

FERC Staff Report on Demand Response and Advanced Metering



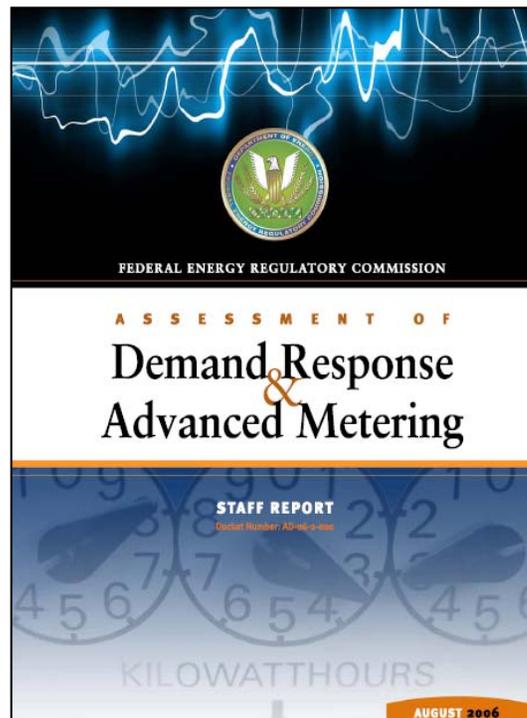
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FERC-NARUC Collaborative Dialog on
Demand Response
Miami Beach, FL
November 12, 2006

*The author's views do not necessarily represent the views of the
Federal Energy Regulatory Commission*



FERC Demand Response Report



- FERC staff recently completed a report required by the Energy Policy Act of 2005
- Report assesses demand response and advanced metering

<http://www.ferc.gov/legal/staff-reports/demand-response.pdf>



Congressional Directive

- Section 1252(e)(3) of EPAct 2005 directs FERC, by appropriate region, to identify and review:
 - Advanced metering penetration
 - Demand response programs
 - Resource contribution from programs
 - Role of demand response in regional and transmission planning
 - Demand response regulatory barriers



FERC Survey

- Sent voluntary survey to 3,365 entities
 - DR survey results by NERC region
 - AMI survey by states
- Covered all 50 states
- Surveyed
 - Public and private utilities
 - Regulated and unregulated entities
- Response rates to demand response & advanced metering surveys ~ 55%
- Survey data now available at <http://www.ferc.gov/industries/electric/indus-act/demand-response.asp>

