

Introduction

Given the impacts of PJM Interconnection's market rules on costs and energy resource choices for the states in its region, states would benefit from a larger voice at PJM. The Organization of PJM States, Inc. (OPSI) is the primary means for state involvement in PJM. Compared to its counterparts in other Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs), OPSI has less formal engagement and influence on PJM rules than any other regional state entity. Strengthening OPSI's role would help ensure that states have meaningful opportunities to influence PJM's rules and policies.

Enhancements to the PJM decision-making process could significantly increase states' role, improve outcomes, benefit wholesale and retail customers, and reduce the need for rulemaking challenges and litigation. Options include soft change, rule or tariff changes to increase states' role in PJM decision-making, and giving OPSI the rights to make filings with FERC under Federal Power Act Section 205.

On the soft side, developing better relations and collaboration between the PJM states, board and management could yield great benefits. Stakeholders are optimistic that PJM management and the board are now or will focus more on collaboration and better communication. On the structural side, changes to the Operating Agreement, Reliability Assurance Agreement or Open Access Transmission Tariff would enhance PJM states' influence on PJM rules and tariffs. Another option would be to allow states to become members of PJM.¹

This paper proposes options for strengthening PJM states' role and OPSI's voice at PJM. In doing so, it looks at how states in other regions interact with RTOs and ISOs.² A goal of this paper is to encourage discussion of how informal or more formal state engagement could benefit everyone — states, retail and wholesale customers, and PJM.

¹ These and other options are discussed at the end of this paper.

² This paper is heavily in debt to the prior work found in Chen and Murnan (2019), https://nicholasinstitute.duke.edu/sites/default/files/publications/print/state_participation_in_resource_adequacy_decisions_print.pdf, and to conversations with many involved with RTO state committees. For another perspective on RTOs see Kavulla (2019), https://www.rstreet.org/2019/08/30/problems-in-electricity-market-governance-an-assessment/.

State Roles in Regional Resource Adequacy Rules and Policy

Resource adequacy planning has been particularly contentious in PJM and is only becoming more so. The Federal Power Act generally reserves generation planning for states, while clearly making transmission service and wholesale energy sales FERC jurisdictional. There is a strong justification for continuing state oversight and influence over resource adequacy in particular. With states' increased interest in choosing their resource mix in recent years, and PJM's interest in responding to state policies with rules that raise offer prices and overall capacity prices through the Minimum Offer Price Rule (MOPR), this conflict has come to a head in the high profile FERC proceeding on changes to PJM's capacity markets. States have found they have little influence on important policies that not only affect costs but influence their resource mix and inhibit their state policy objectives.

States' abilities to directly influence RTO actions, including through Federal Power Act Section 205 filing rights, vary by region. At one end of the continuum, states have the most authority over resource adequacy in the Southwest Power Pool (SPP). At the other end, PJM states are not PJM members, they have no Section 205 filing rights, and they do not have any formal advisory role in reviewing PJM tariff changes beyond that of other non-members.

RTOs (and ISOs) differ in their composition of states. The states in PJM and ISO-New England (ISO-NE) are mostly restructured, meaning retail consumers have a choice of electricity providers, and resource adequacy planning at least in terms of capacity is no longer a state commission function.³ MISO and SPP are mostly vertically integrated states in which public utility commissions play a greater role in determining the mix of generation and capacity needs. Just as with RTOs and ISOs, a variety of regulatory structures exist within vertically integrated and restructured states; they are not monolithic.⁴

Below, we summarize the roles of states and multi-state RTOs for SPP, MISO, PJM and ISO-NE, with a focus on resource adequacy issues. This paper does not address single-state ISOs such as CAISO, NYISO or ERCOT, nor is it an exhaustive comparison of all the ways in which states engage with RTOs.

³ DC and other mid-Atlantic restructured states focus on mandating a resource mix and impose the responsibility for achieving that mix on the retail suppliers and the default provider, usually the utility. The financing of most renewable capacity is through bilateral power purchase agreements between those state-regulated entities and renewable energy developers, outside of RTO markets.

