Consumer Advocates of the PJM States

CAPS

2018 ACTIVITY REPORT

MARCH 17, 2019

President
Kristin Munsch, Illinois Citizens Utility Board

Vice President
Ruth Ann Price, Delaware Division of the Public Advocate

Secretary
William F. Fields, Maryland Office of Peoples Counsel

Treasurer
Meade Browder, Insurance & Utilities Regulatory Section
Virginia Office of Attorney General

The Consumer Advocates of the PJM States, Inc. ("CAPS") was formed to assist state utility consumer advocates in their work of representing consumers in the PJM Interconnection, LLC ("PJM") processes. Through PJM's stakeholder process, CAPS is directly involved in the development of policies affecting wholesale electricity market and electric transmission throughout a region that covers parts or all of 13 states and the District of Columbia and encompasses a population of 65 million.

Regional electric market and transmission initiatives filed at FERC are largely shaped through the PJM stakeholder process, a time-intensive and demanding process. For example, in 2018 PJM held 498 stakeholder meetings involving 17 committees, 19 subcommittees and 11 task forces. Stakeholder meetings often have a strong technical focus, covering areas as disparate as finance, reliability and markets rules. Close participation requires significant financial resources, resources that are often beyond the reach of individual state offices. This was the fundamental motivation for the founding of CAPS in 2012.

The following discussion examines CAPS activities in 2018. This includes a review of major issues and cases which absorbed significant resources from the organization and its members. Also included is a review of ongoing activities that CAPS typically pursues to monitor the PJM stakeholder process and to maintain engagement in the routine business at PJM.

History of Major Cases and Issues

A natural result of consumer advocates' focus on consumer interests has been heavy involvement in some specific issues and cases. The Executive Director has been a primary information source and facilitator for these efforts but substantial weight of participation has come from member offices.

CAPACITY PERFORMANCE

Following approval of RPM, the capacity market came under a detailed set of requirements designed to ensure longer-term reliability. From 2006 to 2008 generators' capacity revenues increased by a factor of 10. PJM and generation owners argued that this was required in order to provide sufficient money to maintain reliable operations at system peaks. Critiques from supply and demand interests, as well as concerns from PJM, resulted in a series of incremental capacity market changes designed to tighten market rules. This trajectory was disrupted in winter 2014 by the unanticipated "Polar Vortex" cold snap. A number of assumptions were upset in the process. First, the assumption that generation-based capacity resources would perform at a normal winter level was exposed as unrealistic. Tens of thousands of MW of generation capacity resources were unable to perform and reliability was threatened over several days. These failures crossed all major generation sources. Second, demand response, which generation interests persistently asserted was unreliable, performed well. Third, renewable resources, often derided as undependable due to their intermittency, also performed well.

In general, assumptions about the effectiveness of capacity resource performance incentives were refuted. Even for coal or gas-fired resources that repeatedly failed to provide support to the grid, financial penalties proved to be insignificant. It was clear to PJM and its members that changes were needed. Here, opinions diverged sharply.

PJM, under pressure from FERC, some state regulators and political interests, put forward a radical redesign of the capacity market, Capacity Performance ("CP"). This relied on both strict performance standards for resources and potentially severe penalties for non-performance. Largely defined out of eligibility were renewable energy systems and demand response. The *quid quo pro* for strict performance standards was a broad definition of costs eligible for inclusion in capacity market offers.

CAPS members took a leading role, along with industrial customers, cooperatives and transmission-dependent utilities, in arguing for significantly less radical changes. They argued that the existing RPM system could be modified without driving potential costs sharply upward. They emphasized that the Polar Vortex exposed a risk of loss-of-load yet there was no actual loss of load. Further, the Consumer Coalition argued that incremental changes like those made after the September 2013 loss-of-load events are effective and much less disruptive. Instead, the Coalition proposed the introduction of severe penalties within the existing RPM system and generation performance testing requirements, which had been abandoned by PJM in past years. Finally, the coalition asked that broad eligibility for seasonal resources such as renewables and demand response be preserved because these can perform well during either summer or winter peaks.

