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PUCO EXHIBIT FILING

Date of Hearing: 6/18/2014

Case Nos. 13-2385-EL-SSO and 13-2386-EL-AAM

PUCO Case Captions: Volume XII

In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §4928.143, Revised Code, in the Form of an Electric Security Plan.

In the Matter of the Application of Ohio Power Company for Approval of Certain Accounting Authority.

List of exhibits being filed:

Company Exhibits 23, 24, 25, 26, 27, 28, 29, 30, and 31

OEG Exhibits 4 and 5

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BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

- - -

In the Matter of the :
Application of Ohio Power :
Company for Authority to :
Establish a Standard Service :Case No. 13-2385-EL-SSO
Offer Pursuant to \$4928.143, :
Revised Code, in the Form of :
an Electric Security Plan. :

In the Matter of the :
Application of Ohio Power :Case No. 13-2386-EL-AAM
Company for Approval of :
Certain Accounting Authority.:
- - -

PROCEEDINGS

before Ms. Greta M. See and Ms. Sarah J. Parrot,
Hearing Examiners, at the Public Utilities Commission
of Ohio, 180 East Broad Street, Room 11-A, Columbus,
Ohio, called at 9:00 a.m. on Wednesday, June 18,
2014.

- - -

VOLUME XII

- - -

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AEP
Ex. 23

PENGAD-Bryant, N. J.

Ohio Regulatory Staff Remarks

PJM's Variable Resource Requirement (VRR): Forward Procurement Auction with a Downward Sloping Demand Curve

FERC Staff Technical Conference
Washington, D.C.
June 7, 2006

General Remarks

The Ohio Staff would like to commend the FERC for accepting the traditional resource requirement approach (the fixed resource requirement option) as a legitimate alternative to RPM. The Ohio Staff would like to request that, in developing the rules for the two alternatives, the FERC needs to ensure that a resource supplier is treated equitably in terms of the IRM requirement, the penalties for violating an IRM requirement, and the appropriate length of a resource commitment, regardless of what alternative the supplier chooses.

PJM's Variable Resource Requirement (VRR): Asking the Right Questions

In its Initial Order of April 20, 2006, the FERC found that the use of a downward-sloping demand curve, in a forward procurement auction, as proposed by PJM would be a just and reasonable option for acquiring capacity. The FERC also found the use of downward-sloping demand curves as just and reasonable in the NYISO and ISO-NE capacity markets. In the FERC's opinion, a downward-sloping demand curve would reduce capacity price volatility and increase the stability of the capacity revenue stream over time. The FERC's conclusion is that as capacity supplies vary over time, capacity prices would change gradually with a sloped demand curve, rather than vary substantially

and dramatically between the PJM capacity market deficiency (penalty) charge and zero, as is the case with the ICAP capacity construct today.¹

The Ohio Staff, in concept, agrees with the FERC that a downward-sloping demand function is a better alternative to the original ICAP demand function (the vertical demand function) in terms of reducing price volatility and reducing investor risk.² The Ohio Staff further agrees in concept with FERC that there should be a locational element to each of the future-identified Locational Deliverability Areas (LDAs).³ We have, however, a list of general concerns related to the questions posed by the FERC staff. In our opinion, the questions posed by the FERC staff are too limited in scope. The underlying assumptions behind all of the questions posed by the FERC staff are as follows:

- ☐ A piecewise downward sloping **linear** demand curve is almost optimal for the design of the capacity market.
- ☐ A **generation** solution is the solution of choice for maintaining an adequate reserve margin for a particular LDA.
- ☐ The generation solution of choice is basically a **gas peaking** unit.
- ☐ Construction of base load and combined cycle units will continue to grow at the same rate of growth as the weather-normalized peak load demand.

In our opinion, these assumptions, as shared by PJM, weaken the proposed RPM * construct filed with the FERC. For that reason, the Ohio Staff understands why the

¹ FERC, *Initial Order* at 104.

² *Id.*

³ *Id.* at ¶6.

FERC is unable to conclude at this time that the proposed RPM construct is just and reasonable.⁴

Proposed discussion topics for the upcoming stakeholder process

Rather than asking what the height and slope(s) should be for a piecewise linear demand curve, the discussion should focus on what family of demand curves would lead to a "quasi optimal" representation of investment behavior and consumer welfare in the electric utility industry. Additionally, rather than discussing what the cost of a new generation entry should be, the discussion should focus on the exploration of cost of entry using differing strategies; namely a transmission upgrade solution, a demand response solution, or a generation solution.

In its *Initial Order*, for example, the FERC notes that according to PJM, the current capacity market construct and a lack of applying a locational value on capacity has impeded the ability of transmission and demand response solutions to participate in capacity markets.⁵ In that regard, the FERC is encouraged by PJM's proposal to consider generation, transmission and demand response, claiming that only when these three interrelated components of the market place are working together will PJM be able to meet established reliability criteria, keep markets robust and competitive, and ensure stable operations.⁶ The Ohio Staff agrees with the FERC and would add a further caveat that a generation solution should not be limited to the evaluation of entry into the capacity market by a gas peaking unit only

⁴ Id.

Id. at ¶75

⁶ Id. at ¶ 4.

The Ohio Staff further agrees with the FERC that PJM should be instructed to adjust its RPM process to explicitly include the assessment of transmission and demand response solutions as viable alternatives to be considered in the auctions. A possible solution to this problem could be for PJM to provide a detailed demonstration in the paper hearing process set by the FERC or via the stakeholder process discussions as to how it intends to tie RTEP, RPM, and demand response solutions all together in a consistent and coherent manner.