⁴ The staff structure of regional state committees varies as well. OMS, for example, has three full-time staff members. The SPP RSC relies on SPP staff (and their PUC staff). OPSI relies on two full-time staff, with a third planned. NESCOE has a larger team.

Southwest Power Pool and the Regional State Committee

The SPP Regional State Committee (RSC) is a not-for-profit corporation made up of one state commissioner representative from each state in the SPP region.⁵ Under the bylaws, each commissioner has one vote and decisions are made by majority rule. The SPP RSC has more influence over SPP actions relating to resource adequacy than do state committees for other RTOs.

When SPP sought to become an RTO, state support was key to gaining support for the proposal.⁶ The states in the SPP region insisted that they should have strong authority and oversight over certain matters within the RTO, including transmission cost allocation and resource adequacy. Through negotiations with SPP and in FERC filings and orders, the states secured this authority in the SPP bylaws.⁷ FERC stated in the SPP RTO approval order in 2004: "The RSC should ... determine the approach for resource adequacy across the entire region."

Consistent with FERC's order, the SPP bylaws provide that the RSC will determine the approach for resource adequacy across the entire region, and SPP will make the requisite filings at FERC to implement the RSC-approved policy. SPP has the right to file its own proposal under Section 205. The RSC authority over RTO resource adequacy rules is for the RSC as a group, so the states must agree in order to influence the regional policy. The RSC also works closely with the SPP Board of Directors on other matters.

Midcontinent Independent System Operator and the Organization of MISO States

The state body for the Midcontinent Independent System Operator (MISO), is the Organization of MISO States (OMS). OMS represents 17 state and local public utility regulators and 11 associate members (including consumer advocate organizations, state legal councils, and adjoining state PUCs). Other than cost allocation issues, consensus among OMS members is encouraged but not mandatory. OMS reflects minority and individual member positions in final position statements. Unlike some state RTO committees, OMS chose an advisory role to MISO so that OMS and its member states could have the freedom to make their own filings before FERC, which

⁵ See https://spp.org/organizational-groups/regional-state-committee/.

⁶ Conversations with former commissioners and FERC staff involved with the RSC's formation.

⁷ For early bylaws see SPP (2003), https://spp.org/documents/1539/bylawsjune2003.pdf. For more recent bylaws see SPP (2010),

https://spp.org/documents/59405/bylaws%20and%20membership%20agreement%2020181103.pdf.

⁸ FERC (2004), Order Granting RTO Status Subject to Fulfillment of Requirements, February 10, 2004, 106 FERC ¶ 61,110, Docket Nos. RT04-000 and ER04-48-000, Par 220, https://www.ferc.gov/industries/electric/indus-act/rto/spp/orders/rt04-1-000.pdf.

they often do, both when they agree and when they disagree with MISO on a FERC issue.

On regional transmission cost allocation, OMS has the right to develop an alternative to be filed by MISO with FERC under Section 205. If MISO is making a cost allocation filing, OMS can ask MISO to initiate a stakeholder process to develop an alternative proposal. If at the end of the stakeholder process OMS still desires to make an alternative filing, MISO has to file OMS's alternative proposal. If MISO decides not to make its own filing, it's not required to file OMS' alternative. MISO's rules provide other opportunities for the states to weigh in on transmission planning issues.

MISO establishes region-wide and zonal resource adequacy requirements based on a Loss of Load Expectation study, ¹⁰ and each utility can meet the requirement through owned resources, contracted resources, or participation in MISO's voluntary Planning Resource Auction. The Planning Resource Auction serves as a residual capacity procurement mechanism, which is typically only utilized for 5% of load within MISO. ¹¹ MISO recognizes that states have resource adequacy responsibility but notes that it is shared with the LSEs, MISO, and FERC. ¹²

MISO's tariff provides that individual states can override the regional planning reserve margin for their jurisdictions, but to date no state has set its own reserve margin.¹³ OMS also has a voice on resource adequacy decisions through the tensector Advisory Committee,¹⁴ the Resource Adequacy Subcommittee and other stakeholder groups.¹⁵

%20Transmission%20Owners%20Agreement47071.pdf#page=333.

