Demand Response in Energy and Capacity Markets

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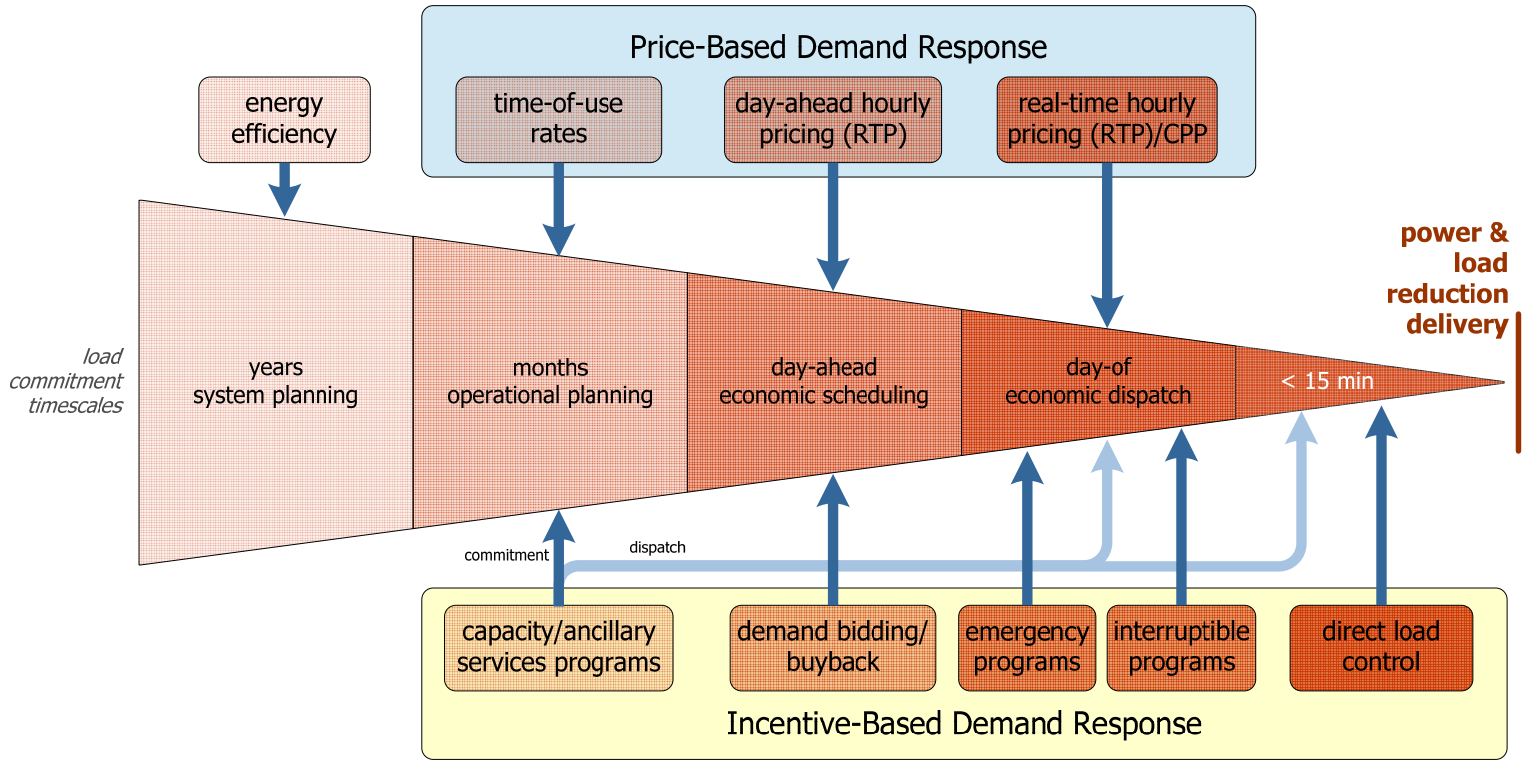
Definition of Demand Response

- Demand response in electricity is defined as

  Changes in electric usage by end-use customers from their normal consumption patterns in response to changes in the price of electricity over time, or to incentive payments designed to induce lower electricity use at times of high wholesale market prices or when system reliability is jeopardized.