Professor Hobbs' Simulation Results

In evaluating the five demand curves, Professor Hobbs was given the limited task by PJM of evaluating a group of linear downward sloping demand curves in terms of their impact on resource adequacy and consumer cost.⁷ Professor Hobbs was not hired by PJM to determine the characteristics of a successful capacity market for consumers and resource suppliers in the PJM footprint, neither was he hired to explore from a large set of feasible curves a demand curve that could possibly lead to a more optimal solution for both consumers and resource suppliers. And finally, he was not asked by PJM to consider transmission and demand resource solutions as competing alternatives to a peaking generation solution. In other words, Professor Hobbs' simulation results, limited in scope at the outset by PJM, are in our opinion also too limited in scope and usefulness for PJM to conclude that the both consumers and resource investors are better off with an RPM construct.

⁷ PJM Interconnection, L.L.C., *Proposal for a Reliability Pricing Model (RPM)* (August 31, 2005) Tab B, Affidavit by Benjamin Hobbs, Ph.D (hereinafter Hobbs' Affidavit) at 3.

High degree of uncertainty in the simulation results

While we agree with Professor Hobbs that the simulation results suggest that consumer cost may be lower under the VRR than under the existing ICAP construct, the simulation model developed was, in his words,

...useful for the purpose of understanding qualitative dynamic effects such as whether a long-term capacity market is less likely to induce boom-bust cycles than a short-term capacity market, and whether the relative ranking of different alternatives is robust under a wide range of assumptions. The model is not accurate enough to make precise quantitative predictions, but its intent is to illuminate several qualitative decisions that must be made at the outset of RPM.⁸

In our view, the inaccuracy of the simulation model in making precise predictions is due, first, to PJM's decision to oversimplify the market that is being represented, and second, to the high degree of uncertainty associated with future economic and weather-related conditions and investor behavior. As an example, in Table 1 of Professor Hobbs' Affidavit, the 4th demand curve (titled Alternative Curve with New Entry Net Cost at IRM+1) leads to an average consumer payment for scarcity and ICAP (column 8 in the table) of \$71/peak KW/year and a standard deviation of \$48/peak KW/year.⁹ With an estimated PJM peak load of 133,500 MW for this summer and an IRM requirement of 15%, the worst case future scenario could lead to an unanticipated additional cost to consumers of almost \$1 billion ($15\% \times 133,500 \text{ MW} \times \$48/\text{KW} \times 1000 \text{ KW/MW}$).

It is for this reason that we strongly urge the FERC not to use the simulation results in making decisions or assessments in regard to the impact of implementing RPM on the cost to consumers. Rather, these results, as Professor Hobbs points out, are to be

⁸ Id. at 16.

⁹ Id. at 36.

used as a demonstration that consumers may be better off with a downward-sloping demand curve than with a vertical demand curve.

AEP
Ex. 24

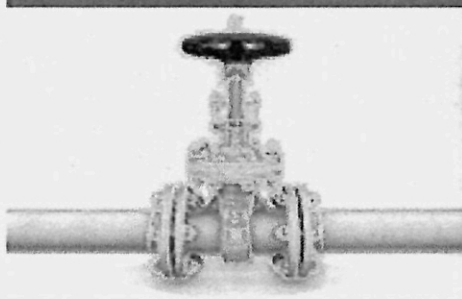
Duke and FirstEnergy Same Delivery Period Auction Results Comparison

State	EDC or Utility	Auction Date	Service Type	Term	Delivery Period	Tranche Target	Tranches Procured	Range Starting Price	Winning Price (\$/MWH)	+/- same delivery period prior auction	Average
OH	Duke	11/12/2013	Full Requirements	12	6/1/14-5/31/15	16	16	\$65-\$85	\$50.11		
OH	Duke	5/1/2013	Full Requirements	12	6/1/14-5/31/15	17	17	\$65-\$85	\$54.16	-\$4.05	\$52.14
OH	FE	1/28/2014	Full Requirements	12	6/1/14-5/31/15	16	16	\$80-\$105	\$55.83		
OH	FE	10/1/2013	Full Requirements	12	6/1/14-5/31/15	16	16	\$80-\$105	\$50.91	\$4.92	\$53.37
OH	FE	1/28/2014	Full Requirements	24	6/1/14-5/31/16	17	17	\$80-\$105	\$68.31		
OH	FE	10/1/2013	Full Requirements	24	6/1/14-5/31/16	17	17	\$80-\$105	\$59.99	\$8.32	\$64.15
OH	FE	1/1/2013	Full Requirements	36	6/1/13-5/31/16	17	17	\$85-\$105	\$59.17	-\$1.72	\$60.03
OH	FE	10/1/2012	Full Requirements	36	6/1/13-5/31/16	17	17	\$80-\$105	\$60.89		
OH	FE	1/1/2012	Full Requirements	24	6/1/12-5/31/14	17	17	\$65-\$85	\$44.76	-\$8.07	\$48.80
OH	FE	10/1/2011	Full Requirements	24	6/1/12-5/31/14	17	17	\$75-\$90	\$52.83		
OH	FE	1/1/2011	Full Requirements	12	6/1/11-5/31/12	17	17	\$70-\$95	\$56.13		
OH	FE	10/1/2010	Full Requirements	12	6/1/11-5/31/12	17	17	\$65-\$90	\$54.55	\$1.58	\$55.34
OH	FE	1/1/2011	Full Requirements	24	6/1/11-5/31/13	17	17	\$70-\$95	\$54.92		
OH	FE	10/1/2010	Full Requirements	24	6/1/11-5/31/13	17	17	\$65-\$90	\$54.10	\$0.82	\$54.51
OH	FE	1/1/2011	Full Requirements	36	6/1/11-5/31/14	16	16	\$70-\$95	\$57.47		
OH	FE	10/1/2010	Full Requirements	36	6/1/11-5/31/14	16	16	\$65-\$90	\$56.58	\$0.89	\$57.03

