

Engagement between States and Regional Transmission Organizations

Prepared for the National Council on Electricity Policy (NCEP), administered by the National Association of Regulatory Utility Commissioners (NARUC) Center for Partnerships & Innovation (CPI)

Prepared by Kerry Worthington, NARUC CPI, March 2022

The price consumers pay for electricity includes costs to generate power and deliver it through various power lines to a home or building (except in the case of onsite generation). According to the Energy Information Administration (EIA), in 2020, generation comprised 56 percent of the average price of electricity in the United States, transmission was 13 percent and 31 percent of the costs were for distribution systems (local service)¹.

Though state regulatory, market, and utility structures vary², each component of a customer's electric bill is of interest to state public utility commissions (PUCs) who are charged with ensuring "just and reasonable" rates for customers.³ As such, understanding the tools and opportunities to influence the cost components and resource mix provided to customers is critical. One of the forums for decision making that may impact what customers pay is the Regional Transmission Organization (RTO); in some regions RTOs are called Independent System Operators (ISOs).

RTOs are non-profit organizations authorized by the Federal Energy Regulatory Commission (FERC) to implement and operate wholesale markets, and conduct planning, operation, and balancing of the interconnected transmission system. RTOs also operate energy and ancillary services markets, and, in some regions, capacity markets. RTO participation is voluntary for utilities and approximately two-thirds of the nation's electricity loads are currently served in RTO regions.⁴ As shown in **Figure 1**, RTOs include ISO-New England (ISO-NE), PJM Interconnection (PJM), New York ISO (NYISO), California ISO (CAISO), Midcontinent ISO (MISO), Southwest Power Pool (SPP), and the Electric Reliability Council of Texas (ERCOT).⁵ Many states are served by more than one RTO. Non-RTO areas include the southeast, southwest, and northwest, which are beyond the scope of this guide.

The footprints of ISO-NE, PJM, MISO, and SPP operators are multi-state. Hence, state coordination and cooperation are particularly important in these regions to effectively influence

There is probably an 80/20 rule here that applies to RTOs. Eighty percent of an RTO is core and fundamental, but the real nuances are in that 20 percent. Each RTO must consider its region's key issues, what and where its generation mix is, the state composition, and where retail customers are.

— Todd Hillman, Senior Vice President and Chief Customer Officer, Midcontinent Independent System Operator (MISO)

- 1 "U.S. Energy Information Administration, "Electricity Explained: Factors Affecting Electricity Prices," February 2021, <https://www.eia.gov/energyexplained/electricity/prices-and-factors-affecting-prices.php>, <https://www.eia.gov/energyexplained/electricity/prices-and-factors-affecting-prices.php>.
- 2 Vertically integrated and restructured markets are among the most popular market types. Some states have both vertically integrated and restructured utilities (Illinois, Texas, and California), while some are partially integrated (Michigan, Wisconsin, and Iowa). Many vertically integrated utilities buy wholesale power through RTOs. Competitive suppliers and large purchasers are also part of the RTO market.
- 3 Public power utilities are often overseen by municipal, regional, or cooperative boards that may not be regulated by state public utility commissions.
- 4 "Electric Power Markets," National Overview, accessed December 28, 2021, <https://www.ferc.gov/electric-power-markets>.
- 5 "Electric Power Markets," Market Assessments (Federal Energy Regulatory Commission, July 20, 2021), <https://www.ferc.gov/electric-power-markets>.

About the NCEP Mini Guide Series

The National Council on Electricity Policy (NCEP) is a platform for all state-level electricity decision-makers to share and learn from diverse perspectives on the evolving electricity sector. The NCEP mini guide series promotes this dialogue by highlighting examples of successful engagement across its members. Each mini guide features collaborative approaches, lessons learned, and interviews with leading state and local decision-makers.

the decision making of the RTO. Regional state committees (RSCs) have been formed by states to coordinate and provide policy input to the RTOs on transmission and wholesale market design and operational issues. Representatives to each RTO's RSC include members of the state PUC; in ISO-NE, members also include non-PUC state officials appointed by the state's governor.

This guide describes the relationship between RTOs and RSCs.⁶ Specifically, MISO and the Organization of MISO States (OMS), ISO-NE and the New England States Committee on Electricity (NESCOE), SPP and the SPP RSC, and PJM and the Organization of PJM States (OPSI) were examined for this guide (Table 1). NARUC conducted interviews with current and former RSC members and current and former RTO executive staff to learn about collaboration among their respective entities.



Figure 1. Approximately two-thirds of the nation's electricity needs are currently served in RTO regions.

ABOUT RTOs

RTOs provide similar suites of services, such as system operation, market operation including ancillary services, and planning; however, each RTO reflects the region in which it operates, and the methods used (e.g., long-term contracts, capacity markets) to secure reliable generation. RTOs are also required to provide market monitoring, either internally or with an independent market monitor. Given these extensive responsibilities, RTOs have staff with wide ranging expertise and budgets that vary with their different responsibilities. The activities of the RTOs are reflected in their mission statements:

- ISO-NE states that its three primary roles are grid operation, market administration, and power system planning.⁷
- SPP describes its role as ensuring reliable supplies of power, adequate transmission infrastructure and competitive wholesale prices of electricity. Additionally, SPP's portfolio of services includes reliability coordination, tariff administration, regional scheduling, transmission expansion planning, market operations, balancing authority, training, and contract services.⁸
- PJM indicates that it operates a competitive wholesale electricity market and a long-term regional planning process.⁹
- MISO considers its role to manage the power grid, administer the buying and selling of electricity, and partnering with members and stakeholders to plan the grid of the future.¹⁰

Members: The structure of the RTO varies from region to region. RTO membership (sometimes referred to as stakeholders,¹¹ participants, market participants, or sectors) can comprise transmission owners, generators,

Table 1. Four RTOs and RSCs Featured in this Guide

RTO	RSC	Jurisdictions served
ISO New England (ISO-NE)	New England States Committee on Electricity (NESCOE)	6 US States
Southwest Power Pool (SPP)	SPP RSC	14 US States
PJM Interconnection	Organization of PJM States	13 US States and the District of Columbia
Midcontinent ISO (MISO)	Organization of MISO States (OMS)	15 US States and the Canadian province of Manitoba

6 States have other mechanisms for influencing the RTOs including RTO membership organizations, organizations of PUC commissioners, governor's organizations, consumer advocate organizations, and individually as state PUCs, consumer advocates, and attorneys general.