⁹ "...the OMS Committee may undertake to develop and request MISO file an OMS Committee alternative costallocation methodology, so long as 66% of all of the OMS Committee voting members agree to this undertaking and pursuant to Section II.E.3.a of this Appendix K. At the end of the stakeholder process MISO will either file with FERC a new transmission cost allocation methodology, a change to an existing transmission cost allocation methodology or will provide the OMS Committee with a written explanation of its decision not to file changes to the Tariff. If MISO does not file changes to the Tariff, no OMS alternative cost-allocation methodology will be filed with FERC by MISO..." MISO (2013), Appendix K, Section E.3. https://cdn.misoenergy.org/Rate%20Schedule%2001%20-

¹⁰ OMS communication, September 2019: "MISO conducts a Loss of Load study annually. States play a role in the stakeholder process that develops that study, and utilities provide the load forecasts that go into the study." ¹¹ OMS.

¹² Chen and Murnan (2019), p. 9 and footnote 35.

¹³ OMS

¹⁴ The OMS has more votes on the Advisory Committee (4) than any other sector. See https://cdn.misoenergy.org/2019%20AC%20Members-Alternates315720.pdf.

¹⁵ On the Advisory Committee:" The State Regulatory Authorities sector holds the most weight at 16% and represents the 17 regulatory bodies that make up OMS. Currently, the 17 members of the State Regulatory Authorities sector are almost exclusively public utility commissions (rather than state energy offices or other agencies)," Chen and Murnan (2019), pp. 9-10, and OMS (2017),

http://www.misostates.org/images/Procedures/OMS Process Document FINAL approved 05182017.pdf.

MISO has regular conversations with the OMS regulators, staff and executive director to ensure communications of MISO and state issues, discuss upcoming initiatives, and other matters.¹⁶

New England Independent System Operator and NE States Committee on Electricity

The New England Independent System Operator (ISO-NE), was formed by the New England Power Pool (NEPOOL) in 1971 to oversee wholesale electricity markets and transmission. Its three critical roles are grid operations, market administration and power system planning.¹⁷ NEPOOL is "a voluntary association of market participants doing business in the six-state New England region."¹⁸ The New England Committee of States on Electricity, or NESCOE, is the RSC for the six New England states.¹⁹ In contrast with other RSCs, each state's governor appoints the NESCOE manager(s), usually a state public utility commissioner or representative from the Governor's energy office.²⁰

NESCOE makes policy determinations with a majority vote (a majority of the states) and a majority-weighted vote to reflect relative electric load of each state within the region's overall load. NESCOE's determinations are usually unanimous.²¹

NESCOE participates in the stakeholder processes and provides input on proposed rules and tariffs revisions with a focus on resource adequacy and system planning and expansion, ²² including providing comments and feedback on wholesale market rules and the transmission planning process. NESCOE does not have a vote within the NEPOOL structure. However, NESCOE can sponsor proposed market rule changes for ISO-NE's and NEPOOL's consideration and can sponsor amendments to rule changes proposed by ISO-NE or market participants. As a practice, proposals are presented in at least three separate meetings before they are voted upon. If states don't agree with an ISO-NE proposal or a NEPOOL alternative proposal, NESCOE can present its perspective to FERC in the form of a filing submitted into the record of the relevant proceeding.

 $^{^{16}}$ Conversations with MISO and stakeholders, and Chen and Murnan (2019), p. 10: "MISO appears to have a relatively collaborative culture."

¹⁷ See https://www.iso-ne.com/about/what-we-do/three-roles.

¹⁸ See https://www.iso-ne.com/participate/governing-agreements/nepool-agreement.

¹⁹ NEPOOL (2015), Section 15.2, https://www.iso-ne.com/static-assets/documents/2015/01/op_2d_rna.pdf.

²⁰ See https://nescoe.com/about-nescoe/nescoe-managers/, and regarding NESCOE's funding and organization see ISO-NE and NEOOL (2007), https://www.iso-ne.com/static-assets/documents/regulatory/part_agree/mou_final.pdf.

²¹ See http://nescoe.com/about-nescoe/nescoe-managers/. Every state gets a vote. A NESCOE policy position requires the support of at least four states and over 50% of the electric load in New England.

²² See http://nescoe.com/about-nescoe/.