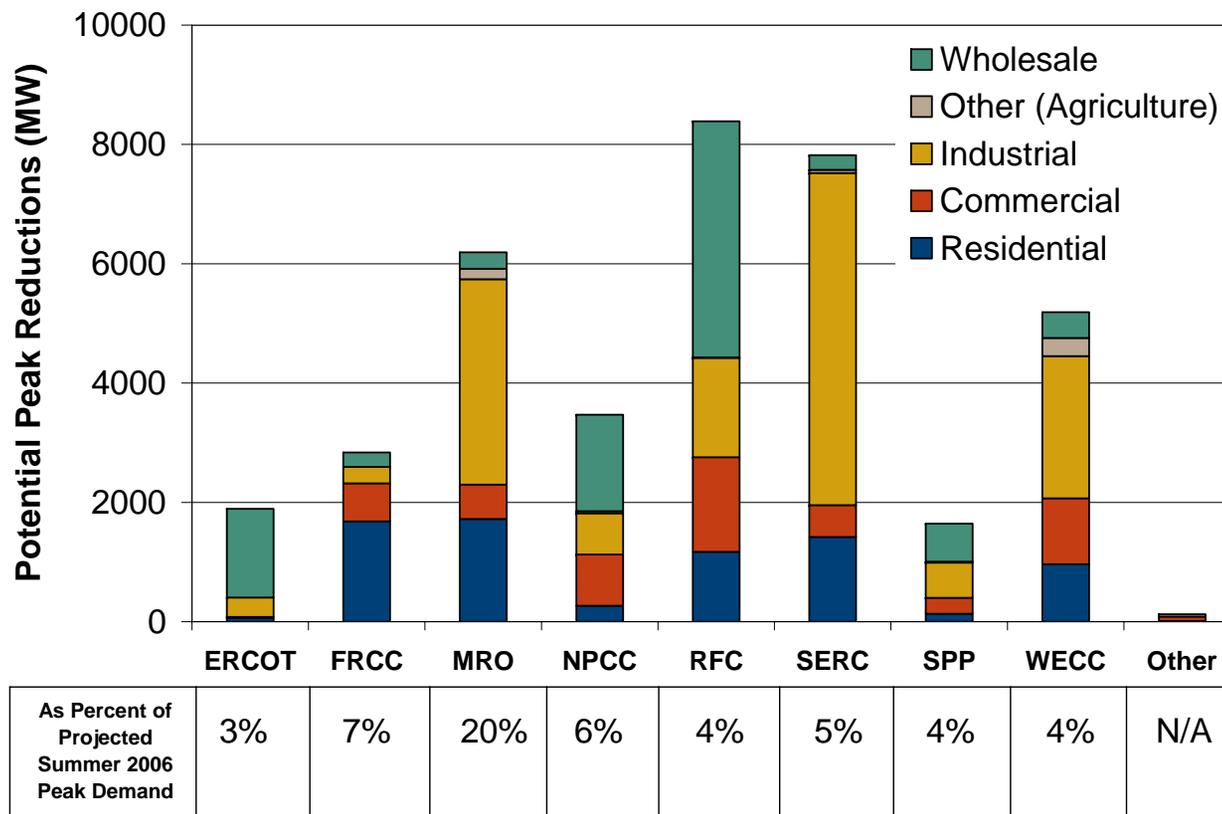


Demand Response Results

- Demand response is important in both wholesale and retail markets
- 37,500 MW of demand response potential in existing programs:
 - Vast majority from incentive-based demand response – many legacy utility programs
 - ISO and other wholesale demand response represents about 8,900 MW (24%)
- Demand response capability represents between 3% to 7% of peak demand in most regions



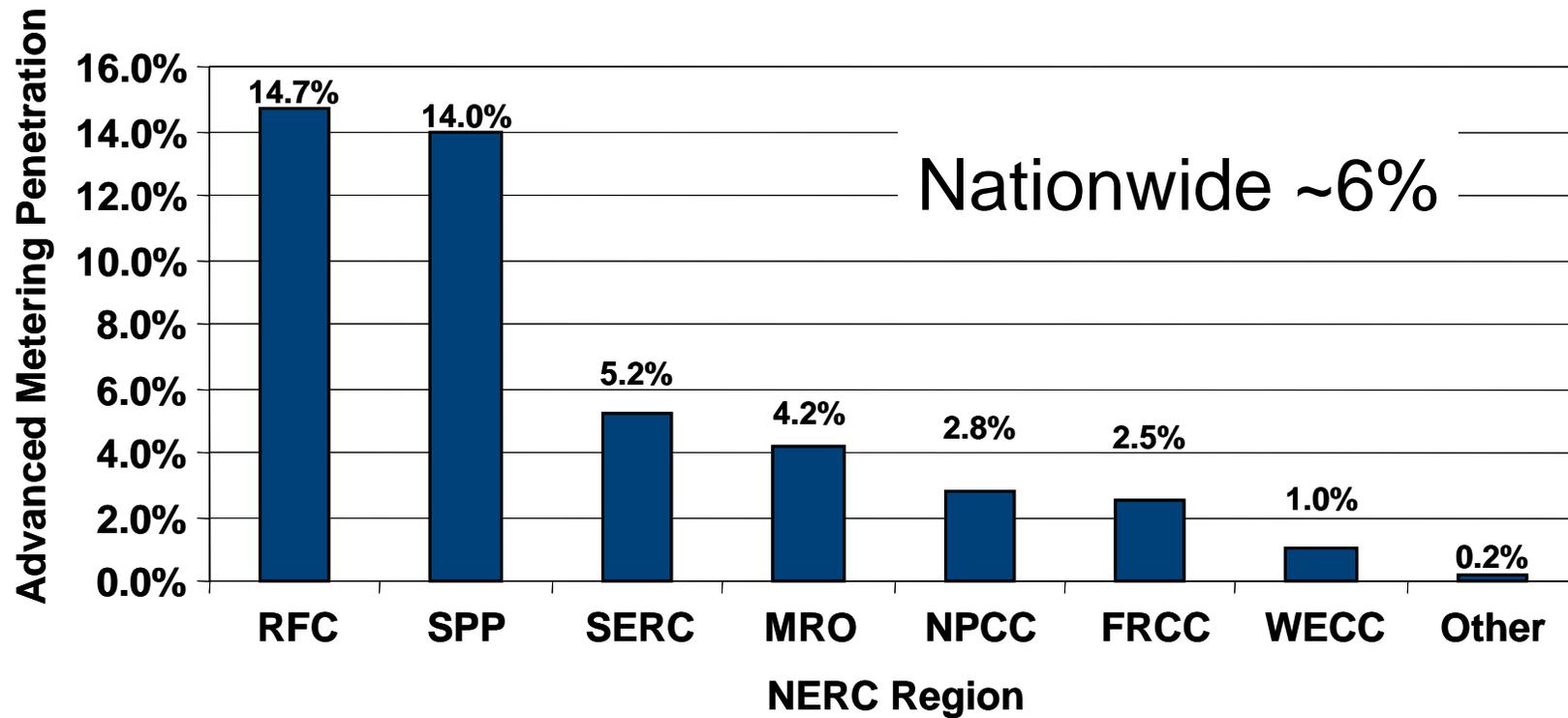
Existing DR Resource Contribution By Region and Customer Class