ACTIVITIES IN 2018

PJM's capacity market is subject to review by an outside entity every four years to critically examine whether key elements of the Reliability Pricing Model (RPM) should be updated. This is known as the "Quadrennial Review". This effort examines important capacity market factors including the reference resource used in determining cost of new generation and the shape of the curve defining the variable resource requirement. The nature of the review is such that stakeholders comment but do not approve recommendations. CAPS members actively participated throughout 2018 in discussions around the review conducted by the Brattle Group for PJM. The Brattle Group's review confirmed that resources participating in the PJM RPM continue to become more efficient and cost-effective. The consumer advocates and industrial customers provided support for the Brattle Group's analysis and fought against price inflating recommendations by PJM and generator interests. In addition, the consumer advocates cooperated with industrial customers to provide critical comments to the PJM Board.[1]

STATE POLICY INCENTIVES IN CAPACITY MARKETS

Over years, independent owners of generation assets asserted that states' support for some types of generation technologies could distort the markets. For example, recent years have seen expansions of Renewable Energy Portfolio Standards as well as support for nuclear generation. These concerns were reflected in a 2016 complaint filed at FERC by a group of generation owner's led by Calpine. PJM stakeholders approved a problem statement and issue charge to explore solutions in January 2017.

Subsidies make it possible for owners of preferred resources to offer into the capacity market at prices well below their full cost. This suppresses prices and has the potential to make unsubsidized resources unable to clear the market. This poses an interesting challenge for consumer advocates who may be put in a position of supporting either their states' programs or a strict market approach.

ACTIVITIES IN 2018

This issue came to a boiling point in early 2018. In January, Stakeholders failed to reach consensus on whether subsidized resources should be allowed to participate in PJM's capacity market, and if they are permitted to participate, what rules should govern participation. Stakeholders voted on eight unique packages. This led to PJM filing the RTO's preferred resource carve-out approach. FERC issued an Order on June 29 rejecting PJM's proposed resource carve-out approach and instituting a Section 206 process.[2] The intervening six months has seen a blizzard of objections and comments at FERC. These include filings from several CAPS members concerned that PJM's proposal will tend to inflate capacity prices.

DOE NOPR —RESILIENCY

In 2017, the U.S. Department of Energy ("DOE") proposed that FERC adopt steps designed to protect "resilience" and reliability. Some saw this as an effort to accommodate the need of uneconomic coal and nuclear plants for market subsidies. The

Commission took up DOE's recommended Notice of Proposed Rulemaking at Docket No. RM18-1. In its January 18, 2018 Order, FERC recited its history of fostering reliability and resilience and found that the NOPR failed to show that existing RTO/ISO Tariffs were unjust and unreasonable. Further, the Commission saw no reason to find that the NOPR proposal was itself just and reasonable. The Commission thus rejected the NOPR and opened a new docket, Docket No. AD18-7, to further examines resilience. The Commission also defined resilience since it was not a common term used in RTO/ISO and NERC reliability efforts prior to the NOPR. Finally, ISO/RTOs were directed to report in the docket on efforts taken to protect resilience.

Some CAPS members joined with other consumer interests to file comments arguing that a singular focus on "resilience" distracts from long-established and effective efforts to keep the grid reliable. Instead, they argued for a focus on enhancing the extremely deep systems already operating to keep the lights on, a point underlined by comments from the North American Electric Reliability Corporation ("NERC"). For many CAPS members, PJM's filing showed no pressing problem with reliability. Nevertheless, PJM proposed rapid adoption of enhanced resilience measures that, in the absence of a demonstrated problem, would amount to subsidies. Almost all commenters agreed that resilience should be recognized and integrated into the existing system.

The CAPS members, along with many others, urged that the Commission resist pressures to intervene in the markets by providing subsidies to selected generating resources. As was widely noted, such subsidies can perversely lead to lesser rather than greater reliability. Generally, load interests argued that action on resilience should be held in abeyance pending the identification of a problem that would match the solution offered in the DOE NOPR.

2018 ACTIVITIES, RESILIENCE AND FUEL SECURITY

PJM responded to FERC's examination of resilience by identifying fuel security as the issue of real concern. This matched DOE's focus and provided a route to define risk and needed actions. The study, released in October, revealed no immediate risk. As a matter of thoroughness, PJM tested a variety of scenarios, introducing more and more extreme assumptions until system failures were identified. Risks include extreme levels of retirements and a disastrous failure of natural gas and oil availability. With a very low level of current risk, PJM has proposed that stakeholders take up the fuel security issues in 2019 with a target filing date of early 2020.