7 ISO New England, "Our Three Critical Roles," accessed December 28, 2021, <https://www.iso-ne.com/about/what-we-do/three-roles/>.

8 Southwest Power Pool, "About Us," accessed December 28, 2021, <https://www.spp.org/about-us/>.

9 PJM, "Who We Are," accessed December 28, 2021, <https://www.pjm.com/about-pjm/who-we-are.aspx>.

10 MISO, "Operating the Power Grid, Managing the Energy Markets, Planning the Future Grid," About MISO, accessed December 28, 2021, <https://www.misoenergy.org/about/>.

11 In ISO-NE, there are not "members" – "membership" is referenced in relation to the New England Power Pool; this is explained in "Governance Structure and Practices in FERC-Jurisdictional ISO/RTOs' NESCOE, p. 33, February 2021, https://yq5v214uei4489eww27gbgsu-wpengine.netdna-ssl.com/wp-content/uploads/2021/02/ISO-RTOGovernanceStructureandPractices_19Feb2021.pdf.

retail suppliers, distribution companies (including cooperatives, municipally owned utilities, and consumer-owned utilities), marketers, and end users.

Some RTOs act as the regional reliability organization; in other regions a different organization has that job. In either case, the RTO plans for grid reliability and reports on reliability metrics to organizations like FERC, the North American Electric Reliability Corporation (NERC), and regional NERC groups, while load-serving utilities report reliability metrics to their state regulators. RTOs also have market monitors that evaluate the RTO markets and provide reports to FERC that states access.

— William H. “Bill” Smith, former OMS Executive Director

Some regions distinguish voting members from non-voting members. For example, PJM has 1,045 members, of which 491 are voting members, as of December 27, 2021.¹² In many regions, RTO members participate in committees, even if they are not voting members. Technical committees exist to meet needs such as transmission planning, integrated planning, interconnection, market, seams, subregional groups, dispute resolution, distributed energy resources, participants, customers, reliability, and security.

OPSI is not a member of the PJM Interconnection, so we participate in the stakeholder process, but not as voting members. That decision is intentional, and it is to preserve some litigation rights later in the process if FERC is involved. OPSI members vote on the comments submitted to PJM/FERC. In OPSI’s comments, there is typically a vote breakdown in the footnotes that will note which commissions were in favor, which opposed, and which abstained. OPSI members vote on other matters such as budgets, personnel items, and other organizational matters.

— David Ober, Commissioner at the Indiana Utility Regulatory Commission

Stakeholders: In some regions, the RTO committee process is also considered the stakeholder process and is often the opportunity for states to voice how the RTO’s actions will impact its constituents/customers, state laws and policies, and other priority considerations. The RTO invites stakeholders to participate in committee meetings, sometimes through sectors. RTO foundational documents generally outline the committee process; not all stakeholders are or can be voting members, depending on the region and states’ preference. SPP’s stakeholder process is a prioritization process where SPP posts quarterly updates and proposals on which stakeholders’ comment.¹³

In most cases, an RTO stakeholder is anyone affected by the RTO and may be similar to stakeholders of state utility commission proceedings. Although they may not all participate in formal stakeholder processes, other RTO stakeholders¹⁴ include NERC, regional reliability entities (SERC, Reliability First, and Midwest Reliability Organization), the RTO’s market monitor, other RTOs, non-RTO utilities, special interest groups, regional and national associations, and the public. Many RTOs strive to be an information source for their stakeholders and thus have a dedicated website with training modules for stakeholders (and operators and the public).

In PJM, the market monitor was once a department of PJM but has been independent since 2008, as a result of a settlement that modified the relationship between the monitor and the RTO, and the monitor and the state and federal regulators. The settlement process was lengthy and OPSI played a critical role in FERC establishing an independent market monitor in PJM.¹⁵

— Joe Bowring, Monitoring Analytics

ABOUT RSCs

An RSC is an organization convened by a group of states for the purpose of interacting together with RTOs and the RTO regulator, FERC, with a unified voice as appropriate. RSCs seek to influence the priorities of RTOs with a collective states’ perspective, guided by the public interest. Some RTOs include general descriptions of its RCS in tariffs and governing documents filed with

12 PJM, “Member List,” last accessed December 28, 2021, <https://www.pjm.com/about-pjm/member-services/member-list.aspx>. In PJM, in the case that an individual company has multiple subsidiaries, the holding company may be a voting member, but the subsidiaries may only participate in lower-level committees and may not participate in the sector weighted voting process.

13 Southwest Power Pool, “Stakeholder Prioritization Process,” accessed December 29, 2021, <https://www.spp.org/stakeholder-center/stakeholder-prioritization/>

14 FERC, being the RTO regulator, is not listed as a stakeholder for the purposes of this document. Other RTOs may be considered as part of an RTO strategy but also are not considered a stakeholder for the purposes of this document.

15 <http://www.monitoringanalytics.com/company/Orders/20080321-el07-56-000.pdf>

FERC, clarifying the role for FERC and market participants.¹⁶ RSC budgets often originate from RTOs (and sometimes require FERC confirmation). For example, the OPSI and the Consumer Advocates for PJM States (CAPS) budgets are sourced from a PJM tariff.

One challenge for RTOs and RSCs in regionally pooling power is navigating multiple states' policies; hence, many RSCs were grown in tandem with RTOs and often grew out of existing public utility commission regional entities. Some RTOs, such as PJM, had a state regulatory sector on its original advisory committee, which pre-dated the RSC.

Many interviewees noted that, while forming the RSCs, there was a lengthy process to establish how much authority the RSC would have, how much authority each state should have relative to each other, if the RSC should expand beyond PUC Commissioners, how the group will make decisions, how to handle the imbalance in priority of restructured states and vertically integrated states, and individual state needs, such as transmission buildout. At the time, there were few resources to guide forming RTOs and RSCs.