The ISO-NE resource adequacy target, or Installed Capacity Requirement, is reviewed in a NEPOOL stakeholder process. The proposed Installed Capacity Requirement makes its way through a technical subcommittee, a reliability committee, and then the broader "Participants Committee." NESCOE can provide its perspective as the proposal is considered in the stakeholder process and, ultimately, when NEPOOL votes.

PJM and the Organization of PJM States, Inc.

The Organization of PJM States, Inc. (OPSI) consists of representatives from 14 public utility commissions from 13 states and the District of Columbia. OPSI's activities include coordinating data/issues analyses and policy formulation related to PJM, its operations, its Independent Market Monitor, and related FERC matters.²³ OPSI monitors PJM, submits comments and interacts with the PJM board and staff. OPSI and its member states are not members of PJM and thus cannot vote on any issue at PJM. The PJM tariff does not give OPSI any unique opportunities to provide input on any aspect of PJM's rule development.

PJM's reliability requirements are approved by PJM's board, generally following an advisory vote by PJM members. Stakeholders, including states, may review and comment on reliability requirements as they are being developed, but have no formal voice in the process.

The 2005 PJM/OPSI memorandum of understanding calls for at least one board-to-board meeting a year. The two boards meet during the OPSI fall annual meeting, which PJM's full board usually attends. A handful of OPSI board members attend the PJM Annual Meeting in May. PJM board members have been meeting with OPSI commissioners at NARUC meetings three times a year in recent years as well.

Changing Roles of PJM and States in Resource Adequacy

When PJM became a Regional Transmission Organization (RTO) in 2001, its capacity market was truly residual and voluntary (much like MISO's capacity construct), and only provided for the voluntary exchange of capacity between its members. PJM primarily ran spot energy markets. Resource adequacy was primarily a state function. ²⁴

²⁴ FERC restructuring Order No. 888 in 1996 and Order No. 2000 encouraged the formation of ISOs and RTOs but did not address nor discuss a significant role for them in resource adequacy.

²³ See https://opsi.us/.

Although many states in PJM's footprint were in the early stages of restructuring their electric power regulatory framework, the PJM states did not surrender their statutory authority under state law and the Federal Power Act over resource adequacy. In some cases, states decided to step back in favor of the RTO making resource adequacy policies. At the same time states were restructuring, many adopted other policies affecting resource adequacy, such as renewable energy²⁵ and energy efficiency²⁶ laws.

Over the last decade, PJM's capacity market has evolved in numerous ways with important implications for states. First, as noted, it has changed from a truly "residual" supply option to encompassing nearly all capacity in PJM following PJM's standards and requirements. Thus the rules by which that market operates have a large impact on both consumers and supply resources, and by extension, state interests. PJM's many changes to the rules over time have increased the market's stringency. For example, the market now includes extensive penalty provisions and hundreds of pages of rules on eligibility and application. These rules, while intended to promote reliability, have the effect of reducing the amount and diversity of capacity resources (supply) that can offer into the auction and to increase demand (e.g., by eliminating seasonal demand response, limiting imports from neighboring RTOs, or raising the amount of capacity PJM seeks to purchase).

- PJM determines how much capacity to procure through the capacity market to achieve its resource adequacy objectives through its load forecast, the reserve requirement, and the Variable Resource Requirement (essentially a demand curve). These elements, while highly technical, have a subjective element that can lead to excessive conservatism at significant cost to consumers. PJM currently procures more than needed reserves for the region. PJM's capacity market accounts for more than 20 percent of total wholesale electricity supply costs.²⁷ The excess reserve margin and related costs have been an ongoing issue in several forums and FERC proceedings.
- The design of the capacity market can also result in substantial windfall payments
 to generators in the case where energy market rule changes cause significant,
 foreseeable increases in payments. OPSI raised this issue in response to PJM's
 recent Section 206 filing to implement operating reserve demand curves.²⁸
 Notably, OPSI had previously requested that PJM include a transition mechanism

http://www.monitoringanalytics.com/reports/PJM State of the Market/2018/2018-som-pjm-sec1.pdf.

²⁵ NCSL (2019), http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx.