FirstEnergy Auction Results

Delivery Period	Auction Date	Term	Delivery Period	Tranches Procured	Winning Price (\$/MWH)
6/1/11-5/31/12	1/1/2011	12	6/1/11-5/31/12	17	\$56.13
	10/1/2010	12	6/1/11-5/31/12	17	\$54.55
	1/1/2011	24	6/1/11-5/31/13	17	\$54.92
	10/1/2010	24	6/1/11-5/31/13	17	\$54.10
	1/1/2011	36	6/1/11-5/31/14	16	\$57.47
	10/1/2010	36	6/1/11-5/31/14	16	\$56.58
	Total			100	\$55.60
6/1/12-5/31/13	1/1/2011	24	6/1/11-5/31/13	17	\$54.92
	10/1/2010	24	6/1/11-5/31/13	17	\$54.10
	1/1/2011	36	6/1/11-5/31/14	16	\$57.47
	10/1/2010	36	6/1/11-5/31/14	16	\$56.58
	1/1/2012	24	6/1/12-5/31/14	17	\$44.76
	10/1/2011	24	6/1/12-5/31/14	17	\$52.83
	Total			100	\$53.37
6/1/13-5/31/14	1/1/2011	36	6/1/11-5/31/14	16	\$57.47
	10/1/2010	36	6/1/11-5/31/14	16	\$56.58
	1/1/2012	24	6/1/12-5/31/14	17	\$44.76
	10/1/2011	24	6/1/12-5/31/14	17	\$52.83
	1/1/2013	36	6/1/13-5/31/16	17	\$59.17
	10/1/2012	36	6/1/13-5/31/16	17	\$60.89
	Total			100	\$55.25
6/1/14-5/31/15	1/1/2013	36	6/1/13-5/31/16	17	\$59.17
	10/1/2012	36	6/1/13-5/31/16	17	\$60.89
	1/28/2014	24	6/1/14-5/31/16	17	\$68.31
	10/1/2013	24	6/1/14-5/31/16	17	\$59.99
	1/28/2014	12	6/1/14-5/31/15	16	\$55.83
	10/1/2013	12	6/1/14-5/31/15	16	\$50.91
	Total			100	\$59.30
6/1/15-5/31/16	1/1/2013	36	6/1/13-5/31/16	17	\$59.17
	10/1/2012	36	6/1/13-5/31/16	17	\$60.89
	1/28/2014	24	6/1/14-5/31/16	17	\$68.31
	10/1/2013	24	6/1/14-5/31/16	17	\$59.99
	Total			68	\$62.09

	OVEC	Expanded PPA
(1) Capacity (MW)	437	3,000
(2) Capacity Factor (%)	75%	75%
(3) Hours/year	8,760	8,760
(1)*(2)*(3)=(4) MWh Production	2,871,090	19,710,000
(5) Change in Market Price (\$/MWh)	5.00	5.00
(4)*(5)=(6) Change in PPA Rider (\$)	14,355,450	98,550,000
(7) AEP Ohio Load (MWh)	41,250,000	41,250,000
(6)/(7)=(8) Change in PPA Rider (\$/MWh)	(0.35)	(2.39)



porterwright



Ohio Utility Regulation: Week in Review

EXECUTIVE SUMMARY: WEEK OF April 14, 2014

The Public Utilities Commission of Ohio held its weekly case determination and signing session on Wednesday, April 16, 2014, at 1:30 p.m., with Chairman Thomas W. Johnson presiding. Also present were Commissioners Asim Z. Haque, Steven D. Lesser, Lynn Slaby, and M. Beth Trombold. Staff members attending the meeting included Attorney Examiners Jeff Jones, Gregory Price, Chris Pirik, and Scott Farkas.

Governor Kasich swore in Chairman Johnson before the April 16, 2014 meeting, after which he offered some observations about the deregulated electric and natural gas markets in Ohio, and his high regard for Chairman Johnson. Some notable comments include: "I will tell you it is a challenging time in our state that has gone through this whole business of deregulation.

Deregulation I think is a challenge for everybody, and the fact that many companies are now shedding themselves of generation and relying more and more on the spot markets, troubles me and concerns me. But this underscores the fact that the ideological definition of deregulation. . . I wasn't sure if it was the smartest thing to have been done in this way, but we are where we are and we can't go back, and so we're onward in a deregulated environment, we've got to figure it out." Governor Kasich also acknowledged Chairman Johnson's "steep learning curve," as well as citing some of Chairman Johnson's attributes as: "smart, honest, fair, will listen, and he will show no favoritism," which Governor Kasich believes made him the right candidate for Chairman.

This week's report includes summaries of the Commission-approved entries/orders and recent Attorney Examiner entries. An electronic version of each document may be viewed by clicking on the highlighted link within each summary.

The Commission's next meeting is scheduled for Wednesday, April 23, 2014, at 1:30 p.m.

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

Technical Conference on Winter 2013- :
2014 Operations and Market Performance : Docket No. AD14-8-000
in Regional Transmission Organizations :
and Independent System Operators. :

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

May 15, 2014

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

Technical Conference on Winter 2013- :
2014 Operations and Market Performance : Docket No. AD14-8-000
in Regional Transmission Organizations :
and Independent System Operators. :

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

I. INTRODUCTION

The Public Utilities Commission of Ohio (Ohio Commission) respectfully submits the following Comments in accordance with Federal Energy Regulatory Commission's (Commission) Supplemental Notice of Technical Conference issued March 19, 2014.

