November 14 – 16, 2008

New Orleans, Louisiana

Session IV:

Climate Change Policy Challenges Confronting US Electricity Markets

November 15, 2008

7TH US-EU ENERGY REGULATORS ROUNDTABLE

Presentation By

Shelton Cannon

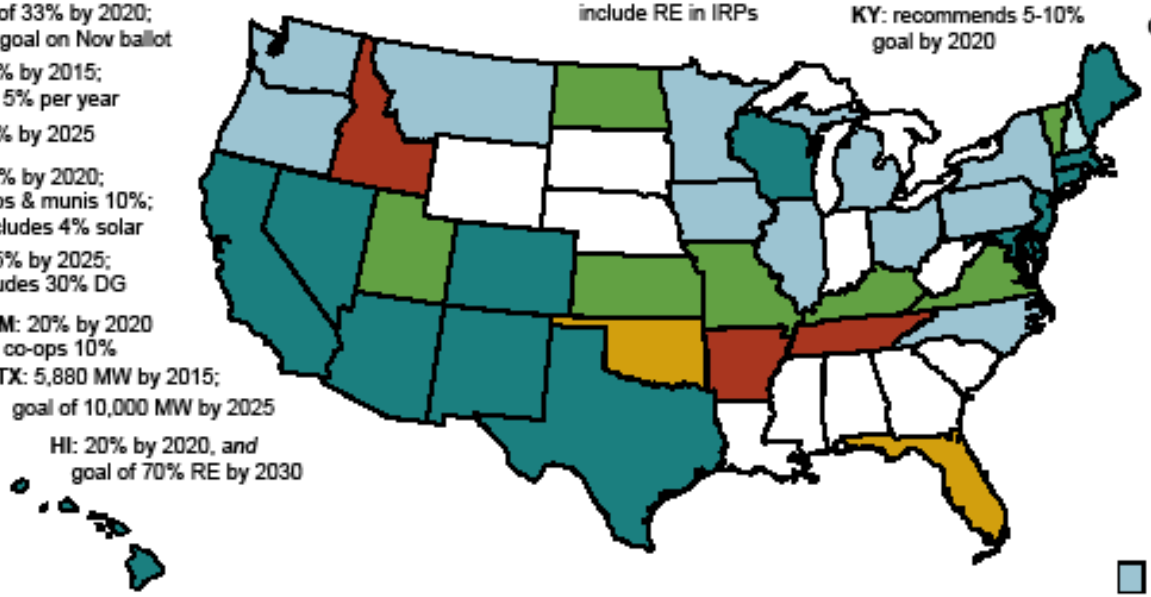
Director, Office of Energy Market Regulation

Federal Energy Regulatory Commission

Reconciling Policy Objectives

- **Climate Change as Driver**
- **Environmental Policy Goal**
  - Reduction in Carbon Emissions
- **Energy Policy Goal**
  - Abundant Energy Supply/Reasonable Cost
- **Market vs. Regulated Solutions**

Renewable Energy Portfolio Standards (RPS)



WA: 15% by 2020

OR: 25% by 2025; small utilities 5-10%

ID: Priority to DR, EE, and in-state RE

CA: 20% by 2010; goal of 33% by 2020; 50% goal on Nov ballot

NV: 20% by 2015; solar 5% per year

UT: 20% by 2025

CO: 20% by 2020; co-ops & munis 10%; includes 4% solar

AZ: 15% by 2025; includes 30% DG

NM: 20% by 2020 co-ops 10%

TX: 5,880 MW by 2015; goal of 10,000 MW by 2025

HI: 20% by 2020, *and* goal of 70% RE by 2030

MT: 15% by 2015

ND: 10% by 2015

KS: voluntary utility goal: 20% wind by 2020

OK: studying RPS, RE transmission, cost-recovery

MN: 25% by 2025 Xcel 30% by 2020

IA: 1,105 MW by 2011*

MO:11% by 2020; ballot initiative for mandate

AR: utilities should include RE in IRPs

WI: 10% by 2015; Governor's goal of 25% by 2025

IL: 25% by 2025

MI: 10% by 2015, and new RE capacity: 1,100 MW by 2015

OH: 12.5% by 2025, with 0.5% solar

KY: recommends 5-10% goal by 2020

ME: 40% by 2017

NH: 23.8% BY 2025

VT: 25% by 2025

MA: 15% by 2020; goal of 250 MW solar by 2017

RI: 16% by 2019

CT: 23% Class I/II by 2020 4% Class III by 2010

NY: 24% by 2013

PA: 8% Tier I, 10% Tier II by 2020; 0.5% solar set-aside

NJ: 22.5% by 2020, with 2% solar

DE: 20% by 2019, with 2% solar

DC: 20% by 2020; with 0.4% solar

MD: 20% by 2022, with 2% solar

VA: 12% by 2022

TVA: Plan to examine renewable and clean energy potential*

NC: 12.5% by 2021 co-ops & munis: 10% by 2018

FL: PSC drafted RPS; will vote in Oct.

