**

Load Zone	Generation (Non-Weather Sensitive)	Load (Non-Weather Sensitive)	Load (Weather Sensitive)
	<u>MW</u>	<u>MW</u>	<u>MW</u>
CT		7.631	6.120
ME			
NEMA	4.999	2.300	
NH		1.000	
RI		0.650	
SEMA	0.280		
WCMA			0.250
<b>TOTALS</b>	<b>5.279</b>	<b>11.581</b>	<b>6.400</b>

# Demand Response During ICAP Transition Period

# Demand Resources Addressed in the ICAP Settlement Agreement

- Settlement Agreement establishes:
  - Capacity payments during Transition Period
    - (December 1, 2006 – May 31, 2010)
  - Forward Capacity Market (FCM) design
  - Demand Resources as Qualified Capacity
    - Demand Resources are eligible for capacity payments during the Transition Period
    - Requires that a distinct method be developed to allow Demand Resources to be fully integrated into the FCM

# Settlement Agreement Concerning Schedule For Filing Rules for Transition Period

- *On or before October 1, 2006*, the ISO New England ... shall file with the FERC necessary changes to the ISO New England Inc. Transmission, Markets and Services Tariff, FERC Electric Tariff No. 3 (the “Tariff”) *to implement the Transition Period* as defined in Section 11, Part VIII of this Settlement Agreement.

# Demand Resources During Transition Period

- Qualified Capacity
  - Real Time Demand Response (RTDR)
  - Energy Efficiency & Non-RTDR
    - New merchant, utility, or state-sponsored demand management resources
    - Subject to the ISO review of the verification process

# Demand Resources in Forward Capacity Market (FCM)

- In FCM, RTDR is Qualified Capacity
- Distinct method shall be developed to allow energy efficiency and demand response resources (non-RTDR) to be fully integrated as Qualified Capacity in the FCM.
  - The method shall consider that some Resources may best be integrated by ensuring that price signals are correct
  - These Resources shall not be subject to the same penalties for poor availability or performance as other Resources (generators)
  - The method must address poorly performing energy efficiency and non-RTDR demand response Resources

# Forward Capacity Market Design

- **Objective:** Establish Forward Capacity Market rules that integrate supply and demand resources into the Forward Capacity Auction (FCA) structure
- **Issues to be addressed:**
  1. Determine Eligible Demand Resource Types
  2. Determine How Demand Resources will be Integrated into the FCA
  3. Establish Qualification and Performance Criteria, and Capacity Value for Each Demand Resource Type
  4. Establish Measurement and Verification Protocols
  5. Determine Methodology to Allocate Installed Capacity Requirement Obligations and Costs (including load reconstitution if appropriate)
- Currently recommending that Demand Resources be treated as a supply resource in the FCA – i.e., allow Demand Resources to submit supply bids into the FCA

# Contact Information

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