The PJM Interconnection, L.L.C.'s (PJM) footprint was particularly hard hit this past winter, with an unprecedented amount of forced outages and scarcity pricing being called in January. With the State of Ohio consisting of over one fifth of PJM's entire load, every decision PJM makes directly impacts Ohio's retail electric consumers. Consequently, the majority of our comments and recommendations pertain to PJM's winter weather operations.

II. COMMENTS

The Ohio Commission is concerned about the excessive amount of forced outages that occurred this past winter. Long-term grid reliability is extremely important to the

Ohio Commission, however, we are mindful that an appropriate balance needs to be struck between cost and reliability objectives. The Ohio Commission is confident that the Commission can achieve these objectives by ensuring generation units are available during peak usage times before entering into scarcity pricing. As discussed herein, the implementation of a claimed capability audit in RTO/ISOs that do not currently have such protocols in place will go a long way in safeguarding the grid in times of extreme weather. In addition, with upcoming retirements that will take effect next spring, fuel diversity is of great importance to the Ohio Commission and should remain a top objective for the Commission as it considers the events from this past winter. Further, measures need to be taken to ensure that energy prices are predictable, including the continued dialogue between the gas and electric industries to assure that electric generators have as much information as possible when considering fuel purchases.

A. FORCED OUTAGES

The recent cold weather incidents expose a troubling trend of an increasing amount of forced outages that have permeated through PJM. While the forced outage rates hit unprecedented highs this past winter, reliability has been under pressure since last summer. Notably, due in part to forced outages, PJM recently endured a load shed event in September of 2013.¹ Accordingly, the Ohio Commission proposes that the

¹ PJM Interconnection, L.L.C., *Technical Analysis of Operational Events and Market Impacts during the September 2013 Heat Wave*, at 4, 26 (Dec. 23, 2013) ("PJM Hot Weather Report").

Commission can address the excessive forced outage rates within PJM by ordering the implementation of a claimed capability auditing program.

1. Winter Testing and Claimed Capability Audits

This past winter alone, as indicated by PJM representative Michael Kormos, the forced outage rate reached approximately 22 percent of all installed generation capacity in PJM.² This is over three times higher than the average forced outage rate of 7 percent.³ Looking at this another way, over 40,000 megawatts of generation that cleared in RPM was unavailable as peak demand soared to new record highs. While some of these outages were related to gas curtailments, the vast majority of PJM's outages were caused by equipment issues.⁴ The forced outages from this past winter, coupled with other recent forced outages, depict a trend in which resources that clear in the RPM auction are not responding when the grid is under dire conditions.⁵

The Ohio Commission understands there will be forced outages from unforeseeable issues. However, the excessive outage rates from this past winter demonstrate that too many generating units are not being properly maintained or updated as necessary in order to provide service at times of peak demand. As Mr. Kormos pointed out at the

² *Technical Conference on Winter 2013-2014 Operations and Market Performance in RTOs and ISOs*, Docket No. AD14-8-000 (Transcript of Conference at 91) (Apr. 1, 2014) ("AD14-8-000 Conference Transcript").

³ *Id.*

⁴ *Technical Conference on Winter 2013-2014 Operations and Market Performance in RTOs and ISOs*, Docket No. AD14-8-000 (Statement of Michael J. Kormos of PJM at 3-4) (Apr. 1, 2014) ("AD14-8-000 Kormos Statement").

⁵ See PJM Hot Weather Report at 11-39.

technical conference, PJM was only 700 MW from implementing voltage reductions this past winter.⁶ The fact that PJM and other RTO/ISOs skated so close to having insufficient reserves highlights the importance of having additional measures in place to ensure sufficient resources are available when called upon. Taking this into account with upcoming retirements in PJM that exceed 10,000 MW, the Ohio Commission urges the Commission to consider means to address these excessive forced outages.⁷ The Ohio Commission provides the following recommendations that, if implemented, will aid in mitigating problems associated with forced outages.

During the technical conference, Mr. Kormos indicated that PJM would be proposing winter testing requirements for generating units in the coming months. The Ohio Commission strongly supports PJM's proposal. This will not only allow PJM to determine whether a generating unit is able to run under winter conditions, but also provides time to correct any issues that may prevent a unit from performing during winter months. The Ohio Commission applauds PJM for considering the re-implementation of its winter testing requirements after a several-year absence. However, because forced generation outages have not been limited to just the winter months in PJM, additional measures need to be taken beyond a winter testing process.⁸

⁶ AD14-8-000 Conference Transcript at 90.

⁷ *Id.* at 99.

⁸ See PJM Hot Weather Report at 4.

The Ohio Commission proposes that PJM establish a claimed capability auditing process to ensure generating units are able to respond to dispatch instructions and maintain performance levels over an extended period of time. The Ohio Commission notes that ISO New England (ISO-NE) currently has a similar auditing program in place that PJM can use for guidance in implementing this process.⁹ Capability audits will allow PJM to monitor its generating units' ability to perform and ensure routine maintenance is being conducted as necessary to allow the units to respond during times of peak demand.

The Ohio Commission echoes Commissioner Moeller's statements that there needs to be a plan for winterization and a summer equivalent. We believe these plans can be implemented through a claimed capability auditing process,¹⁰ and, with such a process, a North American Electric Reliability Corporation (NERC) standard is unnecessary at this time.¹¹ Nonetheless, while we do not believe a NERC standard is the remedy that should be adopted at this time, this option should not be foreclosed entirely and may need to be revisited in the future. Similarly, while significant revisions to current deficiency penalties should not be foreclosed, an evaluation of existing penalties and their impact on forced outages would be useful. The Ohio Commission notes that the establishment of winter testing and general auditing protocols would allow PJM and other RTO/ISOs to confidently know they can count on generating units during times of heavy demand.

