



THE NEXT RESOURCE

Federal Policy and Market Impacts

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Demand Response

- ★ **2005 EPAct**
- ★ **Demand Response Potential**
- ★ **Why Demand Response**
- ★ **Potential Market Benefits**
- ★ **FERC DR Assessment**
- ★ **Transmission Operations & Planning**
- ★ **Improving DR Success**
- ★ **DR Progress & Challenge**

★ **Timed Based Pricing & Other DR**
Shall Be Encouraged

★ **Deployment of DR Technologies**
Shall Be Facilitated

2005 EP Act

★ **Unnecessary Barriers to DR**
Shall Be Eliminated

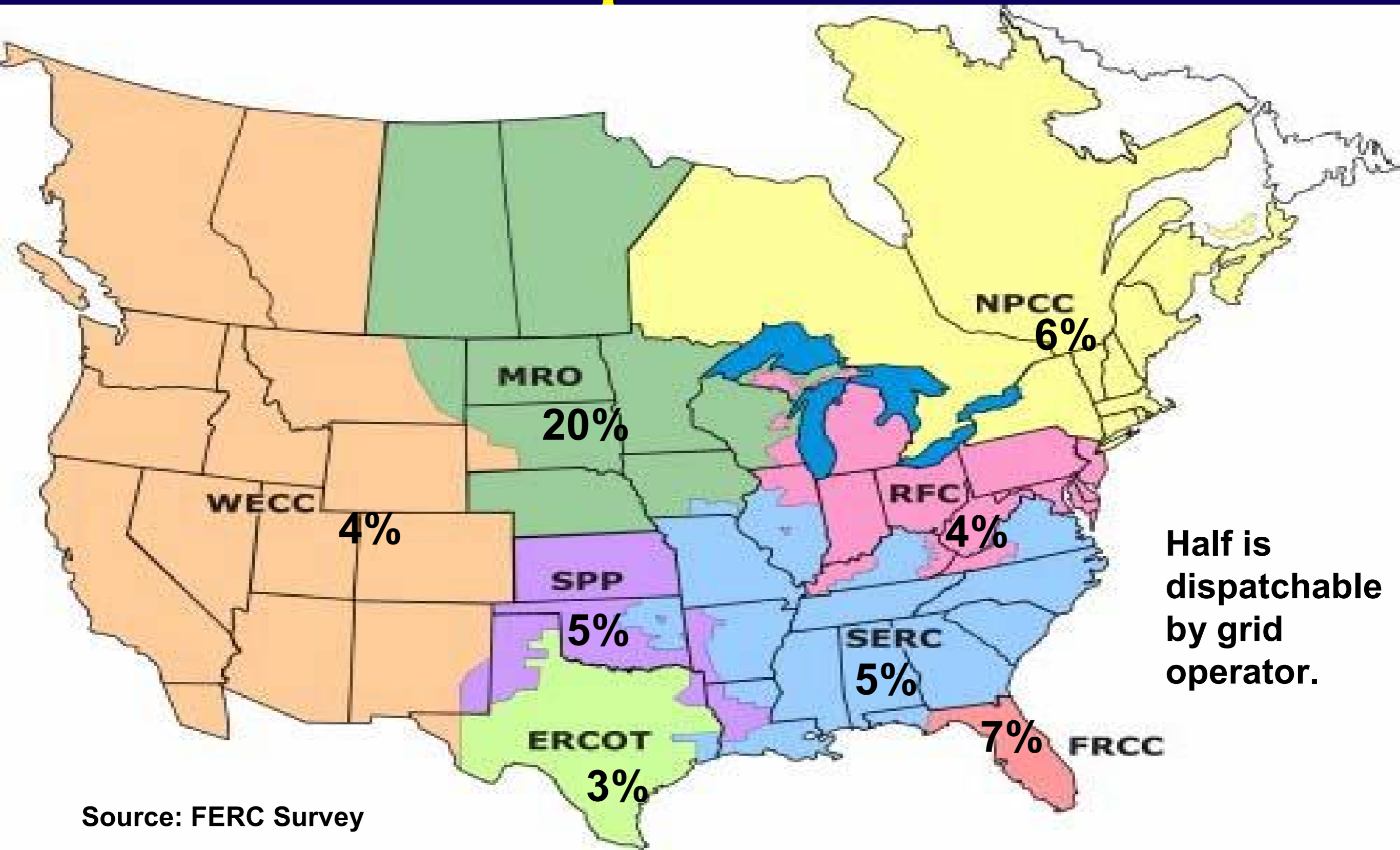
Demand Response
It's the Law

FERC DR Assessment

- ★ **Saturation/Penetration Advanced Meters**
- ★ **Existing DR & TOU Programs**
- ★ **Annual Contribution of DR**
- ★ **DR Potential as Quantifiable Resource for Regional Planning**
- ★ **Current Role of DR in Regional Transmission Planning and Operations**
- ★ **Regulatory Barriers to DR**