²⁶ ACEEE (2019), https://aceee.org/sites/default/files/state-eers-0519.pdf.

²⁷ Monitoring Analytics (2019), p.16,

²⁸ OPSI (2019), https://opsi.us/wp-content/uploads/2019/01/1.23.19-EPF-Letter-to-PJM-Board.pdf.

to avoid the windfall payments associated with the new reserve market design, but PJM's filing did not include such a mechanism.

• Most recently, PJM has sought to dramatically expand the Minimum Offer Price Rule (MOPR), a major change in capacity markets. The stated purpose of this rule is to mitigate the impacts of state public policies to support particular capacity resources, such as zero emission credits for nuclear. However, those state policies generally cause lower prices in neighboring states, and there is no public policy reason to prevent that outcome. The expanded MOPR, or variations that would correct for price suppression alleged to result from state policies, is estimated to cost consumers in the region an additional \$5.7 billion per year, or over \$6 per month for an average residential customer.²⁹ (A FERC ruling is pending.) By increasing capacity market prices, PJM's proposed MOPR would harm both states with and without clean energy policies, with the latter paying tens or hundreds of millions more per year than they would without mitigation.³⁰

Even though PJM's policies and tariffs affect the ability of states to meet clean energy goals and policies, they do not currently reflect meaningful input from the states. States have little input on load forecasts and reserve margins. Most states, even those without renewable energy standards, have other state energy policies and laws that significantly influence resource adequacy, whether they apply to energy efficiency, rooftop solar, energy storage, electric vehicles, or other priorities. PJM's capacity market is increasingly in conflict with many state energy goals at consumers' expense. The issue may be one of balance: can there be a market construct that better accommodates state policies. States likely need a real seat at the table to achieve such a balance.

Potential Options to Increase States' Role

Several options exist to increase states' role in ongoing PJM debates and decisions, which would help to ensure that PJM resource adequacy, transmission cost allocation and other rules and decisions are more responsive to states' energy policy and consumer protection interests. These options include:

 Increase OPSI's "soft" power through enhanced communication and collaboration between PJM and the states. Several RTOs give deference to the views of state

²⁹ Grid Strategies (2019), https://gridprogress.files.wordpress.com/2019/08/consumer-impacts-of-ferc-interference-with-state-policies-an-analysis-of-the-pjm-region.pdf.

³⁰ For a breakout of costs, see analysis in Market Monitor (2019) or Grid Strategies (2019).

- committees regardless of their rules. They prioritize a constructive working relationship.
- OPSI states could have a regular opportunity to provide more formal input into
 the PJM capacity market design parameters, such as the shape and position of the
 VRR curve, which collectively influence billions of dollars of supply investments
 and customer impacts. OPSI also could have more formal input into transmission
 planning requirements or participate in the Members Committee in an advisory
 role. PJM tariffs could have specific opportunities for states' input and could
 require the RTO to say how it took OPSI input into account.
- Give states a role in selecting PJM's board members. OMS often is represented on the search committee for MISO board members. A member of the Northeast Conference of Public Utility Commissioners participates in the selection of ISO-NE directors. The RSC has not had a role in SPP board member search committees, but recently the SPP board solicited RSC input in creating the job description for hiring a new SPP CEO.
- Adopt a provision like that available in MISO that would enable individual states to set a target reserve margin that differs from the rest of the RTO. This would allow a PJM state to choose a lower reserve margin that better matches its assessment of the reliability value of additional capacity compared to other measures such as distribution system improvements. It could enable a state's utilities to procure less from the capacity market in accordance with state policies, which in turn would reduce the LSEs' capacity obligations in that state.
- PJM's capacity market includes a Fixed Resource Requirement option, which was
 originally developed to accommodate integrated resource planning when
 vertically integrated states joined PJM. This mechanism could be enhanced to
 give states and utilities more flexibility to 'opt out' of PJM's capacity market by
 matching supply and load on a megawatt-by-megawatt basis.
- States become members of PJM. Absent change to the PJM sector structure, membership would have little impact as OPSI's 14 states including the District of Columbia would be among hundreds of members of PJM. Unless the sector structure changes to give OPSI's vote more weight, OPSI states may prefer the status quo with their separate voice. In New England, the state committee focuses on ISO-NE matters, so NECPUC commissioners can avoid dealing with RTO matters that could come before the state utility commissions.³¹

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³¹ Chen and Murnan (2019), p. 11.

