FERC's Standard Market Design Proposal

David Kathan, Ph.D
FERC

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Outline

- Overview of Standard Market Design (SMD) Proposal
- Role of Demand Response in SMD
- ISO Demand Response Programs
- Implications for Energy Efficiency

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SMD: Overview

- SMD Notice of Proposed Rulemaking released in July 2002
- Commission's mission
  - Is to make electricity and natural gas markets work for consumers
- Key principles:
  - Same set of rules for all users of the grid administered by a fair and independent entity
  - Market rules that protect against market manipulation
  - Customer protection through market power mitigation measures and oversight
  - Clear transmission pricing and planning policies for grid expansion

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Major SMD Elements

- Independent Transmission Provider
- Open and transparent energy spot markets
- Congestion management through Locational Marginal Pricing (LMP)
- Flexible transmission service-tradable Congestion Revenue Rights (CRRs)
- Transmission pricing reforms
- Market power mitigation and monitoring
- Resource adequacy requirement

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Response to SMD (1): Recent Press

FERC Plan Full of Flaws
Spokane Spokesman Review

Pacific NW States Rail FERC Over Power Grid Rules
Reuters

Wholesale Power Rules Could Cause Local Strife
Virginia-Pilot

15 States Lambaste FERC Proposal
California And 14 Other States Oppose Commission's Attempt To Expand Its Jurisdiction
Contra Costa Times

Energy Deregulator Meets Resistance
Wood Pushes to Open Up Power Networks
Washington Post

Boxer Puts Hold on FERC Nominee
San Francisco Chronicle

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Response to SMD (2)

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Response to SMD (3)

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Response to SMD (4): FERC Response

- In response to comments, FERC extended comment periods for six areas of concern:
  - Unique characteristics of the Western Interchange
  - Planning and pricing transmission expansions, including participant funding
  - State concerns and regulatory participation in Regional State Advisory Committees
  - Resource adequacy
  - Transition issues and Congestion Revenue Rights
  - Timetable for implementation
- White Paper is due this month

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Definition of Demand Response

- Demand response in electricity is defined as load response called for by others and price response managed by end-use customers.
  - Load response includes:
    - direct load control
    - partial or curtailable load reductions
    - complete load interruptions.
  - Price response includes:
    - real-time pricing
    - dynamic pricing
    - coincident peak pricing
    - time-of-use rates
    - demand bidding or buyback programs.

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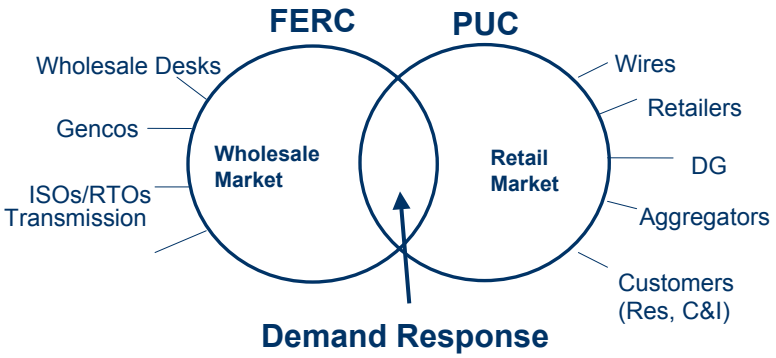
Role of Demand Response



- Demand response operates at the intersection of the wholesale and retail markets

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Demand Response in SMD

- Missing side of market
- Absence of demand response creates need for market mitigation and resource adequacy requirements
- Reduces market power opportunities
- Envisions participation of demand response in
  - Day-ahead markets
  - Real-time markets
  - Resource adequacy
  - Congestion revenue rights
  - Regional resource planning