The SPP filed three times before being recognized by the FERC as an RTO. In its third attempt, it had a favorable recommendation from the states that was conditioned upon an outline of authorities of the RSC, which reflected guidance in FERC Notice of Proposed Rulemaking in Docket No. RM01-12-000, including a definition of a Regional State Advisory Committee (RSAC).¹⁷ OMS, which formed just before the SPP RSC, but after MISO had become an RTO, did not initially seek the same level of authority. Instead, OMS set up a committee structure that is reflective of MISO's committees to be able to provide feedback to MISO and comment at FERC. Much of OMS's organizational process is captured in William H. Smith's "Formation and Nurture of a Regional State Committee."¹⁸

The level of formal participation of the RSCs in RTOs varies: In MISO, the state regulatory sector (and consumer advocate sector) are voting members of the RTO advisory committee process (however, only owner-members vote for Board members).¹⁹ In PJM, the RSC is not a voting member, and the RSC perspective is considered through the stakeholder process; however, the state-appointed consumer advocate office in each of the fourteen jurisdictions throughout the region are voting members in the PJM process.²⁰ In SPP the RSC is not a voting member but has substantial authority to set certain policies (subject to FERC approval) such as the cost allocation methodology used for transmission expansion.

Of the four RSCs reviewed in this guide, the members of three RSCs — OPSI, OMS, and SPP — comprise PUCs with PUC commissioners as board members.²¹ In New England, the NESCOE 'Managers' (its Board of Directors) are comprised of governors' appointees, who are typically state energy officials or PUC commissioners.

In some instances, such as ISO-NE and PJM, the RTO is not legally required to support an RSC position or proposal. NEPOOL collaborates with ISO-NE in managing the regional stakeholder process and has over five hundred members, of which 275 are voting members.²² NESCOE may submit proposals and amendments in the NEPOOL process for consideration and a stakeholder "vote." ISO-NE makes the ultimate determination regarding whether to file a given proposal with FERC, including those that NESCOE sponsored. NESCOE may also support or oppose ISO-NE or stakeholder proposals in the NEPOOL process and, ultimately, at FERC.²³ In addition to stakeholder input within NEPOOL, ISO-NE administers the Planning Advisory Committee²⁴ and Consumer Liaison group.²⁵

16 Some RSCs were established after the RTO's governing document was filed with FERC and therefore may not appear in tariffs or governing documents filed with FERC.

17 "Detailed Summary of FERC's Standard Market Design NOPR," FindLaw, July 12, 2017, <https://corporate.findlaw.com/litigation-disputes/detailed-summary-of-ferc-s-standard-market-design-nopr.html>.

18 William H. Smith Jr., "Formation and Nurture of a Regional State Committee," <https://www.eba-net.org/assets/1/6/11-185-205.pdf>.

19 The number of seats that the sectors hold varies. For example, the state regulatory sector has four seats; the transmission owners have four seats; and other sectors have less than that.

20 CAPS has 16 members from 13 states and the District of Columbia; two states, North Carolina and Illinois have two members in CAPS, but only one member per state in PJM. CAPS as an organization is not a member of PJM; however, the consumer advocates can direct the executive director to vote as their proxy on their behalf.

21 In OPSI, for example, each commission in the region has one designated board member, four of which are officers (President, Vice President, Treasurer, and Secretary). "Home," Organization of PJM States, accessed December 29, 2021, <https://opsi.us/>.

22 New England Power Pool, "About NEPOOL," accessed December 28, 2021, <https://nepool.com/about-nepool/>.

23 New England States Committee on Electricity, "NESCOE'S Focus," Our Work, September 8, 2015, <https://nescoe.com/our-work/>.

24 ISO New England, "Planning Advisory Committee," accessed December 29, 2021, <https://www.iso-ne.com/committees/planning/planning-advisory>.

25 New England States Committee, "Governance Structure and Practices in the FERC Jurisdictional ISOS/RTOS," NESCOE Resources, February 19, 2021, <https://nescoe.com/resource-center/isorto-governance-feb2021/>.

In most regions, the RSC has dedicated staff to support the mission of the RSC, including providing information and analysis. As RSC members turn over due to term limits and changes in PUC or state leader composition, RSC staff provide continuity and can share historical information with new members (e.g., on solutions that previous members had deliberated) while ensuring space for states to share current perspectives. They also reduce the strain of the RTO workload on state commission staff, something particularly important in commissions with smaller staffs.

RSCs such as NESCOE have dedicated staff that attends stakeholder meetings. Some RSCs, such as in SPP's case, rely on the staff of the RTO for administration. In SPP, the RSC relies heavily on the Cost Allocation Working Group committee, composed of state staffs, to develop policy on issues within its authority. The SPP RSC authority includes cost allocation, resource adequacy, and some planning policies. The SPP RSC can direct the RTO to make filings of these policies under the SPP bylaws.

In PJM and MISO, the RSCs participate in the stakeholder committee processes. Another path for collaboration between RSCs and RTOs is through joint board meetings. For example, PJM and OPSI hold formal joint "Board to Board" meetings regularly; and ISO-NE holds regular joint meetings with NECPUC, NESCOE, and the ISO's board of directors. Furthermore, OPSI has a Market Monitoring Committee which convenes public meetings with OPSI, the PJM Market Monitor (Monitoring Analytics), and stakeholders.

Many RSC members and RTO staff acknowledge that communication early and often is a benefit to both groups. The risk of RTOs not engaging states is that members and stakeholders may come to an agreement or point of consensus but the lack of state involvement results in delayed consideration of issues, later impediments to implementation, or litigation at FERC that could have been avoided or narrowed. To demonstrate the value of state review and feedback, some RTOs (through the RSC budget), provide travel support for RSC officials and state staff to attend RSC and RTO functions to ensure that limited state travel budgets do not prevent state participation in the RTO process. In some cases, the executive staff of the RSC is funded through the RTO.

Having an organizing RSC and staff has been effective for advancing tariff designs or transmission planning approaches and harmonizing state goals and mandates with the FERC jurisdictional RTO, tariffs, and processes. NESCOE can make legal filings with FERC expressing support for tariff changes or protesting those changes. Having an organized RSC can aid in having continuity among the states and therefore with the RTO.

— Katie Dykes, Commissioner, Connecticut Department of Energy and Environmental Protection

RSC Relationship with the RTO

Depending on the region, common topics of discussion between RSCs and RTOs include interconnection, transmission and system planning and expansion, demand response, emergency planning, reliability, resource adequacy, cost allocation, rate design and revenue requirements, market power, market monitoring, and market design.

