

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

PJM Interconnection, L.L.C.)
) Docket No. ER15-852-000
)

COMMENTS OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to Rule 211 of the Commission’s Rules and Regulations,¹ Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM (“Market Monitor”), submits these comments on the filing submitted in the above captioned proceeding by PJM Interconnection, L.L.C. (“PJM”) on January 14, 2015 (“January 14th Filing”). In the January 14th Filing, PJM proposes changes to the market rules addressing participation by demand response in PJM’s capacity market, the Reliability Pricing Model (“RPM”). This January 14th Filing was submitted in connection with PJM’s pending proposal to reform its capacity market based on resource performance.²

The January 14th Filing presents a set of contingencies and corresponding proposed rules. In each case, the resulting market design fails to implement the rules for demand response that would allow demand to function in its proper role. In each case, the proposal fails to fully address the jurisdictional concerns raised in the recent *EPSA* decision.³ PJM’s proposal should not be approved. PJM does not need to add new rules or to preserve

¹ 18 CFR § 385.211 (2014).

² See PJM filing, Docket No. ER15-623-000 (December 12, 2014) (“ER15-623 Filing”); PJM filing, EL15-29 (December 12, 2014) (“EL15-29 Filing”) (collectively, “CP Proposal”).

³ *Electric Power Supply Association v. FERC*, 753 F.3d 216 (D.C. Cir. 2014).

existing rules if they continue to treat demand as a form of supply and/or require PJM to engage in measurement and verification (“M&V”) to determine whether demand response occurred.

Not using power does not need to be measured and verified. The actual use of power is metered and should serve as the basis for billing, when customers use less power in response to prices and when customers use more power in response to prices. If PJM wants to prepare for the future, regardless of the Supreme Court decision in the *EPSA* case, it should dismantle the current obsolete and flawed approach to demand response as a supply side product and implement an approach consistent with the principles underlying the Price Responsive Demand (PRD) rules that became effective May 15, 2012. Granting the relevant parts of the FirstEnergy’s DR complaint pending in Docket No. ER14-55 could achieve this objective.⁴ *EPSA* and the CP Proposal create an opportunity for PJM to move forward with its PRD initiative.

I. COMMENTS

A. PJM’s Approach Addresses Multiple Possible Contingencies Rather Than Establishing a Legal and Policy Foundation for Enhanced Participation of Demand in PJM Markets.

PJM anticipates various potential outcomes concerning (i) the CP Proposal pending at the Commission, which could be accepted effective April 1, 2015, as requested; accepted at a later time; or rejected; and (ii) the petitions for a writ of certiorari for review of *EPSA* pending at the U.S. Supreme Court, which could be denied before April 1, 2015; remain pending after April 1, 2015; or be granted. PJM’s anticipated outcomes and associated proposals for demand response rules are summarized in the table:

⁴ See Complaint of FirstEnergy Service Company, EL15-55-000 (May 23, 2014).

Status of Motion for Certiorari	CP Proposal Effective April 1, 2015	CP Proposal Rejected or Not Yet Effective Post April 1, 2015	CP Proposal Effective Post April 1, 2015
Denied	Option A	Option B	Option A
Pending	Option A, Suspended	Option B, Suspended	Option A, Suspended
Granted	Current Rules Retained	Current Rules Retained	Current Rules Retained

This approach is unnecessarily complicated, fails to provide needed reforms to demand response, and will not definitively resolve the jurisdictional issues identified in *EPSA*. PJM’s approach ignores the superior alternative that is largely in place in the existing rules. PRD rules are already in the tariff. PRD rules have experienced a lack of participation due primarily to the fact that the flawed and obsolete rules of the other demand side programs makes them artificially attractive compared to the design of PRD. The PRD rules could be reformed to serve as the platform for the development of a robust and genuine demand side in PJM markets. PJM has already identified PRD as the long term direction for the development of PJM’s markets, calling it “the next market evolution of Demand Response.”⁵ *EPSA* and the CP Proposal create an opportunity to move forward with an approach well suited for the future.

