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of public utility regulation
in America.*

Security of Supply: National Challenges Requiring Regional Solutions

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Regulatory Structure

- Electric utilities in the U.S. are regulated at both state and federal levels: the Federal Energy Regulatory Commission (FERC) regulates wholesale sales and interstate transmission services and States regulate everything else (especially retail rates and distribution-level reliability)
- Two regulatory models exist:
 - Economic (Traditional) Regulation
 - Organized or restructured Markets



Restructuring

- In restructured states, consumers can buy electricity from companies other than their local distribution utility
- Rates for electricity supply are determined by wholesale market conditions and are not set by state commissions
- Customers who don't choose or don't yet have options receive Provider of Last Resort (POLR) or Standard Offer Service (SOS) through their distribution companies
 - State commissions oversee POLR or SOS procurement using periodic auctions in some States

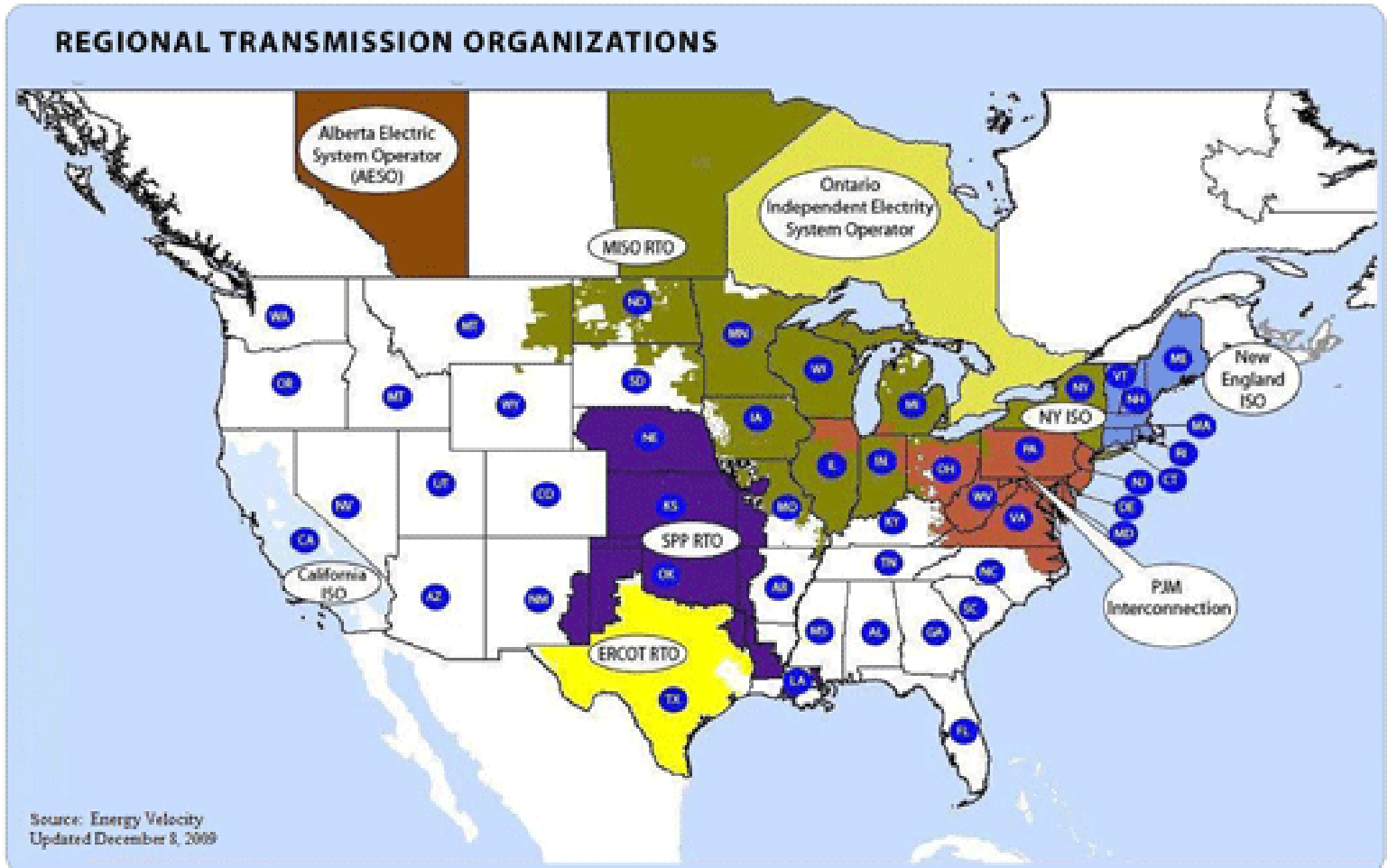


Regional Wholesale Markets

- FERC Order 2000 recognized the creation of regional wholesale markets supported by RTOs and ISOs, providing a flexible regulatory framework for their formation and operation.
- RTOs were designed in part to prevent large-scale blackouts experienced in the West and on the East Coast in the 1990s.
- RTOs and ISOs have also organized market regions in which they operate a day-ahead and/or real-time capacity energy, and ancillary services markets.



