

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

PJM Interconnection, L.L.C.

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Docket No. ER11-4628-000

**COMMENTS
SUBMITTED ON BEHALF OF
THE PUBLIC UTILITIES COMMISSION OF OHIO**

October 12, 2011

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INTRODUCTION

On September 23, 2011, the PJM Interconnection L.L.C. (PJM), pursuant to section 205 of the Federal Power Act,¹ submitted to the Federal Energy Regulatory Commission (FERC) revisions to its Open Access Transmission Tariff (Tariff), the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. (Operating Agreement), and the Reliability Assurance Agreement among Load Serving Entities in the PJM Region (RAA) to recognize and support, at the wholesale level, the development of price responsive demand (PRD).² On September 26, 2011, FERC issued a Combined Notice of Filings No. 1 establishing a comment deadline for interveners of October 14, 2011.

¹ 16 U.S.C. § 824d (2011).

² PJM defines PRD as demand reductions enabled by advanced meters and dynamic retail rate structures by states in the PJM region. ER11-4628, PJM Transmittal Letter at 1.

Pursuant to FERC's Rule 214, Part 38, Rules of Practice and Procedure, 18 C.F.R. § 385, the Public Utilities Commission of Ohio (Ohio Commission or PUCO) timely filed a motion to intervene on October 4, 2011, in Docket No. ER11-4628. Consequently, the Ohio Commission is a party to this proceeding and hereby submits its comments in the above-captioned proceeding.

BACKGROUND

PJM states that its proposed revisions to FERC will allow PJM to harness the benefits of PRD to enhance the operational efficiency of the wholesale energy market and allow wholesale customers (and potentially retail customers depending on the state regulatory construct) to recognize the benefits of wholesale capacity savings from their investment in advanced metering infrastructure.³ PJM further remarks that if PJM is not provided price-responsive load reduction information, there is a risk that PJM could consistently overestimate the loads of end-use customers that are participating in retail PRD programs.⁴ PJM observes that its proposed PRD rules will allow load serving entities (LSEs) and other market participants to commit that PRD loads will be reduced to specific levels when prices rise during emergency conditions, and for PJM to rely on those promised load reductions to reduce the capacity level targeted for procurement in the Reliability Pricing Model (RPM) forward auctions.⁵ In addition, PJM observes that inte-

³ PJM Transmittal Letter at 2.

⁴ *Id.*

⁵ *Id.* at 3.

grating PRD into the wholesale markets, including the determination of forward capacity requirements, ensures that the benefits of making significant AMI investments and retail rate reforms will flow through to consumers.⁶ PJM proposes an effective date for its application of December 15, 2011 so that customers can submit PRD reduction plans by January 15, 2012 to participate in the May 2012 Base Residual Auction (BRAs) for load reductions to occur on or after June 1, 2015.⁷

DISCUSSION

General Remarks

The Ohio Commission supports the recognition of PRD in PJM's tariff, Operating Agreement, and Reliability Assurance Agreement. Consistent with the Ohio Commission's previous comments to FERC, the PUCO reiterates that a growing number of states and utilities are exploring how best to implement dynamic retail prices and expand demand response to include all classes of consumers.⁸ The recognition of PRD will be essential to achieving the benefits of dynamic retail pricing and smart grid investments and a factor to enhancing competition in power markets.

The PUCO also maintains that PRD will improve reliability. That is, periods of high demand and outages will increase prices in balancing markets, causing an offsetting

⁶ PJM Transmittal Letter at 7.

⁷ *Id.* at 1.

⁸ *North American Electric Reliability Corporation*, Docket No. RM10-10 (Ohio Commission Comments at 20 -22) (December 27, 2011).

demand reduction from price responsive consumers. Given this relationship, PRD if accounted for properly, will reduce the planning reserve margins required to meet a loss of load expectation (LOLE) based criterion. Moreover, unlike large customer demand response, mass market PRD is the sum of responses by hundreds of thousands or millions of consumers. While a single large demand responder or generator may fail on a given day, the response of large numbers of consumers and devices is statistically likely to exhibit less variance. Additionally, advanced metering will provide access to more load data, providing the opportunity to enhance forecasting methodologies and reduce the uncertainty associated with load forecasts.