PRD as it now exists is reasonably consistent with the jurisdictional scope of the Federal Power Act. If reformed as the Market Monitor recommends, PRD would be consistent with even a narrow reading of *EPSA*.⁶ PRD provides for the participation of demand on the demand side of the market. PRD includes an appropriate role for PJM, including providing information on price and tools to facilitate decisions by customers on

⁵ See PJM Staff, White Paper, Price Responsive Demand (March 3, 2011) at 5.

⁶ See IMM, Price Responsive Demand, Docket No. ER11-4628 (July 22, 2014). This report is included as an Attachment to this pleading.

consumption but not including M&V. PJM's role could be defined in the tariff consistent with the *EPSA's* holding that "a reduction in consumption cannot be a 'wholesale sale'."⁷

EPSA presents an opportunity to reform the rules for demand response to make them consistent with the functioning of an efficient and competitive market. The current rules for demand response have evolved to create a negative impact on market efficiency and pose obstacles to the growth of an effective demand component to the market. This negative impact is not the result of demand side resources which are an invaluable part of the markets but is a result of current PJM rules. These flaws have been well documented, and some are the subject of pending litigation at the Commission.⁸ Now is an appropriate

⁷ 753 F.3d at 223.

⁸ The Market Monitor has documented in numerous reports the price suppressing effects and market design flaws attributable to the current treatment of Demand Resources in the PJM Capacity Market, including:

- The failure to require performance from Demand Resources that is comparable to the performance provided by Generation Capacity Resources and that would therefore make Demand Resources substitutes for Generation Resources while providing substantially the same compensation to both. *See, e.g.,* Monitoring Analytics, LLC, 2013 State of the Market Report for PJM (March 13, 2013) ("2013 SOM") at 197, 203; *see also,* Monitoring Analytics, LLC, Analysis of the 2016/2017 RPM Base Residual Auction (April 18, 2014) at 3, 35–27 ("2016/2017 BRA Report"), which can be accessed at: http://www.monitoringanalytics.com/reports/Reports/2014/IMM_Analysis_of_the_20162017_RPM_Base_Residual_Auction_20140418.pdf.
- The failure to remove inferior Demand Resource products from the capacity markets which cannot, by definition of the products, be substitutes for Generation Resources and the failure to require demand resource products to respond year round during any hour.
- The failure to eliminate the 2.5 shift in the demand curve used in RPM Base Residual Auctions. *See, e.g.,* 2013 SOM at 157, 160; 2016/2017 BRA Report at 4–5.
- The failure to require Demand Resources to make physical offers. *See, e.g.,* 2013 SOM at 160, 171–172; Monitoring Analytics, LLC, Analysis of Replacement Capacity for RPM Commitments: June 1, 2007 to June 1, 2013 (September 13, 2013), which can be accessed at: http://www.monitoringanalytics.com/reports/Reports/2013/IMM_Report_on_Capacity_Replacement_Activity_2_20130913.pdf; Comments of the Independent Market Monitor for PJM, Docket No. ER14-1461 (April 1, 2014).

time for decisive steps away from the flawed approach of treating demand as a form of supply and treating demand response as changes in demand.

B. Proposed Option A Is Not Needed and Should Not Be Approved.

PJM's proposal designated as Option A includes revised demand response rules that PJM intends to take effect when and if both the CP Proposal is effective and *EPSA* is upheld. Option A preserves the improvements to the rules for Demand Resources (DR) included in the CP Proposal and requires DR to have the same standards as outlined in the CP Proposal. For Option A, DR must be able to respond to unlimited calls for every day in the entire delivery year, but only required from 10:00AM to 10:00PM EPT for June through October and the following May, and 6:00AM to 9:00PM EPT for November through April.⁹