PUC commissions' senior staff also engage with the RTO in meetings, working groups, and on an ad hoc basis where issues of particular importance to the commissions arise. Commissioners trust staff to develop technical knowledge, consider constituents, and write position statements on behalf of states and the RSC. Staff can be instrumental in a state's decision to take policy positions and file comments to the RTO and FERC. In Ohio's case, there is a state statute for a Federal Energy Advocate Office within the PUC. Even in smaller states, there is usually more than one staff member assigned at the PUC to follow RTO issues. Commissioners, new and experienced, often participate in staff discussions to learn more about the issues. For states that are in multiple RTOs, one commissioner will typically be the designee to one RTO and another commissioner will be the designee to the other.

RSCs can take positions at FERC on tariff proposals. RSCs typically have bylaws that will govern how they reach their position, especially when unable to reach a consensus. RSC professional staff can facilitate conversation among the RSC members and articulate the RSCs' collective priorities to stakeholders and the RTO. States may also take and file positions with FERC that are outside of the RSC consensus process or where no consensus has been reached, and in some cases may individually take positions different than those taken by the RSC.

Monitoring what's happening at PJM is not state PUC commissioners' day jobs. They have a very legitimate duty to their state constituents to ensure the delivery of safe, adequate, reliable utility services. That is a very hefty job and a very time-consuming job. PJM wants to operate in the solution space with our states.

— Asim Haque, State and Member Services Vice President, PJM Interconnection

Engagement Among State Agencies Related to RTOs

Many RTOs communicate regularly with their RSC and individual PUC Commissioners and other state officials. For special projects, the RTO might engage other non-RSC agencies, such as the environmental quality departments, as they did while reviewing the federal Clean Power Plan. Some RSCs invite consumer advocates or other agencies to the briefings they receive from the RTO. For instance, consumer advocates can join the Organization of MISO States as associate members. Within PJM, each of the thirteen states and the District of Columbia have a state-appointed consumer advocate office that are voting members.

In some regions, state agencies engage in wholesale electricity policy in other venues. OPSI coordinates the Independent State Agency Committee (ISAC) to bring PUC members and Energy Office Directors together on interconnected transmission system issues. ISAC provides PJM with scenarios for transmission planning and meets during each OPSI board meeting and monthly.

In OMS, members engage with governors through the Midwestern Governors Association. In individual states, some economic development programs, such as Jobs Ohio, help policymakers with a variety of responsibilities create a dialogue among entities and understand what is entailed to build transmission, new generation resources, and serve new customers like data centers.

If there is a topic of interest that they want to have an understanding about, we spend time with State legislators. We are happy to take requests for education and meetings from governors offices as well, but generally speaking, we want to respect the state commission's role in the state as being that primary energy and utility advisor.

— Asim Haque, State and Member Services Vice President, PJM

EXAMPLES OF EFFECTIVE COLLABORATION BETWEEN RSCs and RTOs

RTOs and RSCs coordinate and collaborate across numerous topics and projects. A few specific areas of effective engagement within regions, which were illuminated during the interviews, included: transmission planning, learning about emerging technologies, and emergency operations.

Transmission Planning and Cost Allocation: The RSCs and RTOs collaborate on transmission planning in each region to meet reliability, economic, and policy needs of the states in the region, including transmission project justification, scenario planning, and cost-allocation methodologies. RSCs provide valuable state-specific and regional policy information to the RTOs as they develop these tariffs. Although each RSC and RTO develops and adopts its own methodologies and approaches, each region can point to examples of valuable collaboration leading to an agreed upon decision:

- *SPP:* The SPP RSC developed and approved a cost-sharing methodology called the “Highway/Byway Methodology” between 2009 and 2011. The Highway/Byway Methodology is the primary method used for cost allocation for transmission upgrades identified in the stakeholder planning process.²⁶

- *MISO:* In the late 2000s, states across the MISO footprint adopted renewable portfolio standards (RPSs) which drove a significant increase in wind generation development. The transmission grid at the time was not equipped to handle the amount of generation coming into the interconnection queue, especially in wind-rich areas. State policymakers recognized the need for more transmission to connect the wind generation to load and began a process to develop a new project type and related cost allocation that became known as the “multi-value projects” (MVPs). MVPs are transmission projects that meet regional policy needs, have multiple types of regional economic value, and/or meet a combination of these goals, including reliability.²⁷ OMS was integral in the development of the MVP tariff provisions, participating in stakeholder meetings and leading its own initiative to evaluate the options. Though the resulting OMS proposal was not adopted in full, participation and input from state regulators was key to the success of the MVPs. As of 2021, 16 of 17 MVP projects are in service; one

If you put the smartest people in a room, they will usually hash out a good decision. If people are working on their own, we don't know if it is going to work right.

— Beth Trombold, Commissioner, Public Utility Commission of Ohio

26 Bruce, Rew, “Base Plan Proposal” Cost Allocation Working Group Symposium, Dallas, Texas, October 12, 2004, https://www.spp.org/documents/2383/cawgs_base_plan_proposal_a.pdf.

27 “Multi-Value Projects (MVPs),” accessed December 28, 2021, <https://www.misoenergy.org/planning/planning/multi-value-projects-mvps>.

is delayed, although some construction has started.²⁸ With a great deal of collaboration with state commissions, MISO is embarking on a new portfolio of projects called the Long-Range Transmission Planning (LRTP).²⁹

- *PJM*: An individual state, New Jersey, engaged with PJM and facilitated the first ever utilization of the State Agreement Approach (SAA) to Transmission Planning. The SAA was developed by OPSI.³⁰ The approach was used to meet the guidelines of PJM while meeting the offshore wind initiatives of the New Jersey Board of Public Utilities (NJBPU), under a negotiated structure filed with FERC. The New Jersey SAA is a framework for a competitive transmission process that could bring new, competitive transmission solutions to facilitate offshore wind resources in the PJM footprint. NJBPU staff have outlined the evaluation process and timeline in the 2021 SAA Process Guidance Document, as well as the SAA Agreement, filed at FERC in Docket ER22-902.³¹
- *ISO-NE*: In February 2022, FERC approved a proposal by ISO New England and NEPOOL, supported by NESCOE, that authorizes the ISO to conduct scenario-based, longer-term transmission analysis at the request of the New England states to help the states achieve their policy goals.³²