The failure to properly account for PRD in resource adequacy planning represents a potentially significant barrier to expanding investment in the metering and technology that make PRD possible and consequently the realization of PRD benefits. If PRD is not recognized, LSEs would have to carry additional capacity for demand that would not be present at higher prices. The presence of this additional capacity will suppress energy and ancillary services prices, further discouraging investment in advanced metering and the development of PRD. Thus, resource adequacy planning that fails to properly account for PRD could discriminate against price responsive consumers by requiring them to pay for capacity they do not need, which will negatively impact the benefits that PRD provides.

Over time, as PRD becomes common place, resource adequacy increasingly should be a matter of consumer choice. Regulators should be seeking to expand the range of meaningful choices that are available to consumers and should reconsider

historical approaches that represent potential barriers to providing consumers transparent choices regarding the cost and quality of their electric service.

In Docket No. RM10-17-000 the Ohio Commission recognized the important role of PRD in its comments as follows:

Demand that responds to changes in energy market prices is an essential characteristic of an efficient and competitive power market. The PUCO recognizes that such demand response can provide significant economic and reliability benefits. Demand response can reduce market prices and ultimately prices to consumers, particularly when the slope of the supply curve is steep or resources are in short supply. Active demand participation in energy markets can help mitigate market power. Additionally, the inclusion of demand response in the market will tend to reduce volatility and spread risks when compared to markets without demand response. Demand that responds to price changes in real time also offers significant reliability benefits. When a generator trips off or power flow is curtailed, the initial impact is to increase real-time LMPs where power supplies are reduced. Price responsive demand and demand response resources participating in the real-time energy market will respond to such price changes by reducing energy consumption. This creates a beneficial feedback mechanism, minimizing operational risks, the need to rely on reserves, and the redispatch of generation which might otherwise be required. From an operational perspective, this beneficial feedback mechanism also will tend to increase the predictability of power flows. The development of price responsive demand and demand resources that participate in real-time energy markets also could play a key role in integrating into the grid significantly more variable renewable resources.⁹

Recognition of PRD is essential to the development of efficient markets. Consistent with the Ohio Commission's comments to FERC in Docket No. ER09-1063-004, when

⁹ *Demand Response in Organized Wholesale Energy Markets*, Docket No. RM10-17-000 (Ohio Commission Comment at 2-3) (May 13, 2010).

consumers see and respond to dynamic retail prices it results in “a more transparent and efficient” form of demand response than existing traditional RTO demand response programs.¹⁰ “PRD is load which, based on a dynamic retail price, will respond to changes in wholesale market prices. Unlike a demand response resource, it does not ask for payment from the RTO or require the RTO to calculate a baseline. As smart grid and PRD are implemented, electricity markets will increasingly resemble competitive markets in other sectors of the economy where consumers naturally and seamlessly respond to changing prices.”¹¹ In our comments in that docket, the Ohio Commission urged express integration of the non-discriminatory treatment of PRD in the scarcity pricing tariff proposed in PJM’s compliance filing.¹²

¹⁰ *PJM Interconnection LLC*, Docket No. ER09-1063-004 (Comments on PJM’s Compliance Filing Submitted on Behalf of the Public Utilities Commission of Ohio at 9) (July 30, 2010).

¹¹ *Id.* Although PJM’s current proposal uses a credit mechanism instead of a reduction in forecast demand, this change was made to accommodate non-LSE PRD providers and is not otherwise essential to PRD.

¹² *Id.* FERC has yet to act on PJM’s June 2010 compliance filing in Docket No. ER09-1063-004. Our position in that docket is that the “development of a reasonable approach to scarcity pricing is critical to meeting the Commission’s objectives in Order 719, achieving national energy policy goals, integrating price responsive demand (PRD) into wholesale electricity markets, and providing consumers greater choice and control over their energy bills.” Despite the submission of differing proposals, we said that, “it is important to acknowledge that there may be broad areas of agreement among the Ohio Commission, PJM, and the MMU regarding the importance of demand response and PRD, the efficiency benefits of shifting revenues from the capacity market to energy and ancillary service markets, and the essential requirements of avoiding the undue exercise of market power and protecting consumers.” *Id.* at 28. We continue to encourage the Commission to act in a manner consistent with the Ohio Commission’s comments in that docket.