Under Option A, the M&V requirements are unchanged. Option A specifies that PJM interacts with Load-Serving Entities instead of customers' Curtailment Service Provider representatives, superficially responding to the jurisdictional issues raised in *EPSA*. Option A does not solve the flaws in the current rules that undermine the markets or the deeper jurisdictional concern identified in *EPSA*, namely, that "'wholesale demand response' is a fiction."¹⁰ Option A preserves the need for PJM to rely on M&V to determine

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- The failure to require Demand Resources to make daily offers into the Day-Ahead Energy Market as required of Generation Capacity Resources. *See, e.g.*, 2013 SOM at 197, 203; Complaint and Motion to Consolidate of the Independent Market Monitor for PJM, Docket No. EL14-20 (January 27, 2014).
 - The failure to apply a uniform system offer cap to Demand Resources and Generation Capacity Resources. *Id.*
 - The failure to develop measurement and verification rules sufficient to ensure that Demand Resources do not consume capacity when it is needed by those who pay for it. *See, e.g.*, 2013 SOM at 197–198, 210; Comments of the Independent Market Monitor for PJM, Docket No. ER14-822 (January 1, 2014).

⁹ *See* ER15-623 Filing at 191.

¹⁰ 753 F.3d at 220–221.

what was not used based on an assumption about what might have been used, instead of what was actually used based on meter readings. M&V is essential to the attempt to make demand work as a supply side resource, but after the fact M&V cannot work effectively or reliably on a large scale.

M&V requires PJM to assess the behavior of retail end users in order to estimate whether a reduction from hypothetical behavior can be said to have occurred and therefore whether payments should be made.¹¹ In addition to the fundamental issues with M&V, involvement in M&V perpetuates the jurisdictional problems identified in *EPSA*.

The need for M&V is a key flaw in the current approach which includes demand as supply. Option A retains that flaw.

C. The Existing Price Responsive Demand Rules Are Sufficient to Serve PJM's Needs Regardless of the Any Supreme Court Ruling on *EPSA*.

The short and long term answer to the inclusion of demand response in the capacity market is PRD as modified based on the Market Monitor's recommendations. The PJM market design already includes PRD rules that are adequate in the short run. Unfortunately, the continued existence of inferior alternative DR rules has meant that PRD is relatively unattractive and has been ignored. There is no reason why PRD cannot

¹¹ M&V for demand reductions in the energy market are measured by comparing real time load to historic load usage. PJM defines the forecast load usage per customer as a customer baseline load (CBL). There are three ways to measure compliance for capacity PJM Demand Resources: Firm Service Level (FSL), Guaranteed Load Drop (GLD) or Direct Load Control (DLC). GLD is the best form of M&V out of the three. Demand Resources registered with GLD must reduce by a certain amount below their Peak Load Contribution when a demand response event is announced. All GLD customers must reduce by a predetermined amount compared to their customer baseline load (CBL). Any Demand Resource registered under the FSL must reduce to a predetermined load amount. This means that if a demand response event is called for a FSL customer and the load of the customer is below the FSL amount, the customer is 100 percent compliant without any action taken in response to the event. DLC customers do not have a meter to measure load, and are considered compliant as long as the CSP documents when the switch is on or off. It is impossible to verify a load reduction occurred with DLC customers, since they do not have any hourly interval metered data. Customers and CSPs should not be considered compliant for inaction during demand response events.

function as an interim solution if the flawed rules for demand response were removed. The rules for PRD also have flaws that need to be corrected. For example, the current PRD rules continue to require PJM and the Market Monitor to be involved in M&V.

On July 22, 2014, the Market Monitor submitted a report on PRD that was required under the order that approved PRD. A copy of the report is included as an Attachment. In summary, the report explains that PRD rules have experienced a lack of participation due primarily to the fact that the design of PRD is better than the design of existing demand side programs. The design of the other demand side programs makes them artificially attractive. The Market Monitor includes recommendations to reform PRD, including the removal of M&V rules.

D. With Modifications, Primarily to Eliminate Residual Provisions Involving PJM in M&V, the PRD Rules Can Provide True Integration of Demand Side in PJM Markets.