Education: RTOs routinely offer their extensive technical and operational knowledge and analytical capabilities³³ to stakeholders, including to members of the RSCs and other state decisionmakers:

- Many RTOs have set up robust websites with on-demand learning portals for stakeholders to educate themselves on various aspects of RTO functions and processes. These resources are available to the public.
- Agenda items for discussion during joint RTO and RSC member meetings often include insight and education on technical areas related to planning the bulk power system, operating the system, and designing and operating the wholesale markets that enable the electricity system. RTOs offer technical explanations of trends and forecasts to individual RSC members as well.
- A growing area of interest among the states is energy storage technology. ISO-NE collaborated with NECPUC in 2021 on a training for commissioners and staff on opportunities for energy storage technologies to participate in the wholesale electricity markets.
- PJM offers regular “PJM 101” information sessions to stakeholders and the industry, describing the RTO’s footprint, resource mix, market features, concerns, and anticipated changes in the years ahead. ISO-NE offers an “ISO 101” training for PUCs and other government officials and staff, in addition to training opportunities for stakeholders.
- State PUCs often request, and RTOs often offer, briefings and educational content directly to RSC members. Consumer advocates are often invited to participate in trainings for state commissioners. Other state decision makers can reach out to the RTO or RSC to request notification of educational events.

Coordination for Emergencies: RTOs are regularly engaged with the states on energy emergency planning and communications. For example, ISO-NE holds regular training exercises to review the ISO’s procedures for emergency situations and communications plans. Recently, in response to the COVID-19 pandemic, RTOs worked with state agencies to prioritize testing and vaccinating control room operators and other critical employees for COVID-19 in each of the various states in their footprints to ensure continuity of operations.

MINI GUIDE EXAMPLES

NARUC staff interviewed RSC members and RTO staff to demonstrate the nuance of the relationship between RTOs and the RSCs. Each region is organized in unique ways and demonstrates a variety of ways to understand the complex relationship and how it might vary from region to region. Interviews with SPP and its RSC, PJM and OPSI, and ISO-NE and NESCOE follow. State agency and RTO leads can use these examples to understand each other and continue building positive relationships.

-
- 28 MISO, “MVP Dashboard Report, MVP Dashboard Q4 2021,” accessed March 2, 2022, <https://cdn.misoenergy.org/MVP%20Dashboard%20Q4%202021117055.pdf>; and MISO, “Prior MTEP Status report” December 7, 2021, <https://cdn.misoenergy.org/20211207%20System%20Planning%20Committee%20of%20the%20BOD%20Item%2004%20Prior%20MTEP%20Status%20Report608457.pdf>; and MISO, “MTEP19 MVP Limited Review Report,” accessed March 2, 2022, <https://cdn.misoenergy.org/2019%20MVP%20Limited%20Review%20Report443829.pdf>; and MISO, “Multi Value Project Portfolio: Results and Analyses,” January 10, 2012, <https://cdn.misoenergy.org/2011%20MVP%20Portfolio%20Analysis%20Full%20Report117059.pdf>; and David Boyd & Edward Garvey, “A Transmission Success Story: The MISO MVP Transmission Portfolio,” AESL Consulting, <https://www.aeslconsulting.com/wp-content/uploads/2021/11/MISO-MVP-History.pdf>.
- 29 MISO, “Reliability Imperative: Long Range Transmission Planning,” December 7, 2021, <https://cdn.misoenergy.org/20211207%20System%20Planning%20Committee%20of%20the%20BOD%20Item%2005%20Reliability%20Imperative%20LRTP608458.pdf>.
- 30 Organization of PJM States, Inc., “Memo: State Agreement Approach” June 12, 2012, https://opsi.us/wp-content/uploads/2018/08/State_Agreement_1_letter.pdf.
- 31 “PJM State Agreement Approach” – New Jersey’s 2021 Offshore Wind Transmission Competitive Solicitation under PJM State Agreement Approach, accessed December 28, 2021, <https://www.nj.gov/bpu/about/divisions/ferc/saa.html>.
- 32 178 FERC ¶ 61,137 In Reply Refer To: ISO New England, Inc. New England Power Pool Docket No. ER22-727-000, February 25, 2022, https://www.iso-ne.com/static-assets/documents/2022/02/er22-727-000_2_25_22_ltr_order_accepting_longer-term_planning.pdf
- 33 In PJM, the Market Monitoring Unit Advisory Committee also provides education and information to OPSI and individual states, including formal reports.

Table 2. Mini Guide Interviews

Region	Name	Position	Organization	Organization Type
Southwest Power Pool	Andrew French	Commissioner	Kansas Corporation Commission	State Agency
	Paul Suskie	Executive Vice President of Regulatory and Legal	Southwest Power Pool	RTO
PJM Interconnection	Beth Trombold	Commissioner	Public Utility Commission of Ohio	State Agency
	David Ober	Commissioner	Indiana Utility Regulatory Commission (IURC)	State Agency
	Asim Haque	State and Member Services Vice President	PJM Interconnection	RTO
ISO - New England	Katie Dykes	Commissioner	Connecticut Department of Energy and Environmental Protection	State Agency
	Eric Johnson	External Affairs Director	ISO-New England	ISO

Each person interviewed expressed their own opinions. Inclusion in this document does not indicate the author’s or organization’s endorsement of any statement or suggestion.

SPP and the SPP RSC

Fourteen states are in the SPP RTO footprint (grown from five states in the original power pool). SPP administratively supports the RSC, which is made up of one commissioner per member state. The SPP RSC has primary authority over four SPP RTO policies, including resource adequacy. More information about SPP and the SPP RSC is in *The History of the RSC for the Southwest Power Pool, Inc.* (2021).

The following section presents condensed excerpts from interviews conducted with Commissioner Andrew French, Kansas Corporation Commission (KCC), and Paul Suskie, executive vice president of regulatory and legal, from the Southwest Power Pool (SPP).

How are RSC members and their staff engaged with SPP and RSC working groups?