- RPS
- Strengthened/ amended RPS
- Voluntary standards or goals
- Proposed RPS or studying RPS
- Other renewable energy goal

Updates at: http://www.ferc.gov/market-oversight/mkt-electric/overview/elec-ovr-rps.pdf

Notes: Alaska has no RPS; * Iowa has a goal of 1,000 MW of wind by 2010; TVA's "Renewable Energy and Clean Energy Assessment" is from the Public Power Authority; it is not a state policy.
Abbreviations: DG: distributed generation; DR: demand response; EE: energy efficiency; IRP: integrated resource plan.
Sources: Derived from data in: EEI, EIA, LBNL, PUCs, State legislative tracking services, Database of State Incentives for Renewables and Efficiency, and the Union of Concerned Scientists.

Updated October 6, 2008

Collaborative Greenhouse Gas (GHG) Programs

Collaborative Regional GHG Programs:

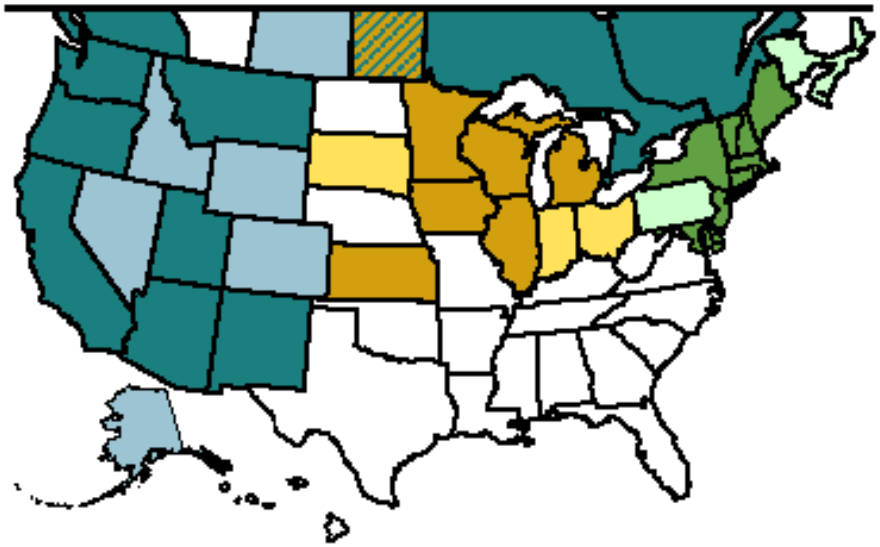
- Groups with goals to lower regional GHG emissions were initiated by Governors at three area Governor Association meetings.
- Each has Participating (or Partner) U.S. states and Canadian provinces.
- Observer jurisdictions do not commit to group GHG reduction goals, but participate in proceedings should they opt to join later.

Western Climate Initiative (WCI):

- Created February 2007
- Partners: 7 states, 4 provinces; Observers: 5 states, 1 province*
- WCI announced its design for a market-based, *multi-sector* cap-and-trade program, Sept 2008:
  - 15% CO_2 reduction below 2005 levels by 2020
  - Phase I to take effect Jan 2012

Midwest Greenhouse Gas Accord:

- Established November 2007
- Participants: 6 states, 1 province; 3 Observer states, 1 province
- *Preliminary* GHG policy recommendation: 15 – 25% reductions by 2020



Regional Greenhouse Gas Initiative (RGGI):

- Takes effect Jan 2009; est. Dec 2005
- 10 Participant states; Observers: 1 state, D.C., 3 provinces.
- Market-based effort to cap and reduce *power-sector* CO_2 emissions.
- 10% CO_2 reduction by 2018 covers over 200 plants
- 188 million allowances to be auctioned through 6 auctions

Auctions:

1. **9/25/08**: 12.5 mil. tons of allowances cleared at $3.07/allowance, raising $38.5 million.
   - 6 states each auctioned 1/6 of their allowances: CT, MA, ME, MD, RI, VT
   - these 6 will offer 16.6% at next 5 auctions
2. **12/17/08**: first 6 states plus NY, NJ, NH, DE: new states auction 20% in 5 auctions. 31.5 allowances in auction

3 to 6: All ten states on same percent basis as prior auctions. 2009 dates: 3/18, 6/17, 9/16, 12/16

Updates at: http://www.ferc.gov/market-oversight/mkt-electric/overview/elec-ovr-ghg.pdf

Notes: Kansas is a MGGRA participant and WCI observer. Ontario is a Partner to WCI and MGGRA Observer.
Sources: Regional initiatives: www.rggi.org, www.midwesternaccord.org, www.westernclimateinitiative.org , trade press, Pew Center.