⁹ ISO New England, Section III, Market Rule I (Apr. 28, 2014).

¹⁰ *Id.*

¹¹ See AD14-8-000 Conference Transcript at 128-29.

2. RPM Price Suppression

Taking a further step back, while the forced outages could be addressed through enhanced auditing procedures, a key component in the lack of unit maintenance and upkeep stems from continued price suppression in PJM's RPM construct. We agree with concerns raised by FirstEnergy Solutions representative Donald Schneider that price suppression may lead to premature and uneconomic retirements. The Ohio Commission believes this is an important issue that should continue to be addressed by PJM.¹² However, turning back to the short-term, these generating resources are still being paid to run, and the expectation remains that these units are taking appropriate measures to make sure units are able to respond during times of peak demand. As discussed below, not only could on-site fuel storage promote reliability, but, incentives for on-site fuel storage could also remedy the effects of RPM price suppression.

3. The Role of Demand Response

Further, the Ohio Commission is concerned that in light of the extreme number of forced outages, PJM is placing itself in the precarious situation of hoping Demand Response (DR) resources respond during winter months despite their lack of obligation to do so. In considering the appropriate balance between price and reliability, the Ohio Commission understands the valuable role that DR plays in RPM and notes that, as a result of the forced outages this past winter, DR was able to help keep the lights on. Nonetheless, the events from this past winter underscore the ability for DR resources to

¹²

See AD14-8-000 Conference Transcript at 211.

be available on a year-round basis. If nothing else, the DR resources that responded in January highlights that DR can indeed be packaged on an annualized basis and should be subject to higher obligations, similar to that of generating units. As Commissioner Clark pointed out, if products are going to be compensated annually, they should be available annually.¹³

The Commission's recent order approving some of PJM's emergency response tariff provisions will greatly improve operational flexibility going forward.¹⁴ However, the Ohio Commission agrees with Mr. Kornos' observation that DR resources need to be available year round. In order to provide PJM with utmost operational flexibility in the event that generation is unavailable, DR should be required to commit to RPM on an annualized basis. As noted at the technical conference, ISO-NE has DR as a year-round resource.¹⁵ Annual requirements will go a long way to maintain resource adequacy and diversity in PJM.

B. RESOURCE ADEQUACY

The Ohio Commission shares Commissioner Moeller's concerns that the upcoming generation retirements will adversely affect reliability. To take a proactive approach in addressing these plant retirements, fuel diversity is extremely important and should

¹³ AD14-8-000 Conference Transcript at 143-144.

¹⁴ See PJM Interconnection, L.L.C., Docket No. ER14-822-000 (FERC Order at 15-16) (May 9, 2014) ("ER14-822-000 FERC Order").

¹⁵ AD14-8-000 Conference Transcript at 148.

remain a priority. Based on performance during the winter events, no one fuel resource can sufficiently meet demand on its own during extreme weather events.¹⁶

Careful planning is necessary in order to ensure PJM and other RTOs and ISOs can handle winter weather events after generation retirements. With a significant portion of the retiring megawatts being replaced by natural gas resources, we cannot afford to forget about protecting our current resources that help in hedging against any unforeseen natural gas curtailments.¹⁷ In addition, it is important to encourage the development of new generation resources to ensure reliability.

C. MARKET IMPACTS

During the technical conference, there appeared to be general consensus that several factors drove up PJM wholesale market prices in January of 2014. Unseasonably cold winter weather and high natural gas prices combined with sustained peak loads and generator outages due to fuel and operational issues had a direct effect on energy prices and operating reserve or “uplift” charges in PJM.

1. Uplift Costs

Commission Staff and PJM representative Kormos both noted that uplift costs for January 2014 were more than PJM experienced for the entire year of 2013.¹⁸ LMP prices

¹⁶ See AD14-8-000 Kormos Statement at 12 (“All conventional forms of generation, including gas, coal and nuclear plants were challenged by extreme conditions.”).

¹⁷ *Id.* at 12–13.

¹⁸ AD14-8-000 Conference Transcript at 28, 96.

in eastern PJM also spiked above \$1,000/MWh on certain days in January.¹⁹ According to Mr. Schneider, PJM's overall gross billing for January 2014 was \$8.2 billion more than the same period in 2013.²⁰ Mr. Schneider stated that "customers paid \$8.2 billion [more] in one month and will receive nothing in terms of future investment in reliable service."²¹

As noted by both Mr. Kormos and Commission Staff, the high prices in early January were caused by higher-than-average loads and, in the case of PJM, high generator forced-outage rates. In the later January events, particularly during the Martin Luther King Jr. holiday weekend, high prices resulted from historically high natural gas prices.²² According to Mr. Kormos, PJM was forced to direct generators to burn expensive gas in high-cost peaking units for the entire weekend in order for those units to be available to serve anticipated loads on Tuesday, January 21, 2014. Mr. Kormos stated that this action resulted in the majority of PJM out-of-market payments that totaled over \$500 million dollars, and "half a billion is a lot of money even in PJM" for uplift to generators for the month of January 2014.²³

¹⁹ AD14-8-000 Conference Transcript at 24.

²⁰ *Id.* at 211.

²¹ *Id.*

²² *Id.* at 97–98.

²³ *Id.* at 113–14.