Paul Suskie, SPP: Depending on the issue, SPP engages with the RSC about twenty-five times throughout the year and the individual state commissions at least once a year. About half of those engagements are education-based. SPP provides updates on topics the RSC wants to learn about. Occasionally, SPP staff provide testimony to individual state commissions in pending dockets and more often provide informational briefings to state commissions on the SPP RTO. The RSC formally meets quarterly with a set agenda the day before the SPP board and more often informally on education or planning matters. The Cost Allocation Working group meets more frequently.

Andrew French, KCC: Working groups include the Cost Allocation Working Group, SPP Strategic and Creative Re-engineering of Integrated Planning Team (SCRIPT) Working Group, the Consolidated Planning Process Task Force (CPPTF), and the Regional Allocation Review Task Force. Membership of SPP working groups is often broad. For example, the SCRIPT, CPPTF, and RARTF all have diverse stakeholder membership (RSC members, state regulatory commission staff, generation developers, and utilities, with technical and administrative support from the SPP staff) to promote a holistic understanding and consider a diversity of viewpoints.

Paul Suskie, SPP: Cross-participation is beneficial when the decision-makers in SPP and the RSC make broader decisions. It prevents a great engineering concept from being scrapped. For example, when looking at how to move forward from the polar vortex of 2021, there are questions about having the right resource mix and policies in place for extreme weather events, which is within the authority of the RSC.

What are some functions and decision-making processes of SPP’s RSC relative to SPP?

Andrew French, KCC: The RSC has tariff authority – for example, certain cost allocation decisions, planning for resource adequacy – and votes on those items in the RSC business meeting. SPP staff often brings items to the RSC for a vote or a consensus recommendation to be considered by the SPP Board of Directors even when that item may not specifically come under our

authority. If commissioners want to be effective for their states and the region, they will need to have a strong voice, because SPP is looking to get that feedback.

Paul Suskie, SPP: In most cases, the RSC will develop and approve a white paper on their policy stance. SPP will take the PRSC's white paper, draft implementing tariff language, and return it to the RSC to confirm if it is consistent with the RSC's approved policy. After the RSC adopts a policy, SPP staff will bring those items to the Board to approve via a SPP filing at FERC. Once it is at FERC, it is open for comment. Under SPP's bylaws, the SPP RTO can file a competing proposal to the RSC's policy, but it has not done so before. That shows that the relationship is working. Where the SPP RSC is unique is that the RSC has the authority to decide key policies, and the RTO makes the filing for FERC approval. The RSC has used its cost allocation authority twelve times, its Financial Transmission Rights (FTRs) three times, Planning for Remote Resources authority three times, and its Resource Adequacy authority twice over 18 years. FERC has only rejected one filing and the rejection was unrelated to the RSC's policy.

"In this industry, with this much complexity, you cannot over-communicate."

— Paul Suskie

What are some keys to positive engagement?

Paul Suskie, SPP: When the RSC membership is consistent for several years, teams work well. This is a complex business, and it takes a while for state commissioners to get up to speed, particularly if they are from outside the industry. Once they have been there a while, the commissioners get engaged in the stakeholder process, and it works a lot more efficiently. Another key is to treat all stakeholders fairly and not get too provincial.

Andrew French, KCC: When I participate on the RSC at SPP, I am representing Kansas, whether those interests are state-jurisdictional, or just broadly reflective of the public interest of the state of Kansas. When representing Kansas, I recognize that we are part of the region, and we typically benefit if the entire region benefits. Take the recent winter weather event for example: In SPP, we did have a couple of controlled service interruptions that were shared across the whole region. Some individual utilities may have had enough power available for their customers at the time SPP directed a region-wide service interruption. But, for that same utility, there were other times during Winter Storm Uri when they were able to rely on the pooled power in the region to avoid an outage. That is sort of the trade-off we accept when we choose to work together as a region. Ultimately, those trade-offs are worthwhile, and customers throughout the SPP footprint enjoy more reliable and affordable electric service by working with our neighbors.

PJM and OPSI

PJM Interconnection was originally a power pool established in 1927, expanded in 1999, again in 2005-2007. The members of the PJM RSC, OPSI, wanted to maintain their individual authority to file at FERC while deciding on the governance of the organization. PJM has a footprint of 13 states and the District of Columbia, spanning from states with offshore wind at the Atlantic Ocean, through Appalachia, to major cities like Chicago. In addition, the retail market structures of the states within the footprint range from vertically integrated utilities to restructured competitive markets. OPSI and PJM have had to navigate this variety of state policies within the footprint.

"The nature of elected commissioners is that there was not a central place in Louisiana to meet – I met Commissioners over iced tea on their porches during the days when MISO expanded into Entergy states."

— Steve Kozey, former MISO General Counsel

The following section presents condensed excerpts from interviews conducted with Commissioner Beth Trombold of the PUC Ohio (PUCO), who serves as OPSI president; Commissioner David Ober, Indiana Utility Regulatory Commission (IURC), who serves on the OPSI Board; and Asim Haque, state and member services vice president, at the PJM Interconnection.

How does OPSI engage with the states and PJM?

Beth Trombold, PUCO: OPSI is made up of the commissioners in the footprint, the designee from each state, and staff. OPSI commissioners get on a monthly phone call. OPSI staff are meeting more frequently, percolating on issues and deciding if they are items that the board should be discussing. PUC staff assigned to OPSI meet twice on Fridays, and, if needed, other days of the week. PJM is involved with OPSI on a staff-to-staff level. The executive director might invite someone from PJM or utilities to talk about things like offshore wind, Base Residual Auction, FERC filings (2222), or resource adequacy.

David Ober, IURC: You don't have to be a member of a board that is assigned to interact with the RTOs to engage the RTO. If you have an interest in the bulk power system and transmission system, how the RTO manages the system, how pricing and markets

work, reach out to the RTO, whether you are the designated person for your state or if you are just a commissioner trying to learn the ropes. It is in the interest of the RTO to engage all commissioners and commission staff.

Asim Haque, PJM: There is an incredible amount of communication between OPSI and my unit, which is the state government policy unit, PJM. We have three meetings annually between the OPSI board and the PJM Board of Managers. We also have a monthly scheduled PJM/OPSI meetings where agenda are determined in advance. The OPSI staff meets twice a week, and its board meets on a particular cadence. There are times when items are advancing; for instance, within the PJM stakeholder process, or there is a filing that we're going to advance at the FERC, that we will ask for time during those staff discussions and even during board meetings to provide necessary updates.