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

Current DR Capability Reduces Peak Up to 20%



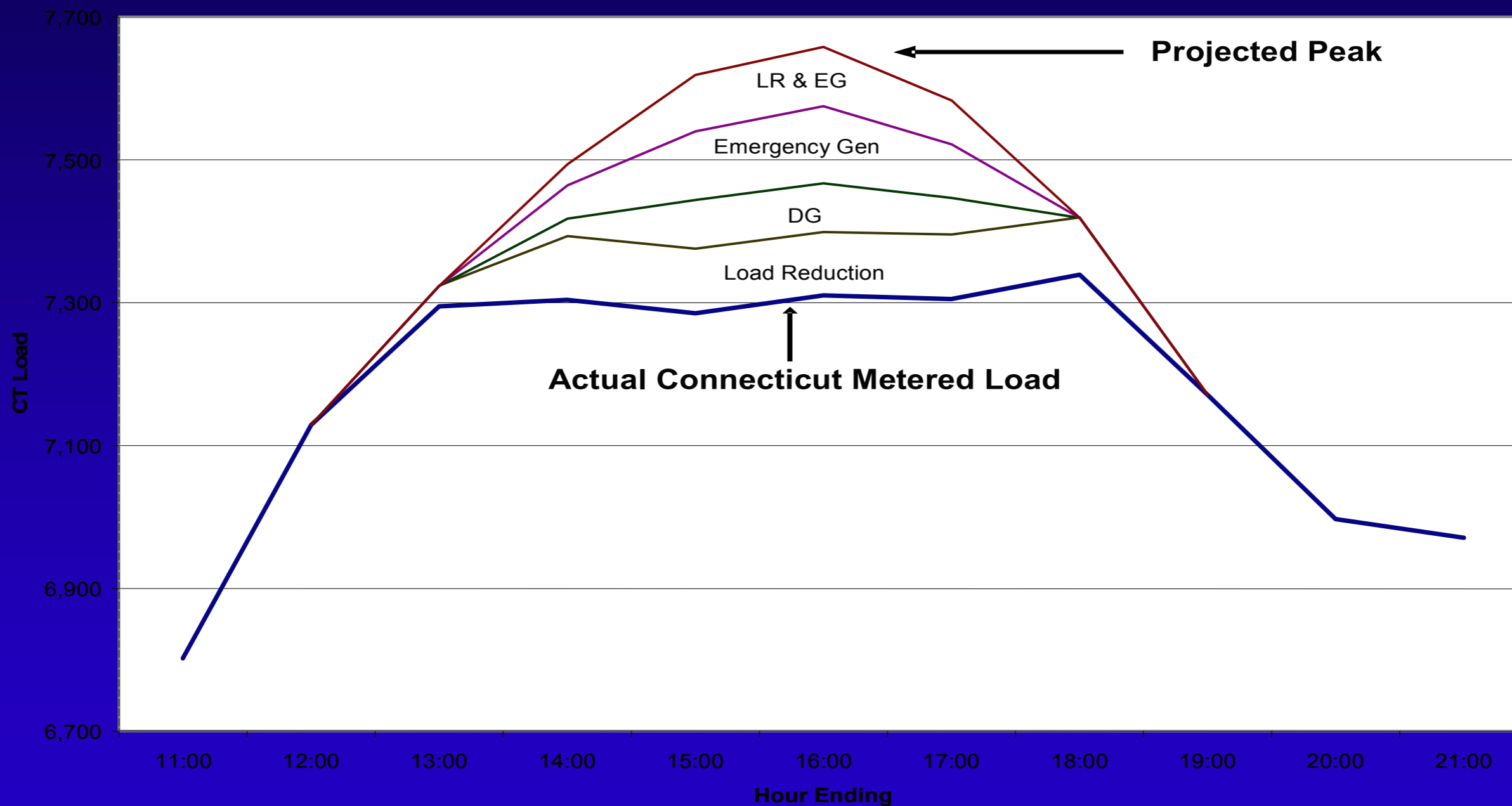
Source: FERC Survey

Top 10 Reasons To Do DR

- ★ **Reduce Price Volatility**
- ★ **Reduce Congestion & Resultant Price Spikes**
- ★ **Improve System Efficiency**
- ★ **Improve Reliability - Reserves & VAR Support**
- ★ **Rapidly Deploy Needed Resources**
- ★ **Mitigate Market Power**
- ★ **Reduce Emissions**
- ★ **Avoid/Defer Generation/Transmission/Distribution**
- ★ **Support Resource Adequacy at Least Cost**
- ★ **Save Money for Consumers**

Connecticut Load - August 2, 2006

(Preliminary Integrated Hourly Data)