2. Gas and Electric Industry Alignment

The Ohio Commission has been an active proponent of the need to examine issues related to gas and electric coordination and applauds the Commission for prioritizing this initiative. The Ohio Commission believes it is also important to highlight that the terms and conditions under which PJM and its generators must buy gas were significant contributing factors to the high energy prices and the extraordinary amount of uplift in January. Specifically, as Mr. Kormos explained in his statement:

Notably it was not the gas transportation issues but rather some of the gas procurement issues that had a greater impact on system operations, dispatch and ultimately price.....The relative lack of transparency of these secondary markets which often bundle transportation or supply, left PJM in the untenable position of being asked to commit generators prior to the Day-Ahead Energy Market....the combination of high prices coupled with the absolute inflexibility to manage the units economically significantly increased the costs and complexity in scheduling and dispatching.²⁴

The Ohio Commission urges the Commission to consider requiring alignment between the two industries. For example, due to the lack of consistency between the markets, PJM directed its generators to buy more gas in anticipation of extreme weather, than was actually needed in real-time. The Ohio Commission looks forward to providing the Commission with comments regarding gas and electric scheduling and alignment in the Commission's notice of proposed rulemaking.²⁵ The need for transparency in secondary gas markets should also be examined by the Commission in order for electric generators

²⁴ AD14-8-000 Kormos Statement at 11.

²⁵ Federal Energy Regulatory Commission, Docket No. RM14-2-000 (Coordination of Scheduling Processes of Interstate Natural Gas Pipelines and Public Utilities) (Mar. 20, 2014).

to have the best information available when considering purchases of natural gas from those markets.

The Ohio Commission notes that during the technical conference, NRG reported its success in buying gas in constrained areas through firm contracts or through purchases of firm gas from third parties.²⁶ While the Ohio Commission takes no position on whether firm gas contracts would be a more desirable option than depending upon the spot market during shortage periods, the Commission should further explore firming up winter fuel supply through forward arrangements, a winter product or other options.²⁷ In addition to considering the value that firm transmission may add in winter weather events, the Commission should also consider the role on-site fuel storage may play in improving reliability.²⁸ As noted by acting-chairman LaFleur, including fuel security into the standard capacity product would not only improve reliability, but could also aid resources that are contemplating premature retirements to continue to operate.²⁹ The Ohio Commission proposes that the Commission order PJM to conduct a study considering how on-site fuel storage can improve reliability and whether it should be considered as part of the RPM capacity product.³⁰

²⁶ AD14-8-000 Conference Transcript at 170-171.

²⁷ *Id.* at 115-116, 119, 141-142, 269.

²⁸ *Id.* at 209-210.

²⁹ *Id.* at 295.

³⁰ *Id.* at 209-210.

3. Price Impacts

The Ohio Commission shares Commissioner Clark's concern regarding the participation of DR and its ability to set shortage pricing in PJM markets.³¹ As previously stated, DR should be available year round as a resource subject to the same requirements as existing generation. This would include the requirement to offer into the energy market as an economic resource rather than as an emergency resource subject to higher offer caps. The Ohio Commission applauds the voluntary response by demand response during the January 2014 events but believes that the recent extreme weather in both the summer and winter highlight the need to further refine its role in PJM markets, including its ability to set shortage prices.

The Ohio Commission highlights the comments made by state commissioners and Paula Carmody of the Maryland Office of People's Counsel regarding the compelling real-world impact on customers of high prices in the wholesale markets on certain customers' electricity bills. The Ohio Commission strongly agrees with comments by Vermont Chairman Voltz, and Maryland Commissioner Brenner regarding the impact of wholesale prices on retail customers and the need to find the best long-term, cost-effective solution to ensure reliability.³² Based on customer inquiries and informal complaints, the Ohio Commission recently initiated a docket³³ to examine marketing practices

³¹ AD14-8-000 Conference Transcript at 146.

³² *Id.* at 256, 268-269.

³³ *See In the Matter of the Commission Ordered Investigation of Marketing Practices in the Competitive Retail Electric Service Market*, Docket No. 14-568-EL-COI (Apr. 8, 2014).

in the competitive retail electric service market; including whether increased costs imposed by an RTO may be pass-through charges or otherwise billed to customers under competitive, fixed-rate contracts.

Finally, with regard to pricing impacts, the Ohio Commission notes that in the coming months PJM and its stakeholders will be reviewing contributing factors to the cold weather price spikes in PJM.³⁴ The Ohio Commission supports PJM's and the Independent Market Monitor's initiatives in this area including examining the causes and actual costs of uplift, including interchange transactions, and whether those charges should be included in LMP rather than as separate charges; the effect of revising or eliminating the cap from cost-based offers and allowing those offers to set LMP; and ensuring that recovery of uplift payments or cost-based offers above the cap is limited to the actual, legitimate natural gas acquisition costs. The Ohio Commission looks forward to providing comments on these matters to the Commission at the appropriate time.

III. CONCLUSION AND RECOMMENDATIONS

The Ohio Commission respectfully requests that the Commission take further action to address forced outages issues that occurred this past winter. Specifically, the Ohio Commission recommends the establishment of a claimed capability auditing process in PJM, or, at a minimum, a winter weather testing requirement to ensure that generating units are being properly maintained. Further, PJM should continue to explore the

³⁴

AD14-8-000 Kornos Statement at 14.

effects of price suppression in RPM and the role DR should play going forward. Fuel diversity and continued efforts to coordinate the gas and electric industries should remain Commission priorities over the next few months. Finally, in light of the extremely high uplift figures from the month of January, the Commission should order an examination of the causes and actual costs of uplift, and determine whether those charges would be better placed in LMP or should remain as separate charges.

Respectfully submitted,

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**Attorney for the
Public Utilities Commission of Ohio**

IV. CERTIFICATE OF SERVICE

I hereby certify that the foregoing has been served in accordance with 18 C.F.R. Section 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 May 15, 2014.