Can you describe how OPSI and PJM navigate the diverse footprint of PJM?

Beth Trombold, PUCO: Ohio is an interesting part of OPSI because we are one of the larger loads in the interconnection (in addition to Pennsylvania). When considering costs within the RTO, there is oftentimes a tendency to want to socialize costs across the largest ratepayers. Since Ohio is home to the many of the larger ratepayers, we are often tuned into cost allocation when smaller states want costs distributed across the RTO. Understandably, each state will pursue policies that are in the interest of their own ratepayers. Another interesting note is that unlike Ohio, some states only have a fraction of their state within the RTO. That can direct to what degree they are involved with OPSI and PJM, and where their priorities may lie.

Asim Haque, PJM: There is also just the element of picking up the phone and giving folks a heads-up on what is going on. At times, we try to wrangle the right people to sit down if one state has a concern so we can have a conversation. PJM has vertically integrated and restructured states, states that want to rely on heavily competitive markets (and others that do not), some with aggressive policy goals for clean energy, fossil, offshore wind, and nuclear. We have a remarkably diverse generation footprint where states often do not perceive a given issue with uniformity, and so that requires a lot of one-off discussions as well. It is an ART, frankly. You have formal structures in place but there is a lot of informality that occurs in-between those formal structures.

David Ober, IURC: I think anytime we can get our states together to sign onto comments from all the states, it carries more weight at FERC. It is not something that you can do as an individual state. It is a challenge to get fourteen jurisdictions to agree on an appropriate course of action or a set of comments. Some states file individually because they have a state-specific comment that they could not get into OPSI comments or are looking to add more weight to OPSI comments. We work well together and respect each other, it is very collegial, and I hope that it stays that way.

What current issues are you discussing between OPSI and PJM and what has been a recent success?

Beth Trombold, PUCO: At Board-to-Board meetings, recent topics have included markets, the Minimum Offer Price Rule (MOPR), resource adequacy in terms of renewables and the impact of renewables on the grid, and governance of PJM. More recently, some states have been involved in understanding how PJM is governed: who are the members of the board, and if the regulator perspective should be on the board to understand our concerns and the impact that the decisions have had on the states. The PUC is in touch with the governor and vice versa, so we get a lot of the heat when things do not go right. The board members might not understand their role in this process. PJM leadership has brought in new members and has various leadership experiences for their Board to get a broader, global perspective on issues as they come through. We have agreed to disagree on many issues, but it has been professional and constructive on each item.

David Ober, IURC: More perspectives from state commissions within management at the RTO would certainly help states.

Asim Haque, PJM: At present, the thing that most intersects policy at PJM is the capacity market, because it is effectively about resource choice, resource selection, and resource adequacy. When the FERC advanced its MOPR order in December 2019, one of the very first briefings we held was with OPSI. My team and I got in cars and planes and visited every commission that wanted to have an individually tailored briefing. On that order, we committed to a certain level of reform to the capacity markets. The order had quite a bit of feedback from OPSI; OPSI advanced an almost-unanimous board letter to the PJM board saying that we think PJM needs to reform and outlined why. There has been quite a bit of discussion post that order, including the type of reform that the States wanted to see such as having an advanced and accelerated stakeholder process to try and reform. The accelerated stakeholder process at PJM has built into it a specific time for states to provide their feedback. That meeting happened on June 30, 2021.

Beth Trombold, PUCO: In one of the re-hearings for the MOPR, PJM put out a decision that made it appear (in a small footnote) that state auctions should also be under the MOPR, which took everyone by surprise. Asim at PJM knew that Ohio had a particularly successful Standard Offer of Service (SOS) auction for people that don't "shop around" and thus, do not participate in customer choice. Ohio and other states with an SOS developed a tariff and worked it through the stakeholder process, which

is not an easy task. We worked as a team, and it ended up in PJM's tariff. FERC approved it from there and exempted the state service auctions.

NESCOE and ISO-NE

NESCOE's Board of Directors, referred to as 'Managers,' lead NESCOE.³⁴ Managers are governors' appointees from each of the six ISO-NE states, which provide input to the regional electricity transmission planning process, wholesale market design and administration, and system operations. For example, Katie Dykes has served as a NESCOE manager in her former roles as leader of the Connecticut's energy office and chair of the utility commission, and now in her current role as commissioner of the Department of Energy and Environmental Protection. All six New England states participate in NESCOE; five are restructured states, whereas Vermont is vertically integrated. Recently, the NESCOE managers published a joint Vision Statement and follow-up report to the New England governors. Topics identified as needing reform included wholesale market design, transmission planning, ISO-NE governance, and attention to equity and environmental justice.³⁵ NESCOE participates in the NEPOOL stakeholder process, but is not, by choice, a voting member. NEPOOL, the regional stakeholder organization, works closely with ISO-NE in administering the regional stakeholder process.

The following section presents condensed excerpts from interviews with Commissioner Katie Dykes of the Connecticut DEEP and NESCOE manager and Eric Johnson, external affairs director, of ISO-New England.

How are NESCOE and ISO-NE engaged?

Eric Johnson, ISO-NE: Wholesale electricity market issues, transmission planning, and governance are among the main areas of recent discussion with the RSC and other state officials. The ISO has regular interactions with both state PUC commissioners (and staff) and RSC representatives (NESCOE Managers and staff). The state PUCs tend to focus on electric distribution system issues whereas NESCOE tends to focus on wholesale market design concepts and regional system planning, although the groups and discussions do overlap. There also is an extensive, long-running dialogue with the states about regional transmission planning. That dialogue focused initially on transmission planning and cost allocation for reliability-based projects, and more recently has shifted to the ISO providing technical analysis to the states to evaluate potential transmission options to achieve their longer-term energy and environmental objectives. The ISO-NE tariff includes expanding opportunities for NESCOE to provide input to the ISO on system planning, and to request technical analysis from the ISO on behalf of the New England states.

