



NARUC

*Serving the consumer interest
by seeking to improve the
quality and effectiveness
of public utility regulation
in America.*

Introduction to U.S. Electricity Markets

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NARUC/CAMPUT Bilateral Roundtable

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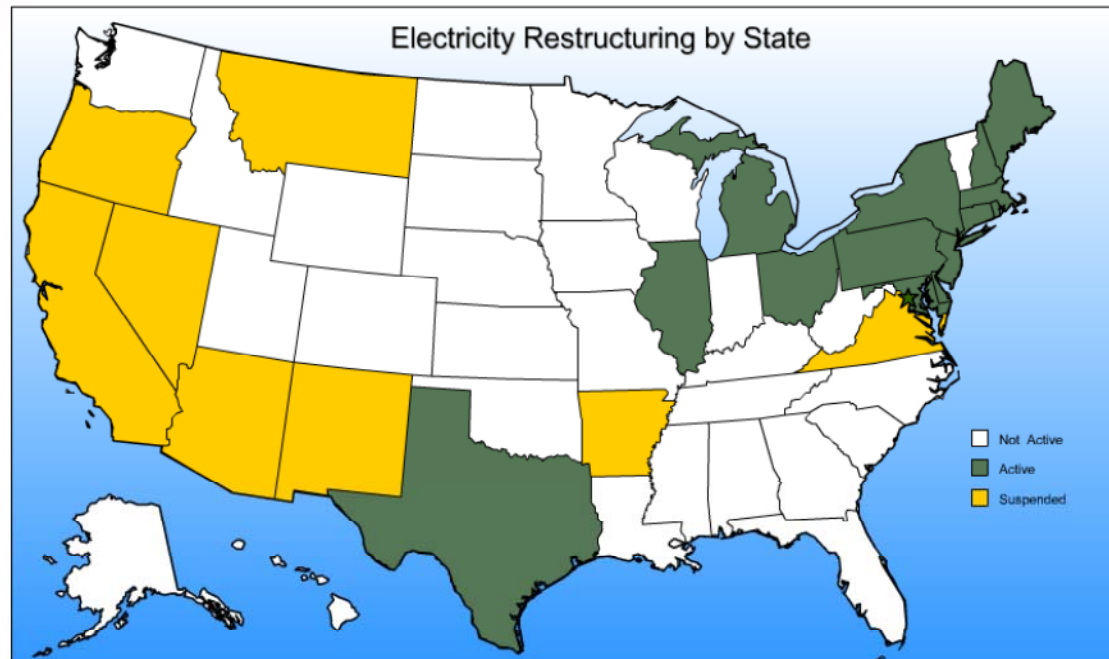


Regulatory structures

- U.S. electric utilities are regulated by both State and Federal regulatory bodies
 - FERC regulates wholesale electricity markets and interstate transmission services
 - Market structures
 - Transmission planning and cost allocation (*e.g.*, Order 1000)
 - Bulk power system reliability (via NERC)
 - State utility commissions regulate everything else, especially retail rates and distribution services
 - Distribution rates in all states
 - Supply rates (integrated states) or default service procurement and retail choice rules (restructured states)
 - Resource planning/adequacy
 - Generation and transmission siting
 - Demand-side resources
 - Distribution reliability



States follow different regulatory models



- Most U.S. states follow an “regulated” model, but many are “restructured.”
 - In regulated states, utilities are vertically integrated and prepare integrated resource plans to serve their load. Supply and distribution rates are set through economic regulation.
 - In restructured states, generation is deregulated and supply rates are set by markets. Distribution services are still fully regulated and distribution rates are set through economic regulation. Restructured utilities do not prepare integrated resource plans, but states retain some authority to direct generation and demand-side resources.