The long term appropriate end state for demand side resources in the PJM markets should be comparable to the demand side of any market. Customers should use energy as they wish and that usage will determine the amount of capacity and energy for which each customer pays.

PJM should provide clear signals to customers about both real time prices and expected hours that determine capacity payments. For example, if a single peak load determines capacity payments, PJM should provide notice to participants when load is expected to be high and that load could be a peak load for the year. Or, if the Capacity Performance proposal to include four summer peak hours, one winter peak hour and all Performance Assessment Hours as the determinants of capacity payments, PJM should provide notice to the market when hours are potential capacity payment determinants.

Under this approach, customers that wish to avoid capacity payments can reduce their load during expected high load hours. Customers wishing to avoid high energy prices can reduce their load during high price hours. Customers would pay for what they actually use, as measured by meters. No M&V estimates are required. No promises of future

reductions which can only be verified by M&V are required. To the extent that customers enter into contracts with CSPs or LSEs to manage their payments, M&V can be negotiated as part of a commercial contract between a customer and its CSP or LSE.

A transition to this end state should be defined in order to ensure that appropriate levels of demand side response are incorporated in PJM's load forecasts and thus in the demand curve in the capacity market for the next three years. That transition should be defined by the PRD rules, modified as suggested by the Market Monitor.

This approach would work regardless of which of PJM's identified contingencies emerges. This approach would work under the current RPM design and this approach would work under the CP design. This approach is entirely consistent with any Supreme Court decision on *EPSA* as it does not require FERC to have jurisdiction over the demand side. This approach will allow the Commission to more fully realize its overriding policy objective to create competitive and efficient wholesale energy markets.

E. Proposed Option B Should Not Be Approved Under Any Circumstances.

PJM proposes that Option B should apply if *EPSA* is overturned and PJM's Capacity Performance Proposal is not approved. Like Option A, Option B is flawed because it preserves PJM's role in M&V. But Option B is less desirable than Option A because Option B retains the inferior, non comparable and inflexible products PJM currently offers: Limited, Extended Summer and Annual DR. PJM renames these products Limited Wholesale Load Response (WLR), Extended Summer WLR and Annual WLR, but they are fundamentally the same and would create the same problems. If PJM's Capacity Performance Proposal is rejected, continuing forward under Option B risks the continued viability of the PJM market design.

PJM states (at 17) "The long-term goal is, and should be, that PJM can call upon a load reduction to help meet capacity needs anytime PJM can call upon a generator to help meet capacity needs." The products in Option B retains would defeat that goal. These products are not comparable to the generation that they displace. The result is price

suppression, faulty incentives, inefficient markets and, over the long run, reduced system reliability. The flaws with these products have been well documented.¹²

Regardless of whether Capacity Performance Reform is approved, there is no reason to perpetuate the harm to the performance of RPM by these inferior and non comparable products. PJM has not shown that Option B is just and reasonable under any circumstances. Option B should not be approved.

II. CONCLUSION

The Market Monitor respectfully requests that the Commission afford due consideration to these comments as the Commission resolves the issues raised in this proceeding.

Respectfully submitted,



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¹² See, e.g., IMM, 2014 State of the Market Report for PJM: January through September at 209; IMM, Analysis of Replacement Capacity for RPM Commitments: June 1, 2007 to June 1, 2013 (September 12, 2013) at 8–9 & Table 8.

Attachment



Monitoring
Analytics

Price Responsive Demand

The Independent Market Monitor for PJM

July 22, 2014

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Introduction

The Independent Market Monitor for PJM (MMU) submits this report in compliance with requirements set forth in the Commission's PRD Order (ER11-4628-000).¹ The Commission required that the MMU report on the performance of PJM's price responsive demand (PRD) program 60 days after PJM's release of the results of its May 2014 base residual auction. This report, prepared by the MMU, reviews the market penetration and functionality of Price Responsive Demand (PRD) (for the 2016/2017 and 2017/2018 Delivery Years) and provides recommendations for improvements. To date there has been no participation by any PRD Resources in any RPM auction for the transition period of the 2016/2017 Delivery Year through the 2018/2019 Delivery Year.