Sources: FERC Survey, EIA, and ISO/RTO Reports

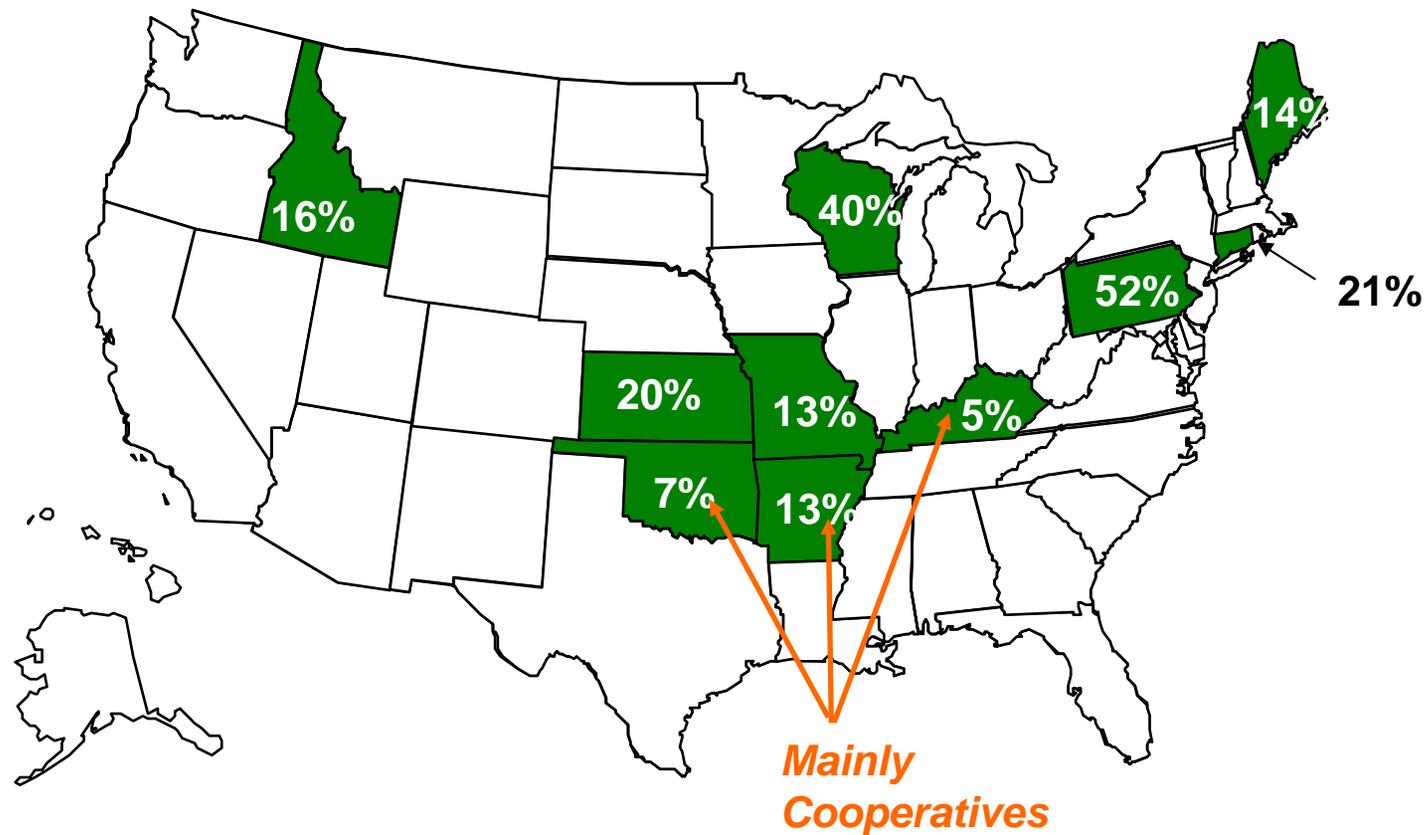


Advanced Metering Penetration By Region



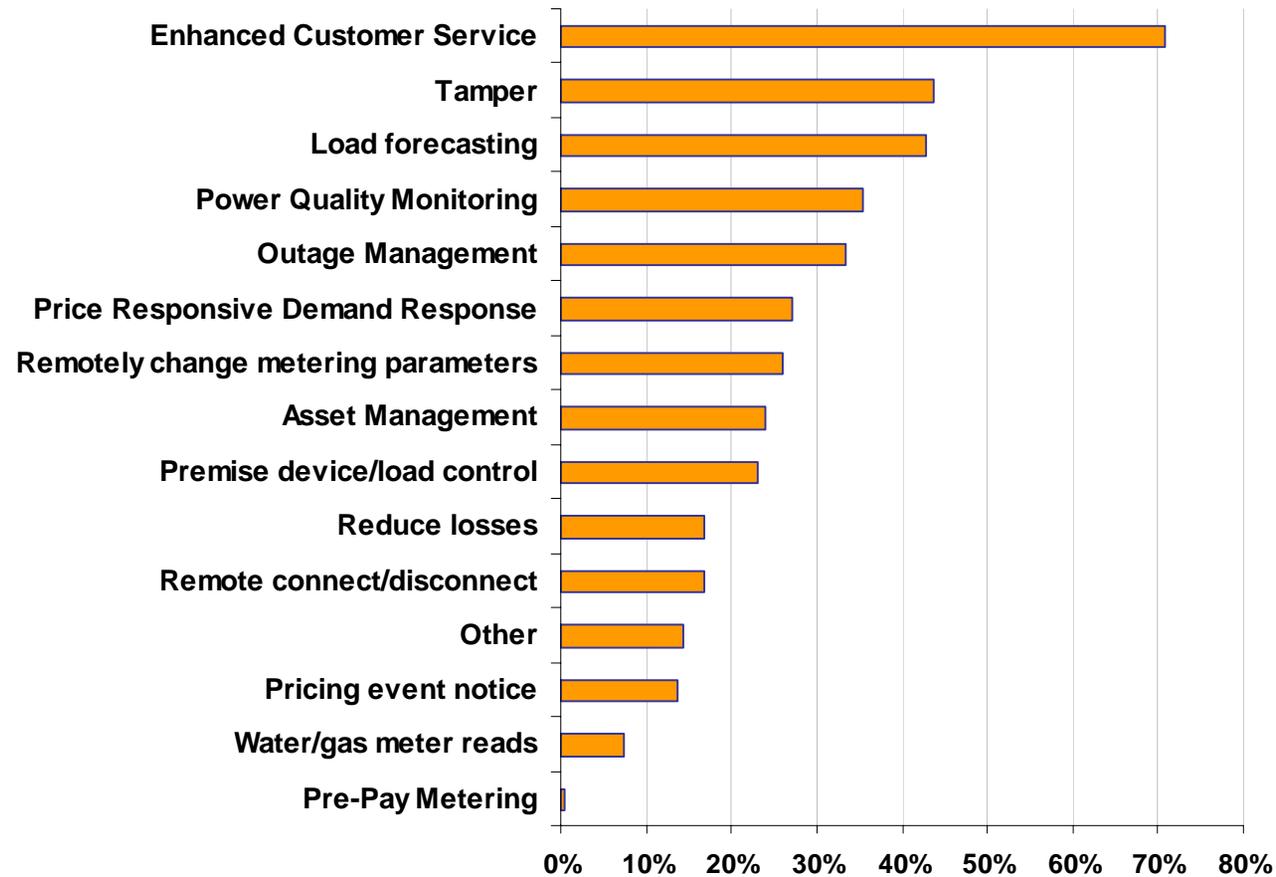


Advanced Metering Penetration Top Ten States





Uses of Advanced Metering



Source: FERC Survey



Demand Response in Transmission Planning

Congress directed FERC to identify “steps taken to ensure that, in regional transmission planning and operations, demand resources are provided equitable treatment.” Steps identified by staff include:

- Assure that planning and operational requirements are specified in terms of functional needs.
- Accommodate the inherent characteristics of demand response resources.
- Allow appropriately designed demand response resources to provide all ancillary services.
- Allow for the consideration of demand response alternatives for all transmission enhancement proposals.
- When appropriate, treat demand response as a permanent solution.
- Develop better demand response forecasting tools for system operators.



Regulatory Barriers

Barriers identified by staff include:

- Disconnect between retail pricing and wholesale markets
- Utilities' disincentives to offering demand response
- Enabling technologies' deployment need cost-recovery certainty; may need incentives
- Research is needed on cost-effectiveness and how to measure demand reductions
- Specific state-level rules may inhibit more demand response
- Specific retail and wholesale market rules may limit use of demand response
- Fluctuating rules may limit third-party participation
- Insufficient market transparency and access to data
- Better coordination of federal and state jurisdictional programs could enable more demand response



Staff Recommendations to the Commission:

- Explore how to better accommodate demand response in wholesale markets;
- Explore how to coordinate with utilities, state commissions and other interested parties on demand response in wholesale and retail markets;
- Consider specific proposals for compatible regulatory approaches, including how to eliminate regulatory barriers to improved participation in demand response, peak reduction, and critical peak pricing programs.