Restructuring

State commissions play important roles in restructured states

Commissions still regulate

- Distribution service
- Supplier licensing
- Fraud prevention and consumer protection
- Affiliate relationships
- Resource procurement by distribution utilities, including default service electricity, renewables and demand-side resources
- Some commissions can order generation

Commissions ensure that utilities

- Do not exercise excessive market power by mispricing utility-affiliate transactions.
- Do not engage in anti-competitive practices

Commissions are a voice for their states in RTO/ISO planning and stakeholder processes and at FERC, especially with regard to market design and rules

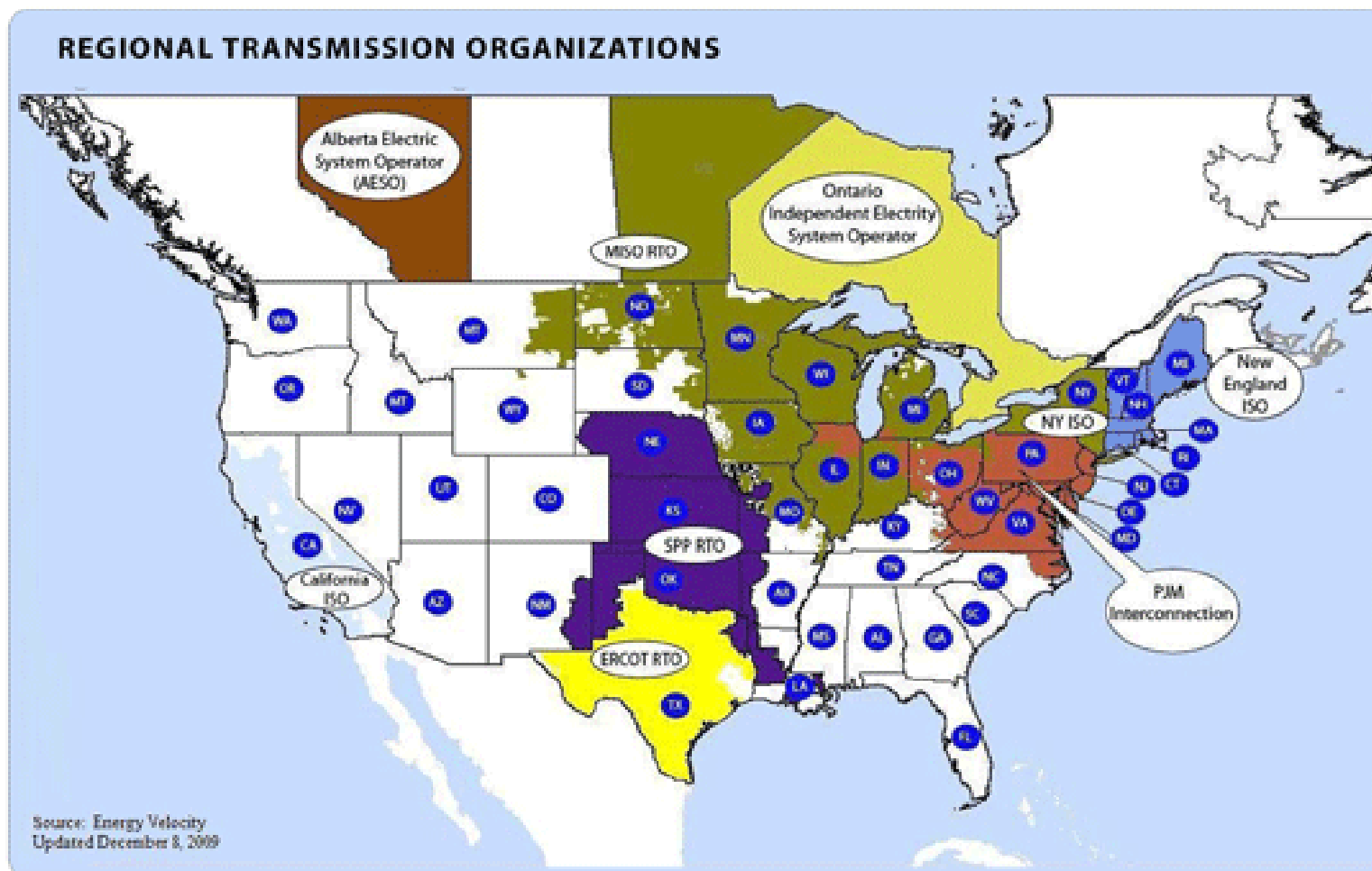


Regional Wholesale Markets

- FERC Order 2000 provided for creation of regional wholesale markets.
- 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 energy and ancillary services markets.
- Regulated and restructured states are part of regional markets
- Independent market monitors enforce market rules, identify market power problems, and keep things fair