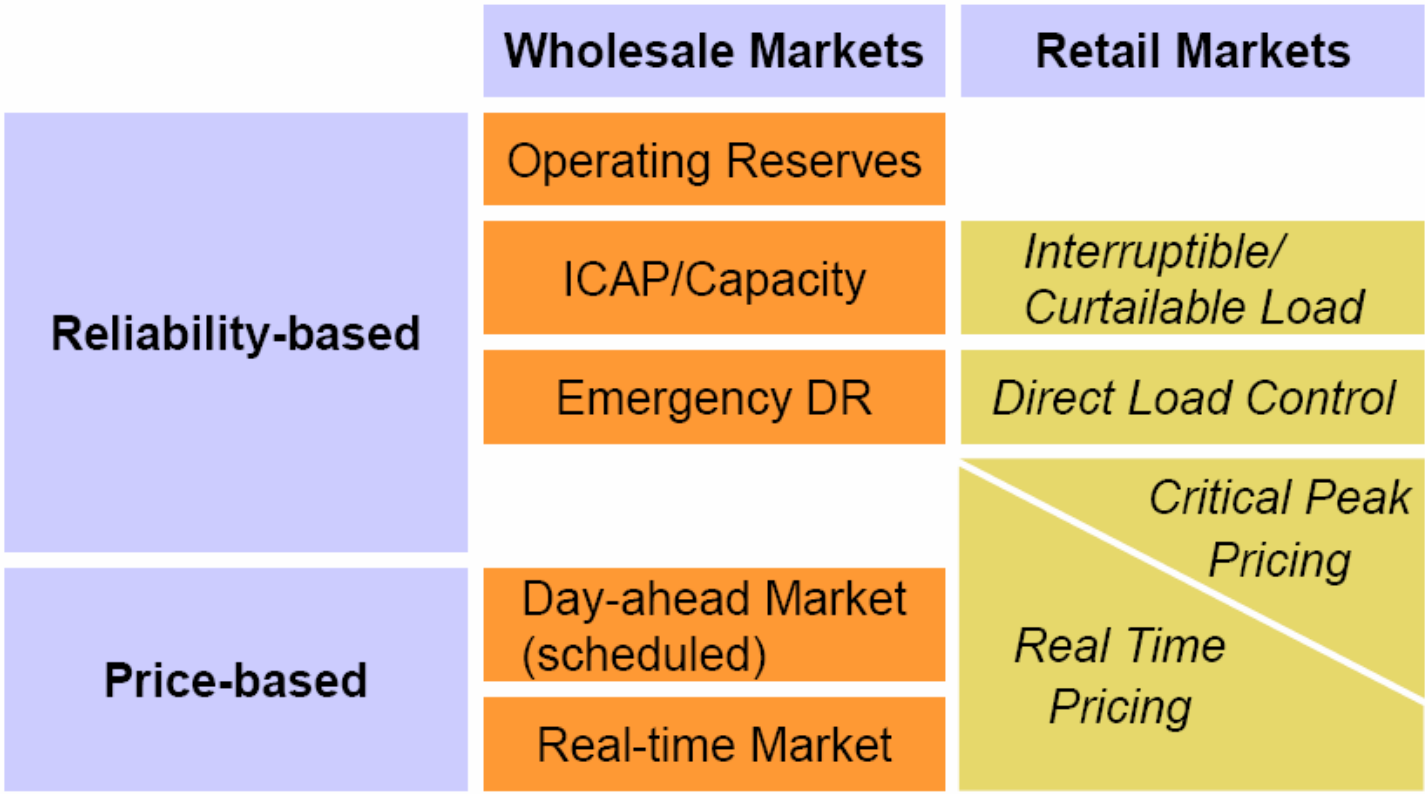
  Source: U.S. DOE EPAct Report to Congress