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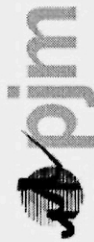
Docket	Description
AD14-8-000	Notice of Technical Conference

Files

Security Level	Filename
Public	Comments 051514.pdf

Filing
Party/Contacts

Filing Party	Signer (Representative)	Other Contacts (Principal)
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2017/2018 RPM Base Residual Auction Results

2017/2018 Base Residual Auction Results Discussion

Table 1 contains a summary of the RTO clearing prices resulting from the 2017/2018 RPM Base Residual Auction in comparison to those from 2007/2008 through 2016/2017 RPM Base Residual Auctions.

Table 1 –RPM Base Residual Auction Resource Clearing Price Results in the RTO

Auction Results	RTO											
	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012 ¹	2012/2013	2013/2014 ²	2014/2015 ³	2015/2016 ⁴	2016/2017 ⁵	2017/2018	
Resource Clearing Price	\$40.80	\$111.92	\$102.04	\$174.29	\$110.00	\$16.46	\$27.73	\$125.99	\$136.00	\$59.37	\$120.00	
Cleared UCAP (MW)	129,409.2	129,597.6	132,231.8	132,190.4	132,221.5	136,143.5	152,743.3	149,974.7	164,561.2	169,159.7	167,003.7	
Reserve Margin	19.1%	17.4%	17.6%	16.4%	17.9%	20.5%	19.7%	18.8%	19.3%	20.3%	19.7%	

1) 2011/2012 BRA was conducted without Duquesne zone load.
2) 2013/2014 BRA includes ATSI zone
3) 2014/2015 BRA includes Duke zone
4) 2015/2016 BRA includes a significant portion of AEP and DEOK zone load previously under the FRR Alternative
5) 2016/2017 BRA includes EKPC zone

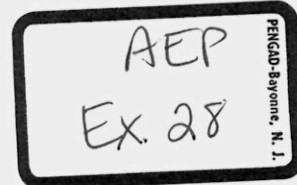
The cleared UCAP is the amount of unforced capacity that was procured in the auction to meet the RTO demand for capacity. The 2017/2018 Reliability Pricing Model (RPM) Base Residual Auction cleared 167,003.7 MW of unforced capacity in the RTO representing a 20.1% reserve margin. When the Fixed Resource Requirement (FRR) load and associated resources are considered the actual reserve margin for the entire RTO is 19.7%. The Reserve Margin presented in Table 1 represents the percentage of installed capacity cleared in RPM and committed by FRR entities in excess of the RTO load (including load served under the Fixed Resource Requirement alternative).

New Generation Resource Participation

The 2017/2018 Base Residual Auction results reflect a continuation of last year's strong participation by new generation capacity resources mostly in the form of new (or uprates to existing) gas-fired combustion turbine and combined cycle generation units. The total quantity of new generation capacity resources offered into the auction was 6,587.3 MW (UCAP) comprised of 6128.1 MW of new generation units and 459.2 MW of uprates to existing generation units. The quantity of new generation capacity resources cleared was 6267.3 MW (UCAP) comprised of 5,927.4 MW from new generation units and 339.9 MW from uprates to existing generation units. The 6267.3 MW of cleared new generation capacity resources exceeds last year's then-record number of new generation capacity resources cleared in any single RPM auction of 5462.9 MW.



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director



**House Agriculture & Natural Resources
Interested Party Testimony on H.B. 506
Director Craig W. Butler**

May 27, 2014

Good morning Chairman Hall, Vice Chairman Thompson, Ranking Minority Member Cera and Members of the House Agriculture and Natural Resources Committee. My name is Craig Butler, Director of the Ohio Environmental Protection Agency. I am pleased to provide Interested Party testimony for H.B. 506 related to carbon dioxide standards for power plants.

H. B. 506 attempts to set a roadmap for Ohio to comply with soon to be issued Federal EPA rules for the control of carbon dioxide from existing coal and natural gas power plants. These rules are going to be required under a seldom used provision of the Clean Air Act. It is expected that U.S. EPA will announce these proposed carbon rules for existing electrical generation plants as early as next week. Although the exact details of the proposal are closely-held within U.S. EPA at this time, we anticipate that these rules will have a substantial negative impact on coal-fired electric utilities in Ohio.

This proposed rule comes on the heels of other U.S. EPA rules that require the reduction of mercury and other hazardous air pollutants from the emissions from coal-fired utilities which will cause a number them to close. At the same time, U.S. EPA has proposed rules to apply carbon dioxide controls to every new coal-fired power plant.

Although U.S. EPA has not revealed any details yet, some public statements by U.S. EPA officials have us very concerned that there will need to be further substantial reductions in coal usage in Ohio to meet a future rules for carbon dioxide. We are seriously concerned that over the course of the next few years, Ohio may lose upwards of 50% or more of the coal-fired capacity due to these unnecessary federal mandates.

Even before U.S. EPA has released the proposed rules, we have started to reach out to stakeholders to ensure that we have input on the plan that will need to be submitted to U.S. EPA. It is our intent to provide for the maximum flexibility allowed under federal regulations to preserve as much existing coal-fired electric generation in Ohio and minimize the increases in the cost of electricity and minimize the impacts on manufacturing and consumers in the state.

Under the anticipated federal rules, Ohio will be obligated to submit a plan to U.S. EPA that meets their final guidelines. If Ohio fails to submit such a plan, U.S. EPA will enforce a federal control plan in the state. H.B. 506 sets out the parameters that Ohio EPA should follow in the development of the state plan.