Without full recognition of PRD, PJM maintains that important benefits of utility smart grid investments would not be realized by consumers. Current PJM demand forecast methods do not consider the development of PRD and are based on data from periods without dynamic retail pricing. Such forecasts would continue to produce resource and planning reserve requirements which would force LSEs with PRD to carry resources and reserves for demand that would not be present at higher spot prices. The requirement to hold this additional capacity both eliminates the opportunity to avoid capacity costs and suppresses energy and ancillary service prices. With the additional capacity in place, energy and ancillary service prices rarely will reach a level that evokes a significant demand response. Preventing consumers from realizing avoided capacity savings could undermine the business case for cost-effective smart grid investments. Particularly given the potential retirement of coal fired capacity to comply with environmental regulations, avoiding the need for new capacity may prove to be one of the most significant benefits of a smarter grid. In addition, as noted earlier, it is not possible to simply wait until there is significant dynamic retail pricing before integrating its consideration into the determination of forward capacity and planning reserve requirements. Early PRD recognition is needed to ensure that the benefits of making such investments and implementing retail rate reforms will flow through to consumers at the earliest possible moment.

As noted in PJM's application,¹³ Ohio is among the states pursuing investments in advanced metering infrastructure and retail dynamic pricing. Ohio's electricity statute specifically encourages the development of advanced metering infrastructure and time-differentiated pricing.¹⁴ The Ohio Commission has approved smart grid and advanced metering deployments in the service territories of AEP-Ohio, Duke Energy Ohio, and First Energy. And, the Commission has approved time-differentiated and dynamic retail pricing options for these companies.¹⁵

Specific Recommendations

The Ohio Commission observes that PJM's PRD revised tariff and RAA in this proceeding is the outcome of a more than 2.5 year stakeholder process. The lengthy and extensive stakeholder process produced the required super-majority enabling PJM to file its PRD proposal under Section 205 of the Federal Power Act. However, obtaining such a super majority required compromises. As a result, selected provisions in the PJM filing are inconsistent with achieving the benefits of PRD, unreasonable, and unduly discriminatory. Therefore, we urge the Commission to modify PJM's proposal in two areas:

¹³ PJM Transmittal Letter at 13-14.

¹⁴ Ohio Rev. Code Ann. § 4928.02(D) (West 2011).

¹⁵ *In re Duke Energy Ohio*, PUCO Case Nos. 10-42-EL-ATA, 10-455-EL-ATA, 10-979-EL-ATA, 10-2429-EL-ATA, 11-2798-EL-ATA; *In re Columbus Southern Power*, PUCO Case Nos. 10-0424-EL-ATA, 11-0530-EL-ATA, 11-1355-EL-ATA (available online: <http://dis.puc.state.oh.us/>).

- First, lift the cap on the quantity of PRD which may be recognized prior to 2019 and allow PRD to enter the market as PRD providers are able to meet the pricing, supervisory control, and other requirements of PJM's proposal;
- Second, expressly allow alternative testing approaches, including the use statistical sampling of residential and small consumer responses and component testing of supervisory controls where such alternative approaches can provide a reliable verification of PRD responses without imposing an excessive one hour interruption of service on small consumers solely for testing purposes in the absence of any generation emergency.

1) The proposed cap on the quantity of PRD to be recognized for delivery years 2015 through 2018 is unreasonable and unduly discriminatory.

PJM's proposal includes caps on the aggregate amount of PRD that can be recognized in PJM's capacity mechanisms of 1,500 MW for the 2015 delivery year, 2,500 MW for the 2016 delivery year, 3,500 MW for the 2017 delivery year, and 4,000 MW for the 2018 delivery year.¹⁶ PJM seeks to justify a seven year transition period on grounds that it was necessary to gain super-majority support in the PJM Members

¹⁶

PJM Transmittal Letter at 22, PJM Proposed Schedule 6.1 (N).

Committee and that a transition will allow PJM and market participants to gain experience prior to full implementation. These are not reasonable grounds for such restrictive caps on demand response and consumer choices.

For 2015, the aggregate cap is equal to less than 1% of PJM's historical peak demand; and for 2018 the cap equals 2.5% of PJM's highest previously recorded peak demand.¹⁷ The caps are fixed megawatt limits and will not grow with system demand or with the addition of Duke Energy Ohio and Kentucky (which has made extensive investments in advanced metering in its Ohio service territory) or with further additions to the PJM customer base.

The aggregate cap is then "assigned to each [Load] Zone (or sub-Zonal LDA, if applicable) pro rata based on each such Zone's (or sub-Zone's) Preliminary Zonal Peak Load Forecast for the Delivery Year compared to the PJM Region's Preliminary RTO Peak Load Forecast for such Delivery Year."¹⁸ Given this pro rata assignment without regard for need or economic consequences, retail suppliers that are relying on PRD could face severe restrictions while PRD allotments are assigned to regions already in surplus and unlikely to see prices high enough to evoke a significant demand response. This pro rata assignment is unreasonable and discriminatory in that it imposes unnecessary costs on those most reliant on the PRD option.