 Give OPSI the power to make its own filings to FERC under Section 205, similar to the rights of the Regional State Committee of SPP. This significant change would give the states as much power over resource adequacy as PJM. The Duke Nicholas Institute suggests:

An SPP-like state committee that approves resource adequacy decisions could give PJM or ISO-NE states more input on capacity market rules. In such a committee, states could 'veto' capacity market proposals and other resource adequacy requirements they find inconsistent with their mandates. Although the RTO could file its own proposal under Section 205 of the Federal Power Act, this power would give the states leverage with the RTO and its members in the stakeholder process to negotiate market rules. For example, states might be able to negotiate rules to create market mechanisms that could efficiently procure the types of resources their policies target. States that disagree with the outcome of the vote could potentially procure less from the capacity market through the MISO-like mechanism described above.³²

Another option would be for PJM to have a "jump-ball" filing provision, where it
must file an alternative approved by some percentage of OPSI members. In New
England the percentage is at least 60 percent of NEPOOL participants.

These options represent (except for the "soft power" option) structural changes to the relationship between OPSI and PJM. They are complementary to other actions that any state can take to reassess its relationship to PJM on resource adequacy or any other PJM matter. For example, the New York Public Service Commission recently opened an inquiry into whether the state is relying too heavily on the New York Independent System Operator's resource adequacy framework.³³ Structural enhancements to OPSI's relationship with PJM could increase the likelihood that state inquiries similar to the one underway in New York ultimately could result in improvements to PJM's rules.

Getting from Here to There

Increasing states' participation in — and authority over — PJM decision-making on resource adequacy and other matters would likely involve changes to one or more of the PJM governing documents.

³² Chen and Murnan (2019), p. 16.

³³ New York Public Service Commission, Case 19-E-0530, Proceeding on Motion of the Commission to Consider Resource Adequacy Matters,

 $[\]underline{http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=19-E-0530\&submit=Search.}$

The PJM Operating Agreement could be amended to provide OPSI-specified opportunities for reviewing capacity market auction parameters and other rules. Section 8.7(b) of the Operating Agreement provides a precedent because it required the Members Committee to create a user group of non-member public interest and environmental organizations. That group has the right to bring issues directly to the Members Committee and the Board of PJM. Similar procedural rights for non-member states would elevate key concerns about resource adequacy policies.

For other changes, amendments to the Reliability Assurance Agreement (RAA) may be appropriate. For example, Article 7 of the RAA addressing reserve requirements could be amended to make clear that states have the authority to set different reserve margins (similar to current rules in MISO).

Changes to the Operating Agreement, Reliability Assurance Agreement, and tariff would require FERC approval, either in response to a Section 206 complaint, or upon a Section 205 filing by the entity with authority to make such filings for each of these documents.

As both OPSI and its members are often resource-constrained, OPSI would likely need additional funding through an increase to PJM's charge. At present, it can be difficult for OPSI states to engage in the PJM process except at a high level given the resources needed to follow PJM, competing state commission demands and the inability to achieve consensus among 14 jurisdictions. More resources would benefit OPSI and the PJM process, even absent the reforms discussed here, as it would assist states in identifying concerns earlier in the process and provide additional constructive input to PJM. If OPSI states agree they want a larger role and stronger voice, OPSI may need structural changes to support more participation at PJM and the decision-making process to arrive at consensus.

Closing

These suggestions and this debate are not new. Events of recent years make it a more timely and important discussion.³⁴

Strengthening the role of states on PJM matters could help states more costeffectively meet their energy goals, save customers billions of dollars, and increase states' voice and impact on PJM's issues, rules and tariffs.

³⁴ These events include changes PJM has made or proposed; the increasing importance to states of renewable energy, clean energy and climate change mitigation; public utility commissioners' concerns about consumers bearing unnecessary costs; and PJM's ongoing search for its next CEO.

About the Authors

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