



MISO 101 Primer: Part 3

Legal and Regulatory Overview of Regional Transmission Organizations

Early electric utility regulation in the United States

Electric utilities are natural monopolies

In the early 20th century, the first electricity utility companies began building power stations and power lines to provide electricity to customers. As more people demanded access to electricity, the heavy upfront cost of building power plants, installing poles, and stringing wires was a barrier for new entrants to participate in the electricity industry. These dynamics Electric utilities are natural monopolies. To ensure their fair treatment of a captured customer base, the industry is subject to layers of local, state, and federal regulation.

Local and state regulatory efforts

The first regulations of electric utilities in the United States appeared from local governments. Competing electric suppliers have created sprawling tangles of wires and poles in communities while going trying to gobble up market share in cities. Local governments created contracts with electric distribution companies for use of specific rights of way.

Eventually, corruption amongst utilities and local governments became rampant. In 1907, New York and Wisconsin passed legislation giving regulatory commissions control over electricity rates and services to reign in the electric utility companies.¹ By 1920, most of the states had created public utility commissions (PUCs) to regulate economic features of electric utilities.

Today, PUCs regulate many aspects of the generation, transmission, and distribution systems that deliver electricity to customers. Their mission to ensure the investments made by utility companies are prudent and in the best interest of customers. Each state's PUC has its authority established by state law, so each one is somewhat different. Some have authority over where energy infrastructure can be sited while others do not. Some can require utilities to conduct integrated resource planning while others cannot.²

Federal regulatory efforts

FEDERAL POWER ACT (1935)

Utilities realized the conventional economies of scale in the electric industry: the bigger the power plant, the cheaper the electricity. They began connecting their grids, building joint projects, and buying and selling electricity, including across state borders.

In 1927, the Rhode Island PUC attempted to design rates for power generated in the state and sold to Attleboro Steam and Electric Company in Massachusetts. Seen as an infringement on the Massachusetts Department of Public Utilities' (DPU) authority, the DPU sued Rhode Island PUC. The case rose to the Supreme Court which determined that the states do not have the authority to regulate interstate commerce. In 1935, Congress passed the Federal Power Act (1935) (FPA) fill this regulatory gap.

The FPA authorized the Federal Power Commission (FPC), originally established in 1920, to regulate interstate transmission and wholesale of electricity and natural gas, while giving jurisdiction over intrastate transmission and retail sales to the states.

Under FPA Section 205, all rates and charges to customers for the transmission or sale of electricity under FPC's oversight, must be "just and reasonable" and "non-discriminatory and non-preferential." Under Section 206, the FPC could investigate utilities to ensure that rules or practices affecting wholesale rates are just and reasonable.

The FPC later became the Federal Energy Regulatory Commission (FERC) as part of the Department of Energy Organization Act in 1977.

Landmark orders for regional transmission organizations

There are several landmark orders from FERC that have shaped the regulatory landscape as we know it today. The core components of market competition and regional collaboration, which are the basis for regional transmission organizations (RTOs) for the benefit of customers are captured in these landmark orders. Building on these orders, FERC continues to shape the national energy landscape with orders on issues like transmission planning and market access for energy storage and other new technologies.

FERC Orders 888, 889, and 2000

By mid-1990s, most of the electricity utilities in the industry were vertically integrated and lacked market competition and collaboration. Regulators grew concerned about excess capacity and high rates. FERC tried to create opportunities for independent power providers to contract with utility buyers, even if their transmission systems are not directly interconnected. Hence, FERC required utilities to respond to transmission system access requests on a case-by-case basis.³ However, utilities had a natural incentive to limit access to their transmission systems as these independent power providers posed direct competition to the utilities' own generation assets.

Ultimately, in April 1996, FERC issued Order 888 and 889 to ensure competition as means to achieving just and reasonable rates. Order 888 promotes wholesale competition through non-discriminatory transmission service by public utilities and establishes the framework for Independent System Operators. Order 889 requires adoptions of and standards for the Open Assess Same-Time Information Systems (OASIS), which facilitates the open access use of the nation's transmission grid. These orders require transmission owning-utilities to provide non-discriminatory, unbundled transmission service to support wholesale competition in the electricity industry.