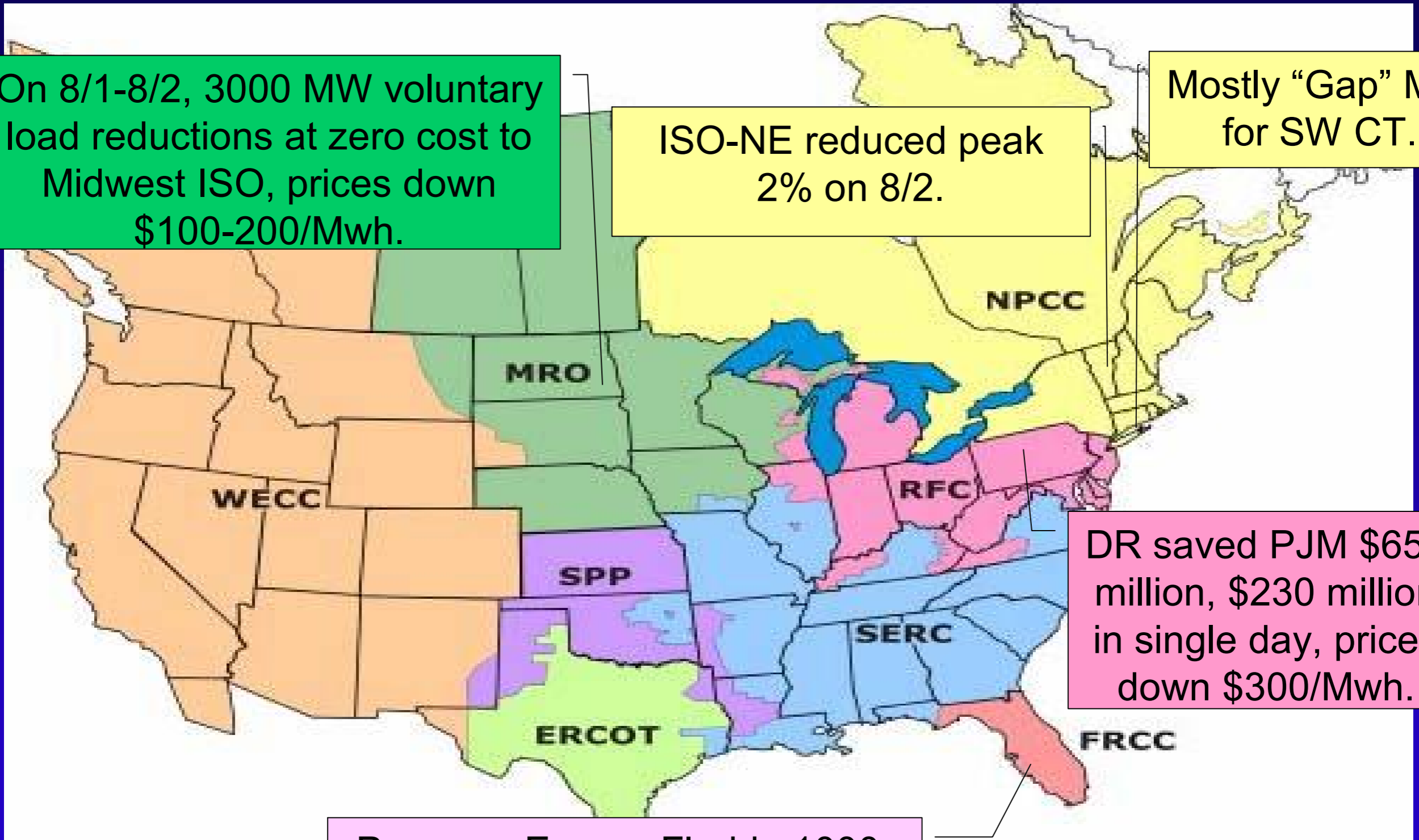


Summer '06 Savings

On 8/1-8/2, 3000 MW voluntary load reductions at zero cost to Midwest ISO, prices down \$100-200/Mwh.

ISO-NE reduced peak 2% on 8/2.

Mostly "Gap" MW for SW CT.



DR saved PJM \$650 million, \$230 million in single day, prices down \$300/Mwh.

Progress Energy Florida 1000-2000 MW reductions.

DR-More Than Peak Shaving

- ★ **PJM/CAISO/ERCOT Use DR As Ancillaries**
- ★ **California & LIPA Testing ACLM A\C As Spinning Reserve**
- ★ **ISO-NE Testing DG & DR (< 5 MW) As Reserves**
- ★ **BPA-DR and DG For Transmission Deferral**
- ★ **ConEd-DR T&D Expansion Alternative NYC & Westchester County**

DR in Transmission Ops & Planning

- ★ **Recognize & Accommodate DR in Scheduling Energy**
- ★ **Specify Ancillaries as Functions Not Technology-Specific**
- ★ **DR provides:**
 - ★ **Operating & Spinning Reserves**
 - ★ **Regulation**
 - ★ **Frequency Response Reserves**
- ★ **Consider DR As Alternatives:**
 - ★ **Transmission Enhancement**
 - ★ **Transmission Expansion**
- ★ **Treat DR As Permanent Solution**
- ★ **Develop Better DR Forecasting Tools**
- ★ **Utility Grade Resource**

Areas To Improve DR Success

- ★ **Disconnect- Retail Pricing & Wholesale Markets**
- ★ **Retail & Wholesale Rules/Laws Limit DR**
- ★ **Utility Disincentives For DR (Throughput Incentive)**
- ★ **Cost recovery & Incentives for DR Technologies**
- ★ **Research Cost-effectiveness Measurement**
- ★ **State-level Barriers to DR**
- ★ **Third Party Provider Barriers**
- ★ **Market Transparency & Access to Data**
- ★ **Coordination Federal-State Jurisdiction**

DR Progress & Challenge

★ FERC Actions

- ★ 08/06- Issued DR Assessment- Promising Potential
- ★ 09/21- Directed CAISO, Midwest ISO & SPP Work w/ Customers & Interested Parties- Consider DR Participation Energy & Ancillary Services Markets

• Future Potential Actions

- ★ Identify Assessment Action Items
- ★ Joint Federal-State Board on Demand Response
- ★ Collaboration w/State PUCs

★ FERC Needs

- ★ Information on Barriers
- ★ Market Participant Ideas and Input- Equal Access/Enhanced Incentives/Fair & Equal Market Payments