Overview

A fully functional demand side of the electricity market means that end use customers or their designated intermediaries will have the ability to see real time energy price signals, will have the ability to react to real time prices and will have the ability to receive the direct benefits or costs of the resultant changes in real time energy use. In addition, customers or their designated intermediaries will have the ability to see current capacity prices, will have the ability to react to capacity prices and will have the ability to receive the direct benefits or costs of the corresponding changes in the demand for capacity. A functional demand side of these markets means that customers will have the ability to make decisions about levels of power consumption based both on the value of the uses of the power and on the actual cost of that power.

With exception of large wholesale customers in some areas, most customers in PJM are not on retail rates that directly expose them to the wholesale price of energy or capacity. As a result, most customers in PJM do not have the direct ability to see, respond to or benefit from a response to price signals in PJM's markets. PJM's demand side programs are generally designed to allow customers (or their intermediaries in the form of load serving entities (LSEs) or curtailment service providers (CSPs)) to either directly, or through intermediaries, be paid as if they were directly paying the wholesale price of energy and capacity and avoiding those prices when reducing load. PJM's demand side programs are designed to provide direct incentives for load resources to respond, via load reductions, to wholesale market price signals and/or system emergency events.

PRD resources are included in both the capacity market and the energy market as reductions to demand. This is a critical improvement on the existing DR construct which includes demand response resources as supply in the capacity market. PRD resources

¹ PJM Interconnection, L.L.C., 139 FERC ¶ 61,115 (2012).

are represented in PJM's capacity market as reductions to an LSE's capacity obligations at PRD Provider specified capacity prices in the Base Residual Auction (BRA) or the Third Incremental Auction (IA).² PRD resources are represented in PJM's energy market as node specific demand schedules.³ PRD providers are required to submit real time energy market demand curves (made up of price and MW pairs), on a node specific basis, for its capacity market cleared or FRR committed PRD Resources.⁴ Through automated price responsive systems or centralized control, a PRD Provider causes load resources, on a node specific basis, to respond to the real-time LMP, although responses to LMP are not mandatory under PRD. The PRD resource, or its LSE, benefits from the resulting load reductions as a reduction in its energy bill.

Outside of Maximum Emergency Generation events, PRD resources are not obligated to reduce demand according to their submitted demand schedules. During a Maximum Emergency Generation event, PRD resources must reduce their demand to match their submitted demand schedules, if LMP is at or above a customer's price threshold, or face penalties.⁵ For a PRD provider with PRD resources at more than one bus in a zone, the PRD provider's compliance during performance events is measured by the aggregate load target of all of the PRD provider's affected nodes in the zone, rather than on an individual node specific basis.⁶ A PRD provider with a portfolio of resources at multiple affected nodes can use its PRD resources that reduce more than their demand curve requirement at their respective nodes to offset its PRD resources that reduce less than

² See LSE PRD Credit, RAA Schedule 6.1 (Price Responsive Demand) § G.

³ Throughout this report, node will represent a specific price node.

⁴ RAA Schedule 6.1 (Price Responsive Demand) § F.

⁵ The PRD resource submitted demand level target, termed the Maximum Emergency Service Level (MESL), is subject to a PRD load ratio adjustment factor. The MESL Adjustment Factor equals the greater of [1.0] or [(actual Zonal load– actual total PRD load in Zone) / (Final Zonal Peak Load Forecast – final Zonal Expected Peak Load Value of responding PRD in Zone)]. This adjustment factor increases the MESL target (increases the allowed load MW at each defined PRD price point) when the actual zonal load for the day is higher than the zonal peak forecast for the day.