Katie Dykes, CT DEEP: NESCOE is a non-voting participant in the New England regional stakeholder process. NESCOE, and New England states individually, do not have a vote in the New England Power Pool (NE-POOL) stakeholder process. NESCOE's origin story reflects a need for the states to be engaged early in the stakeholder process to advance their interests, to have analysis to inform their views, and reduce litigation around key RTO matters down the line. When ISO-NE was created in 1997, states primarily operated through NECPUC, the PUC commissioners conference; but there was a desire by the New England Governors for the states to have dedicated resources to enable support and analysis to states as they develop and share their views with ISO-NE and ISO-NE's regulator, FERC. Now, NECPUC and NESCOE have joint, quarterly meetings with the ISO New England board, and on a similar frequency with leadership of the various sectors of NEPOOL.

How do NE-ISO and NESCOE balance their scopes and state policy objectives?

Eric Johnson, ISO-NE: The states have clear requirements, either in statute or within their executive-branch powers, that have prompted them to take certain actions to achieve their goals. This includes, for example, policy support for energy efficiency, renewable energy, or clean energy. The scope of the ISO's responsibilities falls under the jurisdiction of FERC. The ISO has a unique mission, which is to administer the wholesale markets in a resource-neutral manner. The states' responsibilities, in comparison, are set out by their legislatures. We are working together to meet both objectives and achieve a clean and reliable power system.

Katie Dykes, CT DEEP: NESCOE is funded through the ISO-NE tariff. For that reason, NESCOE has a responsibility to provide and submit a budget for FERC review and acceptance. NESCOE has had to navigate boundaries between state clean energy or states exercising their responsibilities and authorities under state law and matters within FERC's jurisdiction, which is where NESCOE's scope of activities lies. For example, a couple of years ago, Rhode Island, Massachusetts, and Connecticut launched a three-state

34 NESCOE is a different group than the New England Conference of Public Utilities Commissions (NECPUC). NECPUC is the regional affiliate of the National Association of Regulatory Utility Commissioners (NARUC), with PUC members and PUC commissioners as board members.

35 New England States Committee on Electricity, "New England States' Vision for a Clean, Affordable, and Reliable 21st Century Regional Electric Grid," October 2020, https://yq5v214uei4489eww27gbgsu-wpengine.netdna-ssl.com/wp-content/uploads/2020/10/NESCOE_Vision_Statement_Oct2020.pdf; and New England States Committee on Electricity, "Report to the Governors: Advancing the Vision," NESCOE Resources, June 29, 2021, https://nescoe.com/resource-center/advancing_the_vision/.

RFP for procuring clean energy and renewable energy and associated transmission. With the assent of all the NESCOE Managers, NESCOE staff played a facilitating role for the states in developing some aspects of the RFP given its prior work on coordinated procurement as directed by the New England Governors. Once the document preparation was complete, NESCOE's assistance ended; participating states and relevant utilities issued and thereafter conducted the RFP.

What advice do you have for a new NESCOE member?

Eric Johnson, ISO-NE: It is an exciting time to be in the industry. The work of the ISO is very technical in terms of the analysis that we perform. We make every effort to help new NESCOE members or NECPUC Commissioners and their staff to stay informed on regional electricity issues, especially if they are new to the role. We develop online training, in-person and virtual training, factsheets, and other informational resources in non-technical terms to break down the concepts. We hope that they will reach out anytime if they need our support.

Katie Dykes, CT DEEP: Two-way information flow is critical. Information from the states going into the RTO process, but also, considerations from RTO operations and planning need to be flowing into state policy processes and into some places where that is functioning well. NESCOE has contributed to that. There are places where there is more to do to make those connections.

This material was authored by Kerry Worthington of the National Association of Regulatory Utility Commissioners Center for Partnerships & Innovation and is based on work supported by the U.S. Department of Energy under award number DE-OE0000818 and DE-OE0000925.

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

Acknowledgments

The author wishes to thank the following individuals for contributing their time and expertise to the development of this paper:

- Joe Bowring, Market Monitor for PJM at Monitoring Analytics
- Danielle Sass Byrnett, NARUC
- Hon. Katie Dykes, Connecticut DEEP
- Hon. Andrew French, Kansas Corporation Commission, and current members of SPP RSC
- Steve Gaw, former Missouri PSC Chair, founding member of the SPP RSC and OMS, and Missouri Speaker of the House
- Asim Haque, PJM Interconnection and former Ohio PUC Chair and member of OPSI
- Todd Hillman, MISO
- Eric Johnson, ISO-NE
- Steve Kozey, former MISO General Counsel
- Talina Mathews, SPP and former Kentucky PSC Commissioner and member of OMS
- Hon. David Ober, Indiana Utility Regulatory Commission
- Tanya Paslawski, NARUC and former Executive Director of OMS
- Greg Poulos, Consumer Advocates of PJM States (CAPS)

- William H. "Bill" Smith, former Executive Director of OMS
- Paul Suskie, SPP and former Chair of Arkansas PSC and member of the SPP RSC
- Hon. Beth Trombold, Ohio PUC
- Tom Welch, former Chair of the Maine PUC and former PJM Interconnection leader



About the National Council on Electricity Policy

NCEP is a platform for all state level electricity decision makers to share and learn from diverse perspectives on the evolving electricity sector. The community includes representatives from state public utility commissions, air and environmental regulatory agencies, governors' staffs and energy offices, legislatures, and consumer advocates. NCEP is administered by the National Association of Regulatory Utility Commissioners (NARUC) Center for Partnerships and Innovation (CPI).

NCEP serves as a forum for collaboration around grid-related topics at state, regional, and national levels, offering a unique opportunity for state electricity decision makers throughout the country to examine the ways new technologies, policies, regulations, and markets impact state resources and the bulk power system.



NARUC

National Association of Regulatory Utility Commissioners

About the NARUC Center for Partnerships & Innovation

NARUC CPI identifies emerging challenges and connects state utility commissions with expertise and strategies to navigate their complex decision-making. We accomplish this goal by building relationships, developing resources, and delivering training that provides answers to state commissioners' questions. CPI works across four key areas on a wide range of projects: energy infrastructure modernization; electricity system transition; critical infrastructure, cybersecurity, resilience; and emerging issues. CPI is funded by cooperative agreements with the U.S. Department of Energy (DOE), the National Institute of Standards and Technology (NIST), and charitable sources.