RTOs in North America





Federal/State cooperation

- Federal and state regulators meet and interact frequently
 - Federal regulators are NARUC members
 - FERC/NARUC collaboratives
 - National Electricity Forum and other conferences
- EPA Rulemakings on Fossil Generation and GHG emissions
 - 3-5 major rules issued or expected in 2011-2012, including MATS (mercury-air toxics), GHG emissions
 - NARUC Task Force on Environmental Regulations and Generation (TFERG, chair: Gardner, KY)
 - FERC-NARUC Joint Forum on Environmental Regulation (co-chairs: LaFleur and Moeller for FERC, Ziegner and Jones for NARUC)
 - “3-N” meetings: meetings of the state agencies involved in generation and energy – NARUC, NASEO (state energy offices), and NACAA (state air quality agencies). Meet about once per year, recently July 8-10 in Washington, D.C.



Collaboration among states

- NARUC and regional state commissioner organizations create good regional fora
- RTO/ISO regions have regional state committees dedicated to regional transmission and markets issues
 - Organization of PJM States, Organization of MISO States, New England States Committee on Electricity
 - Each is organized a little differently, but each generally has a small in-house staff
 - State commissioners and staff meet regularly, by phone and in person
 - May include committees or subgroups dedicated to specific issues, such as transmission planning
 - Funded by RTO tariff or by agreement with the RTO
- Western States have long coordinated on transmission planning
 - Only one RTO in the West: CA-ISO
 - Through the Committee on Electric Power Cooperation, the Western States and provinces have cooperated for over 30 years on electric power planning, regional issues, and advice to WECC on management of the bulk electric grid
 - Meet several times per year, with funding provided by Western Governors Association and the Western Conference of PSC