FERC issued Order 2000 on December 20, 1999, which encouraged electric utilities selling electricity across state lines to join an RTO.⁴ Importantly, the order does not mandate that utilities join an RTO; instead, FERC emphasizes that joining an RTO is a voluntary decision.

In Order No. 2000, FERC established the basic requirements for RTOs, preserving flexibility for regional entities to further define the RTO based on regional needs. These minimum characteristics of an RTO include:

1. Independence. RTOs are independent from market participants.
2. Scope and regional configuration. RTOs must have appropriate scope and regional configuration.
3. Operational authority. The possession of operational authority for all transmission facilities is under the RTO's control.
4. Short-term reliability. RTOs have exclusive authority to maintain short-term reliability.⁵

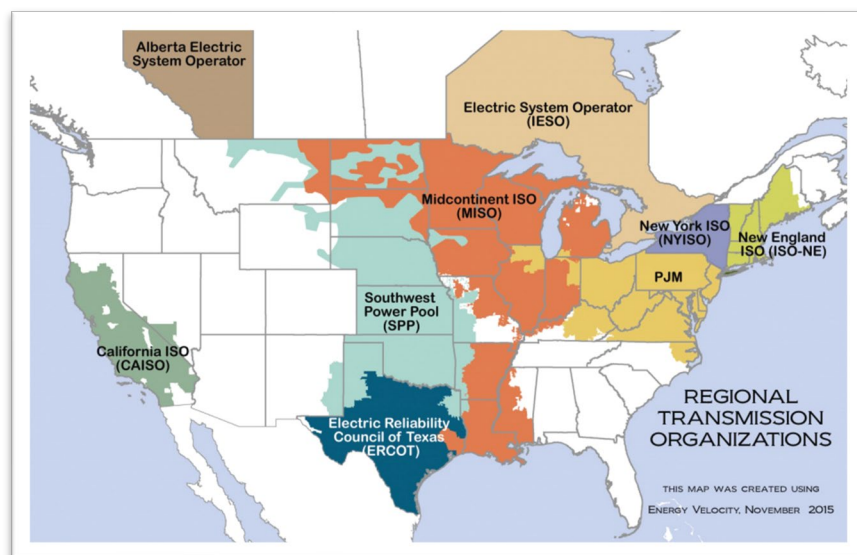
These minimum characteristics allow RTOs to perform several functions critical to transmission system planning, operating, and reliability.

Note that FERC has also defined Independent System Operators (ISOs), which serve many of the same functions as an RTO. These terms are commonly used interchangeably in the industry.

Regulatory oversight for RTOs

RTOs are member-based organizations; as their utility-members' investment decisions are subject to state regulatory bodies, those decisions impact the operations of the RTOs. Furthermore, the RTOs are subject to direct regulatory oversight by federal entities, as discussed above.

Figure 1: RTOs in North America



Source: "Regional Transmission Organizations," FERC (website), accessed September 2nd, 2022, <https://www.ferc.gov/sites/default/files/2020-05/elec-ovr-rto-map.pdf>.

Note that similar grid operator organizations exist in other countries, including Canada, and that international transmission lines facilitate international trade within and between these regions.

Regional States Committees (RSCs)

Regional States Committees (RSCs) are organizations comprised of state PUC commissioners with authority over the utilities in each RTO. They collaborate on RTO-related issues and engage RTOs, FERC, and other stakeholders collectively. Some RTOs include descriptions of RSCs in their tariffs and governing documents filed with FERC, clarifying the role for FERC and market participants. RSC budgets often come from RTOs, and sometimes require FERC approval.⁶ For example, the Organization of MISO States (OMS) budget is included in MISO budget.⁷ While the RSC itself does not have regulatory authority over the RTO, RSC members are the jurisdictional retail authority for the RTO's utility members. As a result, RSCs hold considerable sway in RTO decision making processes.