DEMAND RESPONSE

Consumer Advocates have long supported demand response ("DR") in wholesale energy markets. While CAPS members have individually expressed reservations regarding some state-level programs because of structural/design and cross-subsidy concerns, there has been a strong perception among the consumer groups that the role of DR in PJM's markets is beneficial.

DR became a greater force in the market, beginning in 2007, with the institution of RPM. This capacity market structure was the largest driver of increasing DR with the large majority of DR providers' revenues being derived from the RPM auction. Demand response demonstrably lowers wholesale prices and often provides larger retail customers with an opportunity to be paid directly for the benefits they provided to markets and reliability. However, as DR's market participation evolved and expanded, PJM became concerned that the voluntary nature of DR participation did not match the ostensibly greater peak load performance value of generation resources. Accepting this critique of DR, PJM sought to impose limits on DR even after the performance of generation was exposed as inadequate in the 2014 Polar Vortex.

ACTIVITIES IN 2018

Stakeholders attempted to move forward the reintroduction to the market of summer-only demand response. One of the most radical aspects of capacity performance was to eliminate most demand response from capacity market eligibility. This occurred because of the requirement of year-round performance of all capacity resources. Much of the existing demand resource is available only in the summer because air conditioning controls were widely accepted as a DR measure and even encouraged by PJM because they matched PJM's summer-peaking system.

After the implementation of CP, PJM committed to discussing how the thousands of MW of now ineligible DR could be reintegrated into the markets. This problem was addressed in 2018 through the creation of the Summer-only Demand Response Senior Task Force. PJM was only willing to commit to giving summer-only resources a capacity credit, rather than payments, and only for load-serving entities with a capacity commitment. This also satisfied the Independent Market Monitor who has long argued for limiting the role of DR in the markets. An alternative proposal restored some of the role of summer DR but consensus was never reached.

In the second half of 2018, CAPS hired a consultant to evaluate the best way for residential and small commercial customers to take advantage of PJM's new capacity credit approach. The review and analysis by Demand Side Analytics will be completed in early 2019.

TRANSMISSION POLICY AND EXPANSION

Transmission expansion policy became a central concern for CAPS members early in the initial expansion of PJM in 2000. The crucial links between transmission adequacy and both reliability and market outcomes pushed advocates toward involvement in this PJM process. As elsewhere under PJM's authority, transmission expansion decisions, once made by PJM were routinely approved by FERC and were thus not strongly influenced in state regulatory processes. The development of the market efficiency process, driven by load interests, added the requirement that PJM routinely examine how potential projects can benefit consumers through price mitigation.

Even with this advance, many transmission projects fell outside the full scrutiny of PJM's evaluation process. These supplemental projects are determined by transmission-owning utilities as replacements for transmission infrastructure that is exceeding its useful life. These projects become part of the RTEP but are not evaluated under normal PJM procedures. Once submitted to FERC, they are routinely approved and utilities often present them to state regulators for cost recovery as though these projects are mandated by PJM.

Over the past several years, CAPS members have joined other load interests in pressing forward an effort to better understand how supplemental or replacement projects are selected. PJM and the Transmission Owners made some changes. However, these sparked controversy by failing to improve a process that currently offers negligible opportunities for stakeholder participation in supplemental project planning. In addition, in their filing in EL16-71 PJM and the TOs shifted the supplemental planning process from the OA to the OATT thus removing the process from significant stakeholder oversight. In September 2018, FERC did not accept these concerns and underlined the TOs' fundamental authority over replacement projects.[3]

ACTIVITIES IN 2018

Review of transmission owner-designated projects continued. Some progress was made in proposed Manual 14B amendments that required detail of supplemental projects to be provided to stakeholders in sub-regional RTEP meetings. Beyond the concerns raised for load interests in FERC's Order, there continued to be issues that consumer advocates and others see needing better resolution. These include:

- timing of TO presentations to stakeholders which appears to be very late in the project review process,
- the possibility that transmission replacement will occur for infrastructure that continues in good working order, and
- a level of information from TOs that is inadequate to support independent analysis of project assumptions or need.

In late 2018, CAPS initiated a process to hire a consultant to assist CAPS member offices through education and information sharing regarding the jurisdiction of supplemental transmission projects and planning of these projects within the PJM footprint. Continuum Associates was hired to educate and provide information to the advocates regarding PJM supplemental transmission projects within PJM's RTEP. This includes analysis, review and, where appropriate, recommendations for approaches within the stakeholder process.