¹⁷ PJM experienced a peak demand of 158,450 MW on July 21, 2011. See on-line: <http://www.pjm.com/~media/about-pjm/newsroom/2011-releases/20110722-pjm-and-members-set-new-record-for-peak-power-use.ashx> ,

¹⁸ PJM Proposed Schedule 6.1 (N).

For utilities in Ohio and other areas in PJM, dynamic retail pricing represents an important option that may be considered in response to anticipated generation retirements. There remains widespread concern regarding potential retirements and output restrictions on coal and other generation. With EPA compliance windows closing during the period of the caps and compressed EPA compliance deadlines making retrofits costly or impractical for many units, the Commission should not foreclose any reasonable compliance options. If needed, retail pricing reforms might offer comparatively rapid and flexible alternatives to transmission or generation capacity additions. This option should not be restricted given the risk of significant reliability impacts and of imposing greater costs on consumers and businesses at a time of economic hardship and slow or faltering economic growth.

There is no reasonable justification for restricting the use of PRD for the next seven years. As PJM's filing states, "stakeholder consensus is not an end in itself."¹⁹ Moreover, there is no showing that the caps are needed for PJM or market participants to gain additional experience with PRD. As PJM's filing indicates, states are proceeding at different speeds and significant experiments underway in several jurisdictions. This natural progression will provide an opportunity to gain any needed experience without capping the potential for more rapid implementation if justified. The effect of the cap is to allow selected market participants to limit competition and protect their capacity

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PJM Transmittal Letter at 21.

revenues to benefit their private business interests. These restrictions are not in the interests of consumers, reliable system operations, or the market generally.

2) Capability testing requirements must allow alternative testing methodologies to avoid unnecessary and unreasonable interruptions of service for residential and small consumers and to prevent undue discrimination.

PRD is the means of refining forecasts of peak demand to account for efficient, short term price responsiveness. However, under PJM's proposal, if the RTO does not declare a Maximum Generation Emergency during a given Delivery Year, then each PRD Provider must demonstrate that it tested its PRD-eligible load for at least a one-hour period during any hour in which an emergency could be called.²⁰ To the extent such testing might require a one-hour interruption of PRD loads, such a requirement would be unreasonable as applied to small consumers and highly discriminatory when compared to non-price responsive consumers.

"Price responsive demand should be distinguished from demand response resources. PRD that responds to dynamic prices is a type of load. It should be treated in a manner that reflects the system benefits of its flexibility and not discriminated against when compared to demand that can respond only to changes in flat prices over time horizons of months to years."²¹ Non-PRD loads are not subject to any performance

²⁰ PJM Transmittal Letter at 34, Proposed Schedule 6.1 (L).

²¹ *PJM Interconnection LLC*, Docket No. ER09-1063-004 (Comments on PJM's Compliance Filing Submitted on Behalf of the Public Utilities Commission of Ohio at 9) (July 30, 2010).

testing. Such loads often exceed forecast levels and can exceed associated planning reserves without penalty. To subject consumers, and particularly small consumers, to actual interruptions in the absence of any emergency solely because they are price responsive is unnecessary and highly discriminatory.

PRD loads are subject to both higher peak retail prices and substantial penalty payments if they fail to meet their commitments when called. These are substantial deterrents. Given that many customers who participate in demand response resource programs are served under fixed retail tariffs, the rate impact to a PRD consumer from failing to respond could substantially exceed that faced by a customer in a PJM demand response resource program.

A significant target for the expansion of PRD could be residential consumer demand that with increasing automation could respond to dynamic pricing.²² Such consumers are inherently different from the larger, typically more sophisticated customers who participate in existing demand response resource programs. Requiring residential and small consumers to experience one-hour service curtailment in the absence of any emergency solely for testing purposes would be extremely difficult to explain and make it much more difficult to obtain broad adoption of dynamic retail pricing. For smaller consumers, PRD could reflect the responses of millions of individual thermostats, water heaters, and appliances. No single consumer's devices would have a material impact on the total response. For these consumers testing the

²² See, for example: FERC, *National Assessment of Demand Response Potential* at 28-29 (June 2009).

components of the supervisory control system and a statistically representative sample of consumers and devices could provide comparable or superior verification of their ability to perform when compared to testing of larger loads through an actual interruption.