Role of Demand Response in Energy and Capacity Markets



Source: DOE EPAct Report

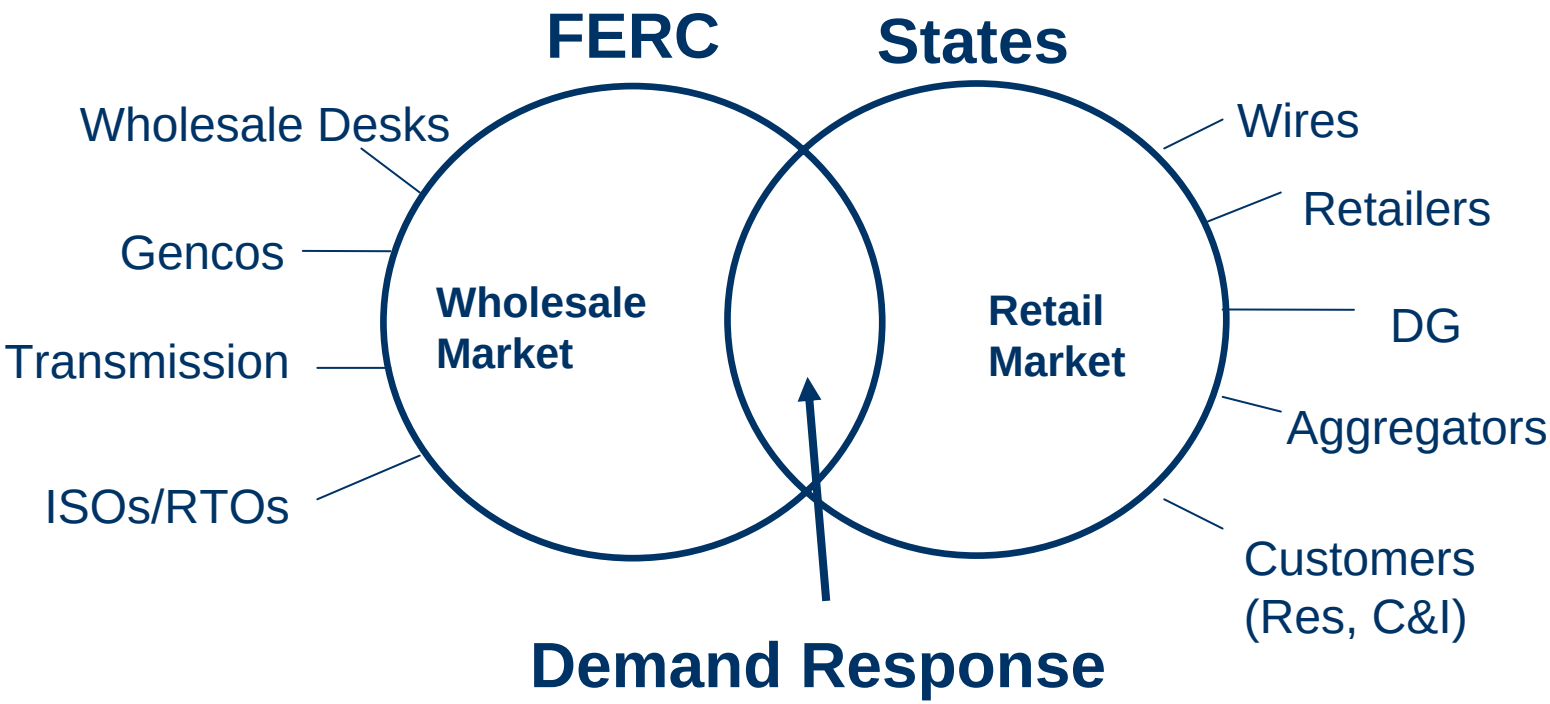
DR Market and Program Typology



Benefits of Demand Response

- Key tool for handling:
  - Supplier market power
  - Inefficient reserve procurement
  - Power price volatility
  - Reliability issues
- Additional Benefits
  - Creates opportunities for risk management
  - Potential environmental improvements
  - Increased customer service and choice