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Key Challenges

- **Regulatory Turf**
- **Operational/Reliability**
- **Building Needed Transmission**
  - Interconnection Queue
  - Regional Planning
- **Transmission Pricing**
- **Incorporating Demand Side**

Regulatory "Turf"

- Jurisdictional Lines
- State v Federal
- State v State v State
- Regional Issues =

  Regional Solutions

Operational Challenges

Availability



Technological

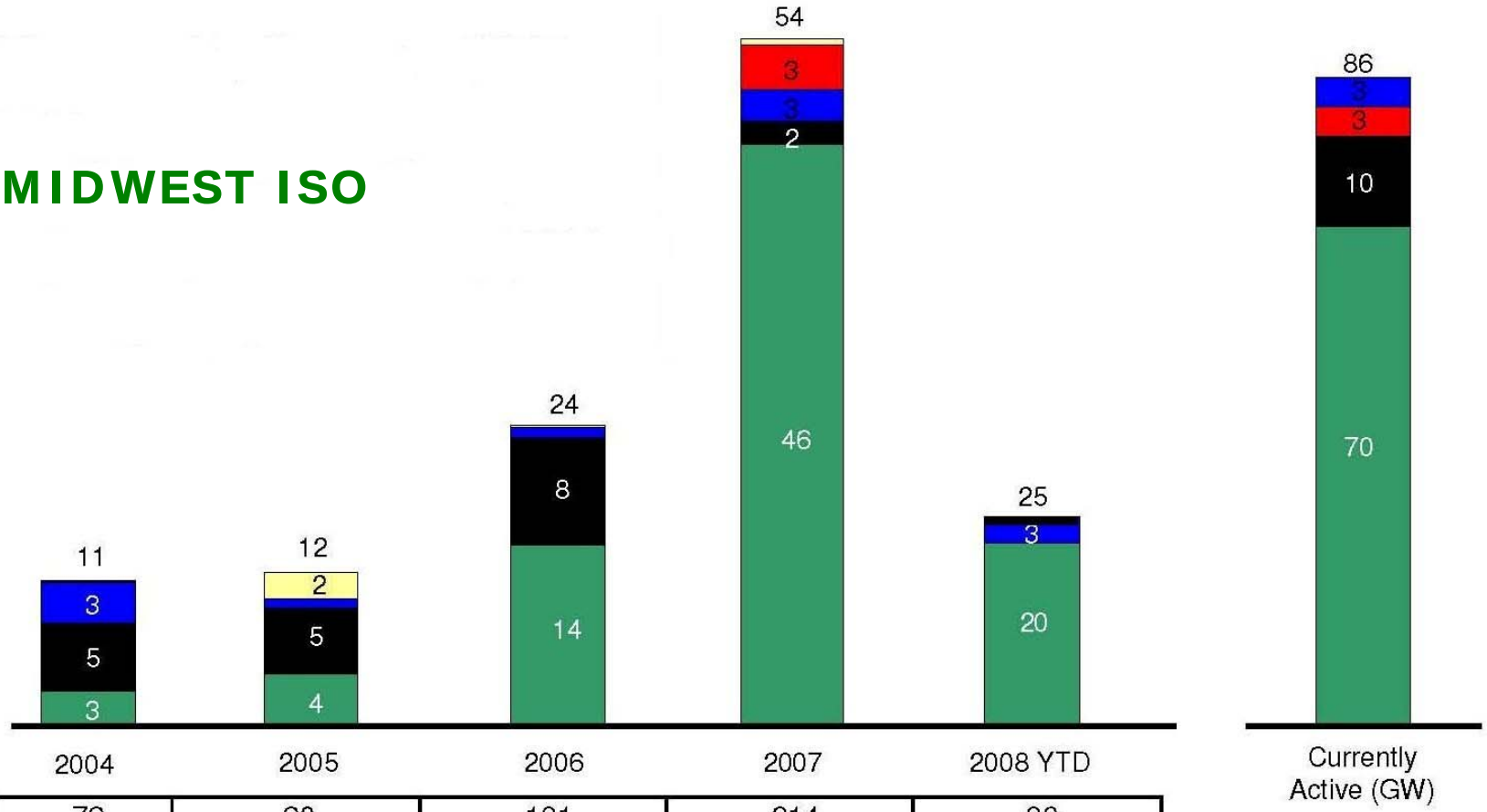


Reliability

Fuel Diversity

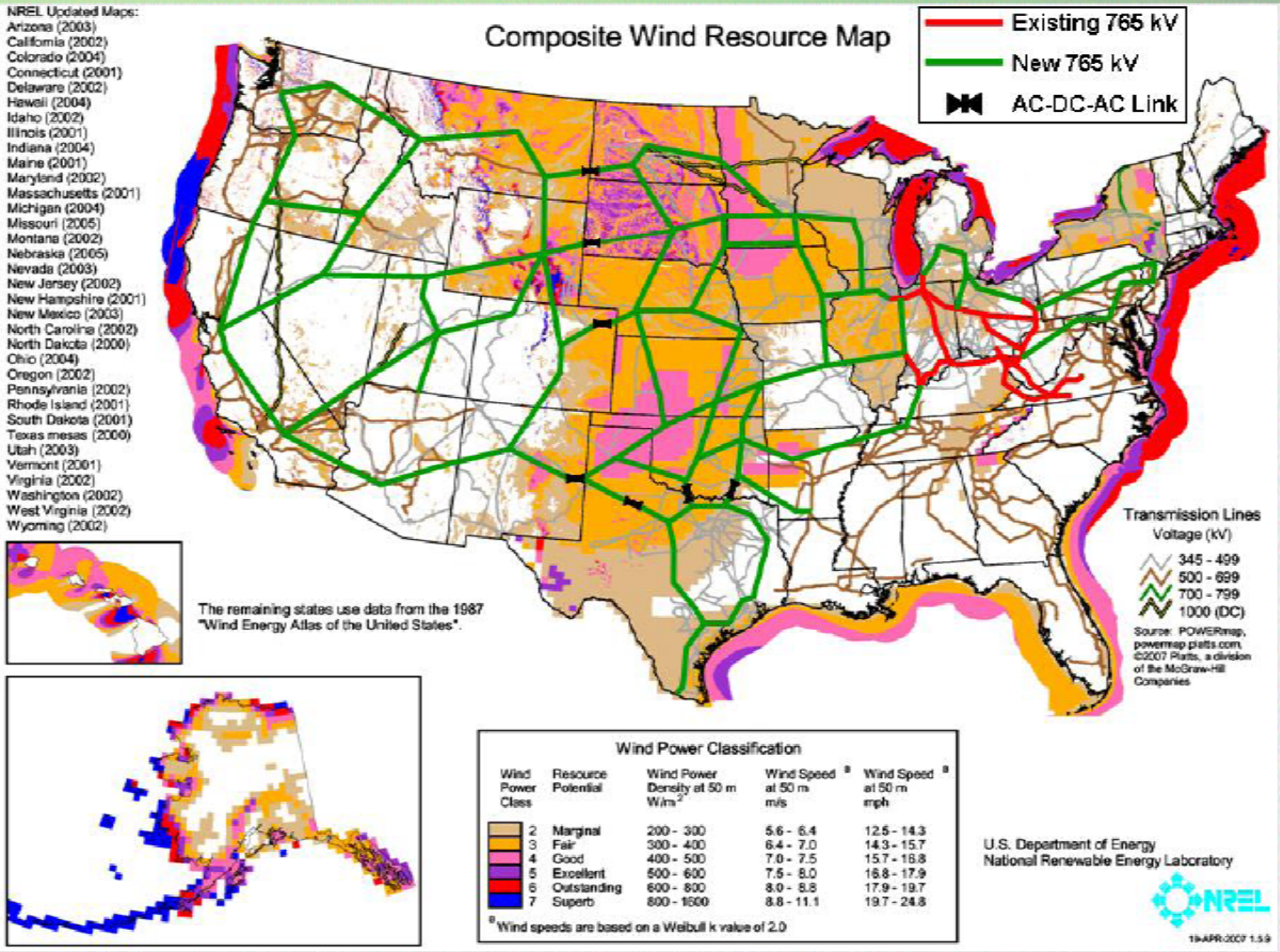
Building Needed Transmission: Queue Reform

MIDWEST ISO



Total # of Requests	79	90	131	214	86
Wind	**43 (54%)**	**51 (57%)**	**99 (76%)**	**165 (77%)**	**70 (81%)**

Building Needed Transmission:
Planning & Siting



Transmission Pricing

- **Incentives**
  - Order No. 679
- **Cost Allocation**
  - Determining Beneficiaries
  - Roll-In vs. Incremental
- **Merchant Transmission**

Incorporating Demand Side

- Other Side of Carbon Equation
- Again - Jurisdiction Can Complicate Issues
- Recent Commission Rule on Improving Wholesale Competitive Markets - Order 719
- Congressional Direction - Energy Independence and Security Act of 2007

Conclusion

- Need for Regulatory Certainty
- Regional Cooperation
- Calibrating Expectations
- Multi-Tiered Approach
- Opportunity - Catalyst for Change