⁶ RAA Schedule 6.1 (Price Responsive Demand) § K. Note, there is a contradiction between RAA and Manual 18 on the measurement methodology. Manual 18 indicates that in the case of a PRD provider with PRD resources at more than one bus in a zone, the PRD provider's compliance during performance events is measured in terms of the aggregate MW shortfalls of all of the PRD provider's affected registrations in the zone, rather than on an individual node specific basis.

their demand curve requirement at their respective nodes in a given measurement period.

PRD demand curves, when submitted, are assumed to be responsive at the specified prices in PJM's solution software, regardless of whether the PRD has an obligation (based on declared Maximum Emergency Generation events) to perform. This means that a PRD resource demand curve may set LMP if the demand curve becomes the marginal resource in the solution software. A PRD resource bid price is currently limited to the \$1,000 offer cap applied to generation resources.⁷

PRD resources are not required to have telemetry to PJM operations. Absent system telemetry and direct dispatch capability by PJM consistent with that used for generation resources, PRD should not be eligible to set price in PJM's Real-Time Electricity Market. PJM's system does not assume responses, nor allow price setting, by generation resources unless the generation is actively following PJM's dispatch instructions and there is supporting telemetry.

To qualify as a PRD resource, customers are required to have dynamic retail rates,⁸ meters that can record usage in an hourly interval or less, automated systems and centralized control by the PRD provider that can guarantee customer specific load response.⁹ To participate in the PJM Capacity Market, a PRD provider must submit a PRD Plan by January 15, before the BRA or third IA of that year.¹⁰ The PRD plan consists of different energy price thresholds at which a PRD provider guarantees, during maximum emergency generation events, to immediately reduce node specific consumption to a specified MW level. PRD bid in the capacity market appears as shifts in the auction's demand curve based on the PRD provider's specified capacity prices for a specific reduction in the LSE's capacity obligation. A PRD provider that clears in the capacity market must reduce its load to its Maximum Emergency Service Level (MESL) when PJM initiates a Maximum Emergency event and when LMP is at or higher than its

⁷ RAA Schedule 6.1 (Price Responsive Demand) § D.4.

⁸ Examples of qualifying dynamic retail rates are 1) LMP, 2) time of use electricity rates (with at least a peak and off peak price component) or 3) rates with peak time rebates. PJM "Manual 18: Capacity Market," Revision 22 (April 24, 2014), p. 30-31

⁹ PJM "Manual 18: Capacity Market," Revision 22 (April 24, 2014), p 30.

¹⁰ PJM "Manual 18: Capacity Market," Revision 22 (April 24, 2014), p 31.

specified price threshold. A PRD provider that is unable to reduce, on an affected node (aggregate or individual) basis, to their MESL level will pay penalties.¹¹

PRD is a better approach than PJM's other demand response programs. In PRD, load resources see, respond to and benefit at the nodal level from a response to wholesale market price signals rather than receiving side payments. PJM's Economic Load Response program, for example, provides payment for energy reductions based on the zonal, rather than nodal, wholesale energy prices at the time of declared reductions in load, where declared reductions are measured against customer base line consumption levels that have significant measurement issues. PJM's Emergency Demand Response program allows participating load resources to sell in the ability to reduce load by specified MW amounts in times of declared emergencies as capacity supply MW in PJM's capacity market.¹² These MW are treated as supply although they are reductions in demand. Under the PRD program, MW of demand reduction are appropriately treated as demand.

The nodal nature of the PRD response also means that PRD resources have system operation and reliability advantages over demand side resources participating in PJM's other demand response program. Unlike PRD, the location of demand response is not known by PJM in the operational day.¹³ While Emergency Demand Response resources are dispatchable, they respond on a zonal (or super zonal) basis, not on a nodal basis, and require at least a thirty minute notice under recent changes, rather than the near instant response required of PRD.^{14 15 16}

While PRD is better than PJM's other demand side programs, the current implementation of the PRD program is not an attractive option for load resources relative to PJM's other demand side programs. This is reflected in the absence of PRD participation in any RPM auction for the transition period of the 2016/2017 Delivery Year

¹¹ PJM "Manual 18: Capacity Market," Revision 22 (April 24, 2014), p 38.