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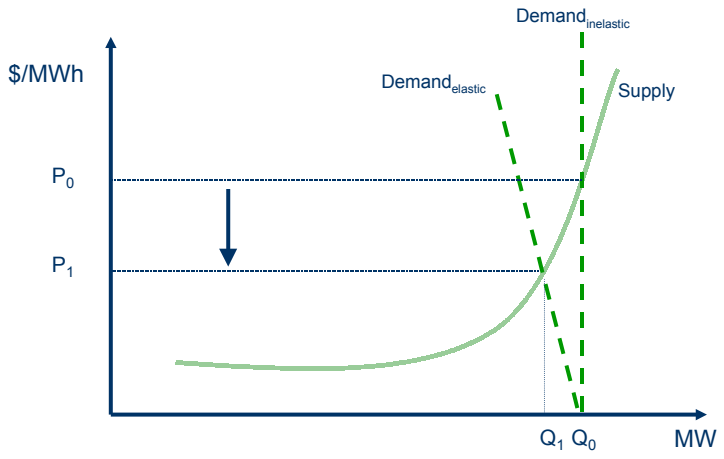
Short-Term Benefit of Demand Response



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ISO-NE Demand Response Programs

- Real-Time Demand Response
  - 30-Minute Demand Response
  - 2-Hour Demand Response
- Real-Time Profiled Response
  - For non-interval metered loads
- Real-Time Price Response
- Day-Ahead Demand Response

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NYISO Demand Response Programs

- Emergency Demand Response Program (EDRP)
- ICAP Special Case Resource (SCR) Program
- Day-Ahead Demand Response Program (DADRP)

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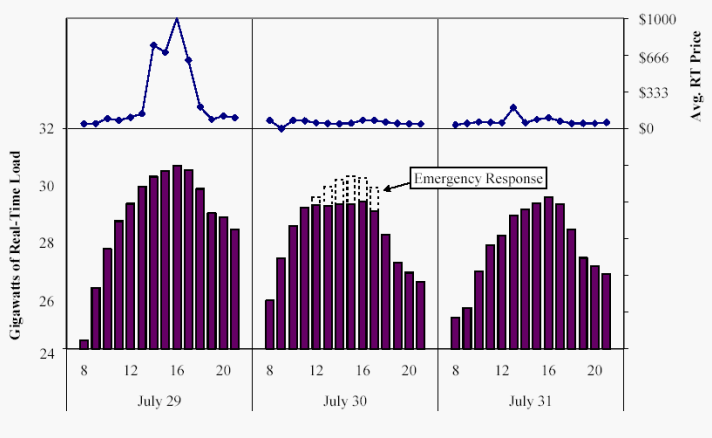
NYISO Demand Response -- 2002



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PJM Demand Response Programs

- Emergency Program
  - Voluntary Curtailment
- Economic Program
  - Day Ahead Option
  - Real Time Option

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2002 Demand Response Participation

Region	Participants	Registered DR Load	Other DSM Programs	Regional Peak Demand
NY ISO	1,706	1458 MW	865	31,000 MW
PJM	179	891 MW	2,070	62,500 MW
ISO NE	91	166 MW	1,587	25,500 MW

[1]Sources: Cummings (2002), Lawrence (2002), PJM (2002), www.ne-iso.com

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Resource Adequacy and Demand Response

- Demand response currently counts toward reserve requirements in key ISO markets
- Demand response can provide value by
  - Reducing need to build or purchase additional capacity
  - Creating revenues from capacity sales in Resource Adequacy Markets
- Multiple forms of demand response can provide resource adequacy:
  - Emergency response
  - Price-responsive load
  - Distributed generation
- Price-responsive load and energy efficiency may have difficulty qualifying as installed capacity

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What is FERC doing on Demand Response?

- Standard Market Design
  - Market rules that are neutral and workable for supply and demand resources of all sizes, owners, technologies and fuels
  - Locational Marginal Prices to show the true value of energy over time and place
- Interconnection standard rules for DG
- New England Demand Response Initiative
- Education about the importance of demand response and DG

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Implications for Energy Efficiency

- SMD focus is on wholesale markets, not retail
- SMD has several implications for energy efficiency
  - Transparent and liquid wholesale markets can send proper price signals to customers
  - Locational marginal pricing may require “targeted energy efficiency”
  - Enabling technology installed to support demand response also can support energy efficiency
  - Potential role in regional planning and resource adequacy

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