Federal agencies

FEDERAL ENERGY REGULATION COMMISSION

The Federal Energy Regulatory Commission (FERC) regulates the electricity, natural gas, and oil transaction and transmission between two or more states. It also permits natural gas pipelines connecting multiple states and hydropower projects.⁸ FERC issues orders to regulate RTOs which can be both very broad as discussed above in the Landmark Orders for Regional Transmission Organizations section above, or more narrowly focused on a single issue between a handful of parties. Stakeholders can participate in FERC's regulatory process by submitting comments under FPA Section 205 and Section 206 to question the practices and decisions of parties to FERC proceedings in pursuit of just and reasonable electric rates.

FERC also regulates grid reliability under the FPA Section 215. FERC works with the North American Electricity Reliability Corporation (NERC) to support grid reliability responsibilities.

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

The North American Electric Reliability Corporation (NERC) is an international regulatory authority with the mission of establishing standards and monitoring grid reliability and security.

NERC was founded in March 2006 to enforce reliability standards, analyze seasonal and long-term reliability, oversee the bulk power system, and provide educational opportunities in the electricity industry. NERC creates reliability criteria North America's bulk power system covering cybersecurity, emergency preparedness and planning, frequency and voltage levels, resource adequacy, transmission planning and more.⁹ These standards are applicable to organizations who use, operate, and own part of the electricity grid.¹⁰

Conclusion

The United States has developed layers of local, state, regional, and federal regulation, and processes in an attempt to ensure customers have reliable and affordable electricity. These jurisdictional boundaries intersect and overlap through every facet of RTOs. By understanding

the regulatory pressures on MISO and its members, local governments and other stakeholders can more strategically engage in the MISO stakeholder process.

For questions, comments, and feedback, please contact Matt Prorok, Senior Policy Manager, Great Plains Institute at mprorok@gpisd.net.

¹ Inara Scott, “*Teaching an Old Dog New Tricks: Adapting Public Utility Commissions to Meet Twenty-first Century Climate Challenges*”, Harvard Environmental Law Review 38 (2014): 372 – 413,

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2511041

² Environmental Protection Agency, “An Overview of PUCs for State Environmental and Energy Officials”, (May 20, 2010), https://www.epa.gov/sites/default/files/2016-03/documents/background_paper.pdf

³ Paul Joskow, “*Transmission Policy in the United States*” (Center for Energy and Environmental Policy Research, October 2004), 18-20, <https://dspace.mit.edu/bitstream/handle/1721.1/45025/2004-017.pdf?sequence=1>

⁴ FERC Order No. 2000: Regional Transmission Organizations, 18 CFR Part 35 (1999), <https://www.ferc.gov/sites/default/files/2020-06/RM99-2-000.pdf>

⁵ FERC Order No. 2000: Regional Transmission Organizations, 18 CFR Part 35 (1999), <https://www.ferc.gov/sites/default/files/2020-06/RM99-2-000.pdf>

⁶ Kerry Worthington, *Engagement between States and Regional Transmission Organizations* (National Association of Regulatory Utility Commissioners Center for Partnerships & Innovation, March 2022), 3-4, <https://pubs.naruc.org/pub/6BF1C563-1866-DAAC-99FB-8301548535A0>

⁷ *OMS Funding Agreement* (Organization of MISO States, June 2003), <http://www.misostates.org/images/financial/OMSFundingAgreement.pdf>

⁸ “What FERC Does”, FERC (website), accessed Oct 25th 2022, <https://www.ferc.gov/what-ferc-does#:~:text=The%20Federal%20Energy%20Regulatory%20Commission,well%20as%20licensing%20hydro%20power%20projects>.

⁹ “All Reliability Standards”, North America Reliability Commission (website), accessed Oct 24th, 2022, <https://www.nerc.com/pa/Stand/Pages/AllReliabilityStandards.aspx>

¹⁰ “About NERC”, North America Reliability Commission (website), accessed Oct 24th, 2022, <https://www.nerc.com/AboutNERC/Pages/default.aspx>