PRICE FORMATION

Price formation addresses the components taken into consideration in establishing energy prices. The massive quantity of energy delivered in PJM makes the details of price setting critical for consumers. Suppliers argue for "efficient" pricing meaning that many factors can contribute to prices. This can result in adding factors or attributes that contribute to higher prices. The argument is that higher prices will encourage competition and that higher prices will encourage market entry thus improving the margin of reliability and transparency

ACTIVITIES IN 2018

The year began with the proposed formation of an Energy Price Formation Senior Task Force ("EPFSTF"). Stakeholders were directed to examine a variety of issues around how Locational Market Prices ("LMPs') are calculated, compensation for fast-start resources, and pricing of expanded reserves procurement.[4]

In April, the PJM Board requested that stakeholders narrow their attention to evaluating changes to the reserve markets. The Board hoped to see stakeholders address this issue by the end of the year.

The EPSTF met at least twice a month through the end of 2018 evaluating PJM's concerns with the reserve markets and potential changes. In addition, the consumer advocates met numerous times with PJM throughout this period seeking additional understanding of the RTO's perspectives. CAPS members also provided feedback on the impact PJM's proposals would have on consumers in the region.

As the year came to a close, Stakeholders could not reach consensus on changes to the reserve market. As a result, in December the PJM Board reacted by establishing a firm deadline for stakeholder consensus and a set of required components — including two new components. The Board gave stakeholders until the end of January 2019 to finish their work.[5] Throughout the process consumer representatives struggled to understand PJM's desire to develop a proposal that goes beyond what is necessary and risks customers paying more than what is just and reasonable.

PRICE-RESPONSIVE DEMAND (PRD)

CAPS Members were instrumental in maintaining Capacity Market rules that allowed two utilities to qualify mass-market demand response programs as Price Responsive Demand (PRD). This PRD capacity lowered the amount of Capacity that customers needed to buy in the Base Residual Auction (BRA) run in Spring 2017. Simulations run by the independent Market Monitor indicated that this reduction in demand saved customers over $130 million in wholesale power costs. A proposal was made in the PJM stakeholder process to modify Capacity Market rules such that the demand response programs would no longer be able to qualify as PRD. CAPS argued that it was premature to make a change to these rules without fully exploring whether demand response programs, such as the programs that qualified as PRD, would be appropriately valued after the change in the PRD rules. On a motion made by a CAPS Member, this proposal was tabled, which allowed the demand response programs to continue to qualify as PRD for the BRA run in 2018 and provide benefits to customers.

VARIABLE OPERATIONS AND MAINTENANCE ("VOM")

The cost of producing energy includes fuel and VOM. The VOM category captures only costs that are deemed necessary to energy production. From the beginnings of the PJM energy market, VOM has covered a very limited number of costs. Still, there has been much debate about other costs that could be construed as being necessary for energy production.

ACTIVITIES IN 2018

PJM and generation owners pushed forward an effort to inflate VOM. The logic that all such costs should be included appears reasonable but, in practice, many of the costs appear to be better captured as components of capacity. In spite of strong opposition from consumer advocates and other load interests, a package of changes to Section 2.6 of Manual 15 —Cost Development may allow a variety of possible costs to now be rolled into the energy price.

FINANCIAL TRANSMISSION RIGHTS ("FTR")

FTRs are a mechanism that compensates market participants for congestion costs. Assigned to specific paths, FTRs were created to ensure that consumers continue to receive the benefits of the transmission systems that they paid for in the past under vertical integration. FTRs are allocated to load-serving entities to reflect the historical paths. LSEs may either keep the FTRs to cover anticipated congestion or sell them in anticipation that revenues from the sale will exceed the value of avoided congestion.

This led to robust speculative activities by a number of specialized businesses. These businesses purchase both LSEs' FTR sales and available, new FTRs. The result is trading on hundreds of millions of dollars of positions over several future years. These businesses bet on the congestion value of their positions. The risk is that unforeseen events, such as grid failures and unavailable generation, or new transmission capacity will turn speculative portfolios into costly disasters that could result in defaults.