RTOs in the United States





Recent Developments

- Competing pressures on electricity prices:
 - Lower natural gas prices have helped lower supply rates since 2009
 - Costs of maintaining and upgrading infrastructure and environmental compliance costs place upward pressure on rates



Market Structures

- Regional markets vary by region and may include
 - Energy market
 - Forward capacity markets of varying terms
 - Combination of energy and capacity markets
 - Ancillary services markets
 - No formal organized market



Pending Environmental Protection Agency Actions

- EPA Regulations compliance costs and deadlines are a challenge to coal-heavy States.
- Key EPA rules affecting electricity address emissions of mercury/hazardous materials; interstate transportation of emissions; release of green-house gases for new and existing power plants; and use of cooling water for generating plants.



Impact of EPA Regulations

- Retire, retrofit or replace existing coal plants?
- Concern over maintaining reserve margins
- Are market structures performing adequately in response to pressures placed on the system?

Specifically, are price signals adequate to incent capacity additions?



Related Issues

- Growing regionalization of transmission and resource planning – Order 1000, interconnection-wide transmission planning projects (e.g., EIPC/EISPC), integration of renewables, demand-side resources, coal retirements and reliability, coordination of operation of gas and electricity markets to ensure reliable service
- Economic Downturn – State commissions manage continuing stress on consumers and diminishing assistance resources

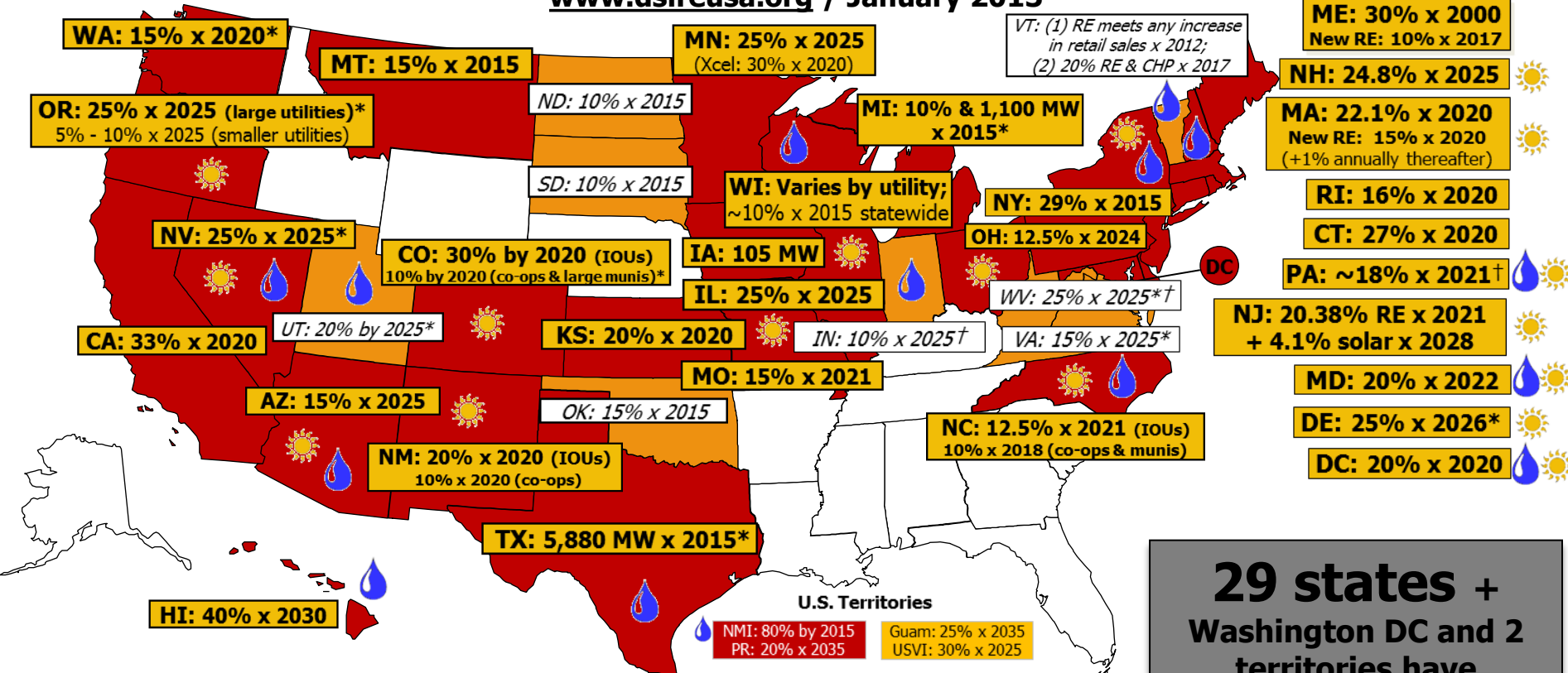


Renewable Integration

- Renewable portfolio standards
 - Early standards now under review
 - FERC and RTO actions to maximize benefit
- Impact of natural gas
- Enhanced security of supply
- Impact of renewables on capacity markets
 - Quantity vs. quality

Renewable Portfolio Standard Policies

www.dsireusa.org / January 2013



- Renewable portfolio standard
- Renewable portfolio goal
- 💧 Solar water heating eligible
- ☀️ Minimum solar or customer-sited requirement
- ✳️ Extra credit for solar or customer-sited renewables
- † Includes non-renewable alternative resources

29 states + Washington DC and 2 territories have Renewable Portfolio Standards
(8 states and 2 territories have renewable portfolio goals)



Thank You

Questions?

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