¹² PJM "Manual 18: Capacity Market," Revision 22 (April 24, 2014), p 132-135.

¹³ PJM "Manual 11: Energy & Ancillary Services Market Operations," Revision 67 (June 1, 2014), p 108-109.

¹⁴ PJM OATT. Attachment DD (Reliability Pricing Model) § 11 p. 2641.

¹⁵ PJM OATT. Attachment DD-1(Procedures for Demand Resources and Energy Efficiency) p. 2655

¹⁶ PJM "Manual 18: Capacity Market," Revision 22 (April 24, 2014), p 132-134.

and the 2017/2018 Delivery Year. This lack of participation is due primarily to the fact that the design of PRD is better than the design of existing demand side programs. The design of the other demand side programs makes them artificially attractive. PRD, by design, includes stronger compliance requirements and more limited aggregation opportunities across nodes. These requirements are necessary for PRD to act as effective, node specific price responsive demand in PJM's capacity and energy markets. However, the PRD program suffers from internally inconsistent rules regarding measurement of performance and inconsistent allocations of realized cost savings and penalties that disrupt the price signal, and therefore its value, to potential customers and providers. The rules favor participation by LSEs, not customers.

Properly revised, PJM's PRD program would allow end use customers, without intermediaries, to see, react to and receive the direct benefits or costs of changes in real-time energy use and capacity requirements, thereby providing a vehicle for effective demand side participation by customers in PJM's markets. The PRD program would provide an effective replacement for PJM's current DR programs with their critical design weaknesses. In the PRD program, participating LSEs should be required to pass on all the energy and capacity market savings, costs and penalties associated with PRD resources directly to the end use customer that is providing the PRD resource. The absence of a full pass through distorts, and in some cases eliminates, the incentives to participate in the PRD program.

The PRD program should be modified to require a stronger connection between LMP and the retail rates of customers that qualify to participate in the program. Customers should face real time LMP as a default at their price nodes, rather than just time of use rates in order to participate in the PRD program. Such exposure would allow end use customers, without intermediaries, to see, react to and receive the direct benefits or costs of changes in real-time energy use.

Recommendations

- The MMU recommends that the PRD program be reevaluated. The PRD program should be revised to allow end use customers, without intermediaries, to see, react to and receive the direct benefits or costs of changes in real-time energy use and in capacity requirements, thereby providing a vehicle for effective participation by customers in PJM's markets.
- The MMU recommends that participating LSEs be required to pass all the energy and capacity market savings, costs and penalties associated with PRD resources directly to the end use customer that is providing the PRD resource. The absence of a full pass through distorts, and in some cases eliminates, the incentives to participate in the PRD program.
- The MMU recommends that PJM limit eligible dynamic retail rate structures to retail rates that directly reflect LMP in order to provide end-use customers with an accurate price signal for electricity. Absent a direct link between the customer's time

of use rates and the customer's nodal LMP, retail rates distort the marginal incentives for customer power consumption.

- The MMU recommends that PJM require five minute interval meters for all PRD eligible end-use customers, rather than hourly interval meters, to provide more accurate measurement of partial hour compliance.
- The MMU recommends that PJM revise the penalty rules to make the PRD incentives consistent with the incentives in an all energy market. .
- The MMU recommends that PJM eliminate the MESL adjustment factor and measure compliance via a PRD resource's unadjusted MESL. Using the adjusted MESL will tend to undermine PRD reduction requirements during periods of greatest system stress, when the unadjusted MESL requirement would be most valuable to the system.
- The MMU recommends that PRD resource performance be measured at each specific node, rather than on the basis of a PRD provider's PRD portfolio within the zone.
- The MMU recommends that PJM eliminate discrepancies between the RAA and PJM's Manual 18.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Eagleville, Pennsylvania,
this 13th day of February, 2015.



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