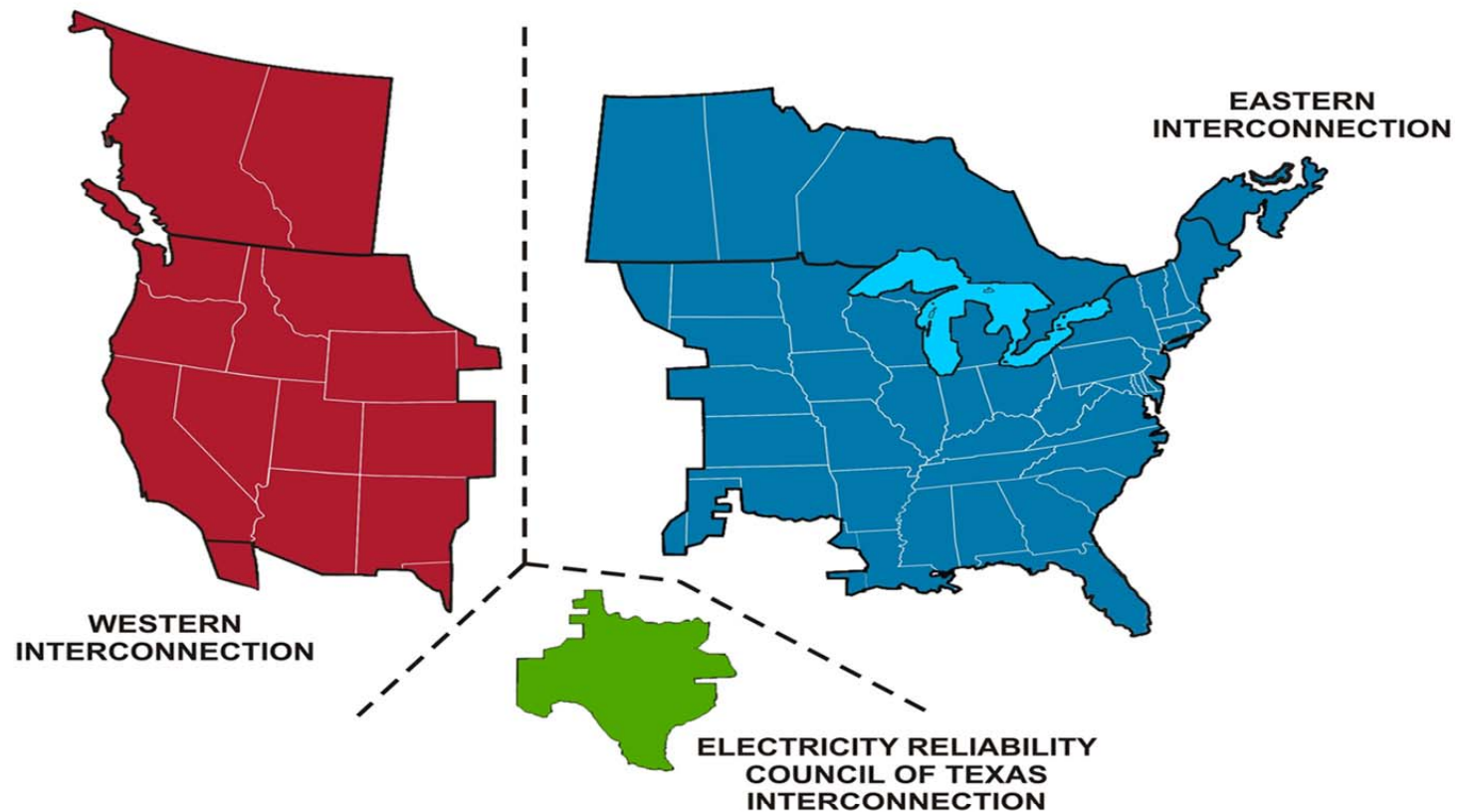
Transmission planning

- Interstate transmission is planned regionally
 - In RTO/ISO areas, RTO/ISO plans transmission through a stakeholder process (FERC Order 890)
 - States are stakeholders and participants, but exact role varies by RTO/ISO
 - Non-RTO/ISO areas plan differently
 - In the Southeast, transmission is planned by utility territory
 - In the West, states plan transmission collaboratively even though they are not in an RTO – WECC *et al.*



The three interconnections

North American Electric Reliability Corporation Interconnections





FERC Order 1000

- Establishes new principles to govern regional and inter-regional transmission planning
 - Requires regional transmission planning processes to consider public policy requirements in state or federal law or regulation, not just reliability
 - Eliminates right of first refusal for incumbent transmission owners
 - Improves coordination for inter-regional transmission projects
- Encourages regions to negotiate cost allocation methodology
- Allows each region to devise its own solutions through its stakeholder processes
 - Compliance filings due October 2012 and April 2013



DOE-funded interconnection-wide planning

- In 2009, Congress authorized funds to begin examining inter-regional, interconnection-wide planning
 - Funding through DOE Office of Electricity Deliverability and Energy Reliability
- Grants were made to organizations in each interconnection
 - New organizations were formed in the East: Eastern Interconnection Planning Collaborative (planning authorities) and Eastern Interconnection States' Planning Council (states)
 - ERCOT and the West had existing organizations
- Each group has deliverables due to DOE in 2012 and 2013
 - EIPC will deliver three fully modeled transmission scenarios – not a plan, but a wealth of new information to inform planners – by year-end 2012
 - Business as Usual
 - Combined Federal Climate and Energy Policies
 - National RPS Policy/Regional Implementation
 - EISPC has participated in developing those and will deliver a series of studies and white papers, most prominently a study of clean energy zones in the Eastern Interconnection by spring 2014
 - ERCOT and the West will deliver similar studies
- Discussions for future inter-regional planning efforts are under way
- DOE also conducts transmission congestion studies every three years – 2012 study is in process