Demand Response at Nexus Between Retail and Wholesale



FERC's Demand Response Objective

- Objective 2.2 (Establish Clear Market Rules to Govern Electric Markets) of FERC's 2005-2008 Strategic Plan states that FERC will
  - "Promote development of policies that accommodate effective demand response programs."
- Chairman Kelliher at the January 25, 2006 demand response Technical Conference stated:
  - "Federal and state regulation has to work together and encourage greater demand response"

FERC Demand Response Activity

- Approval and support of ISO/RTO demand response programs
- Direction for ISO/RTO economic and reliability planning processes to incorporate demand response
- Adoption of Small Generator interconnection rule
- Support for regional demand response efforts (e.g., New England Demand Response Initiative, Mid-Atlantic Distributed Resources Initiative)
- Support of International Energy Agency demand response resources task
- Preparation of report to Congress

EPACT Section 1252(e)(3)

REPORT.—Not later than 1 year after the date of enactment of the Energy Policy Act of 2005, the Commission shall prepare and publish an annual report, by appropriate region, that assesses demand response resources, including those available from all consumer classes, and which identifies and reviews—

(A) saturation and penetration rates of advanced meters and communications technologies, devices and systems;

(B) existing demand response programs and time-based rate programs;

(C) the annual resource contribution of demand resources;

(D) the potential for demand response as a quantifiable, reliable resource for regional planning purposes;

(E) steps taken to ensure that, in regional transmission planning and operations, demand resources are provided equitable treatment as a quantifiable, reliable resource relative to the resource obligations of any load-serving entity, transmission provider, or transmitting party; and

(F) regulatory barriers to improved customer participation in demand response, peak reduction and critical period pricing programs.

FERC Demand Response Report

- By August 8, 2006, FERC will prepare a report on demand response that will:
  - Report on the six areas identified in EPAct 2005
  - Contain results of survey of advanced metering and demand response

FERC Docket AD06-2

- A docket has been created for the EPACT report
- Docket contains
  - Notices concerning draft survey and technical conference
  - Comments on draft survey
  - Comments on technical conference issues
  - Technical conference presentations and transcript

Demand Response Technical Conference

- Held on January 25, 2006
- Heard from interested parties on
  - Demand response policy
  - Advanced Metering
  - Demand response programs
  - Regional issues
- Webcast available on www.ferc.gov
- Transcript available

FERC Metering and DR Survey

- In order to respond to Congress, FERC will be conducting a survey on
  - Advanced metering and infrastructure
  - Demand response programs
  - Time-based rate programs/tariffs
- Survey covers entire U.S. and will seek data from regulated and unregulated entities
- Comments were received on draft survey
- Survey has received OMB approval
- Will go live tomorrow
- Due date for responses will be April 7

FERC Metering and DR Survey

- Recipients of survey will include:
  - Investor-Owned Utilities
  - Municipal Utilities
  - Rural Cooperatives
  - Federal Marketing Agencies and Authorities
  - Municipal Power Authorities
  - State Agencies and Authorities
  - Power Marketers
  - Unregulated Retailers
  - Curtailment Service Providers

Recipient information drawn from EIA-861 contact data

Advanced Metering Survey

- Advanced Metering survey requests data on:
  - The number of meters by frequency of measurement and frequency of data retrieval
  - Whether AMI has been implemented
  - Current functionality of AMI system
- Analysis of data will include
  - Saturation rate of advanced metering by
    - Region
    - State
  - AMI Adoption and Functionality

DR and Time-Based Rates Survey

- DR and time-based rates survey requests data on:
  - Detailed usage data presentment
  - Type of program/tariff
  - Mandatory/Voluntary?
  - Number of enrolled customers
  - Potential MW & MWh reduction
  - Actual MW & MWh reduction

Issues Raised in Comments

- Subsidization
- Linkage between retail and wholesale markets
- Incorporation of DR in regional transmission planning and operations
- Treatment of energy efficiency
- Customer interest and participation
- What level and type of advanced metering

For More Information

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