ACTIVITIES IN 2018

The financial transmission rights (FTR) market saw an unprecedented financial impact following the GreenHat Energy default. Green Hat Energy was able to accumulate an 890 MWh FTR portfolio starting in 2015. Initially, GreenHat Energy's position was profitable, and thus, GreenHat had a low credit requirement. In 2017, GreenHat Energy's portfolio started to lose value. By June of 2018, GreenHat Energy was in default of its positions and had left PJM market participants on the hook for potentially hundreds of millions of dollars. The company's business failures exposed the insufficiency of PJM's credit requirements. This has forced customers to deal with the fallout. Under PJM's Operating Agreement, defaults by one member not covered by credit instruments are allocated to other members. A large default like GreenHat's can undermine market participants and generally add risk. These disruptions then flow through to customers in the form of higher costs or less competition. As we start 2018, the PJM Board is in the midst of an independent review of what happened and there are a number of cases before the FERC.

Other CAPS Activities in 2018

In addition to major issues, CAPS directly engaged in a number of core activities.

INTERNAL COMMUNICATIONS

CAPS continued its core function of keeping members informed during 2018. This included the following.

- Monthly memos and calls to coordinate participation in the MC and MRC and other stakeholder groups,
- Monthly PJM issue overview
- Calls on pressing policy issues, and
- Board and Executive Committee meetings.

EXTERNAL COMMUNICATIONS

CAPS are effective because it actively communicates with other stakeholder process participants. In 2018, this included:

- Monthly update calls with PJM or the IMM,
- Frequent calls on pending policy decisions, the BRA, etc. with PJM and the IMM,
- Calls with allies including the PJM Load Coalition, and
- Calls and meetings with market participants including generation owners, transmission owners and financial market participants.

CAPS MEETING PARTICIPATION

To share its perspectives and ensure that it is an active participant in the public dialogue surrounding issues at PJM, CAPS seeks a public role where the opportunity presents itself. These included the following in 2018.

LIAISON COMMITTEE

This committee exists to provide a forum for direct communications to the Board from each Sector. To encourage frank exchanges, only PJM members and OPSI members may attend. Each Sector is represented by a few presenters whose comments invite dialogue with the Board. CAPS members and staff participated in all four meetings during 2018.

PUBLIC INTEREST AND ENVIRONMENTAL ORGANIZATION USER GROUP (PIEOUG)

This PJM User Group includes representatives of public interest and environmental organizations. The group discusses public interest and environmental issues of common interest with the PJM Board of Managers.[6] On May 14, 2018 at the PJM annual meeting time was carved out for the consumer advocates (and environmental organizations) to publicly present to the PJM Board. CAPS members identified a number of ongoing concerns to the PJM Board (e.g. transmission costs, achieving reasonable energy prices, support for the role of the market monitor and the lack of prioritization of major consumer initiatives), initiatives for 2018 (e.g. an appreciation by PJM that load pays, more focus on market mechanisms and better communication), and core areas of focus (e.g. transmission, energy price formation, resilience, and demand response).

REGULATORY MEETINGS

CAPS members attended informal meetings with state and federal regulators. Meetings were held at FERC by the Executive Director and members to discuss the resilience issue and supplemental transmission projects. Some of these opportunities were shared with other customer groups at FERC. CAPS was also represented at OPSI meetings in April and October where some members participated in panel discussions and met directly with state regulators.

Conclusion

CAPS was founded to bring a consumer voice into the decision-making process at PJM. As efforts in 2108 demonstrate, the organization has established its place through active participation in the stakeholder process but also through extensive contacts with individual members and groups of interests including generation and transmission owners.

ENDNOTES

1 Joint Consumer Advocates letter, https://www.pjm.com/-/media/about-pjm/who-we-are/public-disclosures/20181002-joint-customer-coalition-letter-re-market-competitiveness.ashx?la=en

2 Order Rejecting Proposed Tariff Revisions, Granting In Part And Denying In Part Complaint, And Instituting Proceeding Under Section 206 Of The Federal Power Act, Docket No. EL16-49.

3 164 FERC ¶ 61,217

4 LMPs are the basis from which consumer energy prices are calculated. Where separate prices, based on available resources, can be calculated, LMPs are the prices at thousands of locations across PJM. These prices are aggregated to reflect a demand-weighted price within a region. These publicly available prices are the index against which prices in bilateral energy contracts are set. They become the basis for offers in state retail auctions. Thus, LMPs either directly or indirectly determine the energy prices paid by consumers.

5 Board Letter, December 5, 2018 - https://www.pjm.com/-/media/committees-groups/task-forces/epfstf/20181214/20181214-item-03-pjm-board-letter-12-5-2018-price-formation-letter.ashx

6 https://www.pjm.com/committees-and-groups/user-groups/pieoug.aspx.