The Ohio Commission notes that the language in proposed schedule 6.1 (L) may be sufficiently broad to permit alternative testing procedures:

PRD Providers that register Price Responsive Demand shall be subject to test at least once per year to demonstrate the ability of the registered Price Responsive Demand to reduce to the specified Maximum Emergency Service Level.²³

To prevent discrimination against price responsive consumers and avoid unnecessary and unreasonable interruptions of their service, FERC should direct PJM to implement its proposed tariff in a manner which provides reasonable assurance of the ability of PRD to reduce to specified Maximum Emergency Service Levels while minimizing actual service curtailments in the absence of any generation emergency. Such assurance could be provided through the use statistical sampling of residential and small consumer responses and component testing of supervisory controls.

3) State Jurisdiction

The Ohio Commission observes that PJM's application reflects that "PRD Plans must also demonstrate satisfaction of the PRD eligibility requirements, including specifications of the AMI and supervisory control equipment, any applicable retail

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PJM Proposed Schedule 6.1.

regulatory approvals, and demonstration such approvals were obtained.”²⁴ In addition, PJM’s application reads as follows: The transmittal letter further reflects that “[i]f the PRD provider is not an LSE, then the plan must detail how the contractual arrangements with the relevant end-users includes a dynamic retail rate structure that conforms to the applicable PRD implantation standards (including any required retail regulator approvals).”²⁵ Finally, the Ohio Commission observes that PJM’s application reads as follows: “In all cases, however, PRD Providers must comply with all retail regulatory requirements applicable to the provider.”²⁶

The Ohio Commission concurs with PJM’s proposed RAA language revisions concerning state jurisdiction regarding retail LSE load participating in wholesale markets. As such, the Ohio Commission requests that FERC approve RAA section D(i) and that FERC affirm in its decision approving PJM’s application that all retail load participating in wholesale PRD must have either the explicit or implicit (*e.g.*, via a generic policy decision) authority to acquire service pursuant PJM’s PRD tariff.

In addition, the Ohio Commission recommends that FERC’s decision concerning PJM’s PRD application must articulate and affirm that the states possess the authority to exclude or limit retail load’s ability to acquire service pursuant to PJM’s PRD tariff. A determination by FERC consistent with this recommendation could promote state retail

²⁴ PJM Transmittal Letter at 26.

²⁵ *Id.*

²⁶ *Id.* at 17.

load participation in wholesale PRD programs by limiting any ambiguity (and debate) concerning the point of demarcation between the state and federal jurisdictions.

CONCLUSION

The Ohio Commission thanks FERC for the opportunity to file comments in this proceeding.

Respectfully submitted,

/s/ Thomas W. McNamee

Thomas W. McNamee

180 East Broad Street

Columbus, OH 43215-3793

614.466.4396 (telephone)

614.644.8764 (fax)

thomas.mcnamee@puc.state.oh.us

On behalf of

The Public Utilities Commission of Ohio

PROOF OF SERVICE

I hereby certify that the foregoing have been served in accordance with 18 C.F.R. Sec. 385.2010 upon each person designated on the official service list compiled by the Secretary in this proceeding.

/s/ Thomas W. McNamee

Thomas W. McNamee

Dated at Columbus, Ohio this October 12, 2011.

Submission ID 323263

Submission Description Comments submitted on behalf of the Public Utilities Commission of Ohio under ER11-4628-000.

Submission Date 10/12/2011 2:17:03 PM

Filed Date 10/12/2011 2:17:03 PM

Current Status Pending

Dockets	Docket	Description
	ER11-4628-000	PJM Interconnection, L.L.C. submits tariff filing per 35.13(a)(2) (iii): Revisions to the PJM Tariff, OA and RAA re Price Responsive Demand submitted on 9/23/2011 4:06:16 PM

Files	Security Level	Filename
	Public	Comments 101211.pdf

Filing Party/Contacts	Filing Party	Signer (Representative)	Other Contacts (Principal)
	Public Utilities Commission of Ohio	thomas.mcnamee@puc.state.oh.us	daniel.shields@puc.state.oh.us

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

10/12/2011 2:25:07 PM

in

Case No(s). 93-7000-EL-FAD

Summary: Comments submitted on October 12, 2011 to the FERC by Thomas McNamee on behalf of the Public Utilities Commission of Ohio to be considered in FERC Docket No. ER11-4628-000, In re PJM Interconnection, LLC. electronically filed by Kimberly L Keeton on behalf of Public Utilities Commission of Ohio