AEP
Ex. 29

Residential CRES Offer Terms as of June 13, 2014

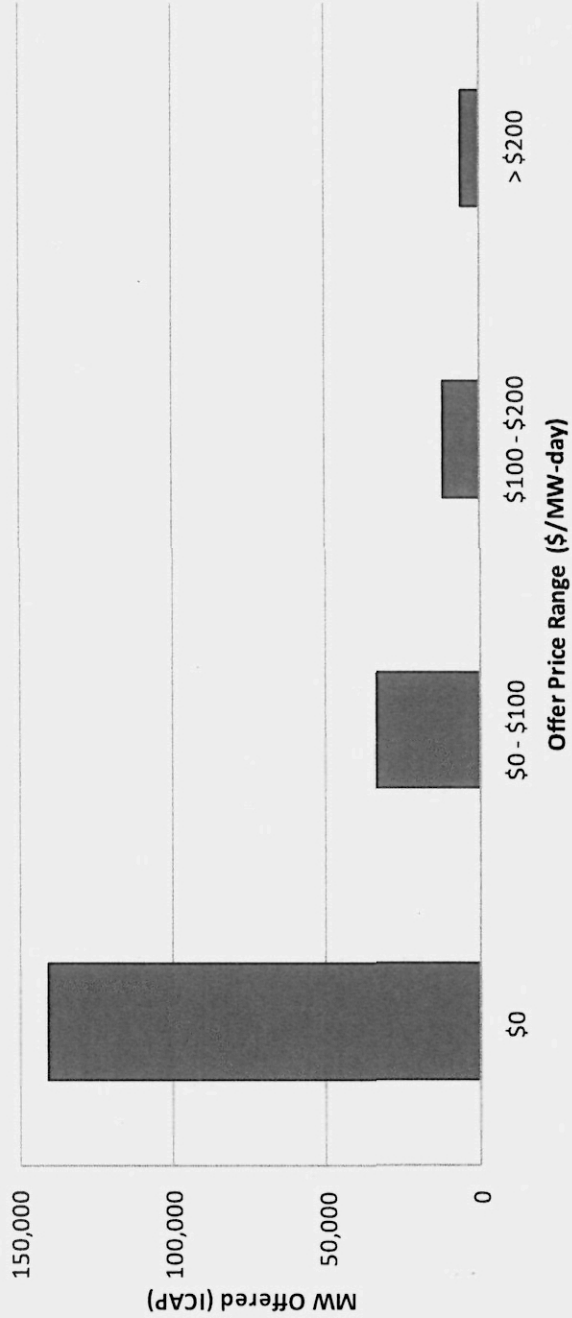
Contract Term	EDU Service Territory							State Totals	
	AEP Ohio	DP&L	Duke	OE	CEI	TE	Number	Percent	
Up to 12 months	35	32	49	26	26	26	194	72.4%	
Greater than 12 months and up to 24 months	12	8	12	8	8	8	56	20.9%	
Greater than 24 months and up to 36 months	4	3	4	1	1	1	14	5.2%	
Greater than 36 months	0	0	1	1	1	1	4	1.5%	
Total Offers	51	43	66	36	36	36	268	100.0%	

Source: PUCO Apples to Apples Comparison Charts dated June 13, 2014

Capacity Resource Offer Prices for 2016/17 Delivery Year



16/17 BRA MW Offered per Price Range



AEP
Ex. 31



Reliability Pricing Model Variable Resource Requirement (VRR) Curve

RPM Training – Appendix B
February 2014



- VRR Curve is determined prior to the Base Residual Auction
- Curve parameters are posted by February 1st prior to the Base Residual Auction
- Posted curve parameters may be adjusted prior to the Base Residual Auction to account for entities that have elected the FRR Alternative



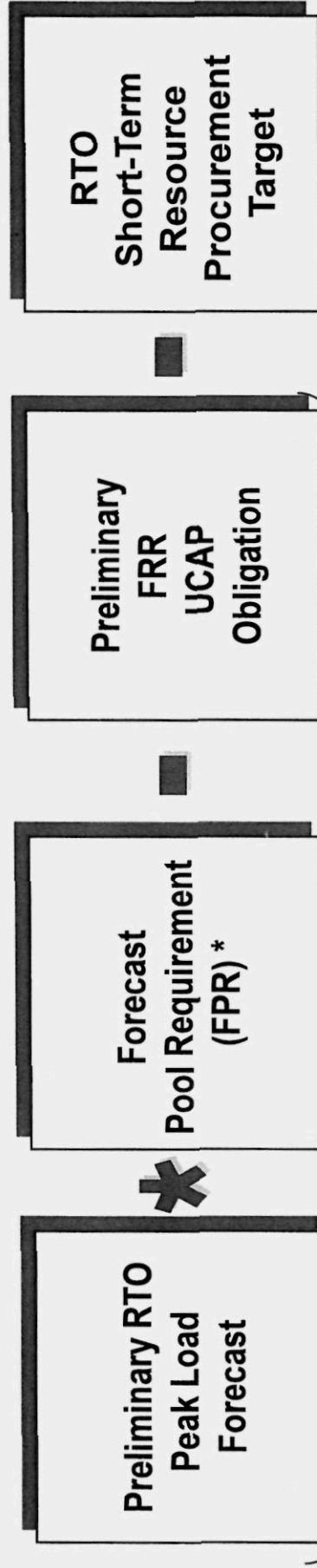
- Target Level
- Cost of New Entry (CONE)
- Net Energy & Ancillary Services (E&AS)
Revenue Offset

Beginning no later than for 2015/16 DY and continuing no later than for every third DY thereafter, PJM will perform a review of the shape of the VRR Curve, CONE values, and E&AS offset methodology.



PJM RTO Target Level

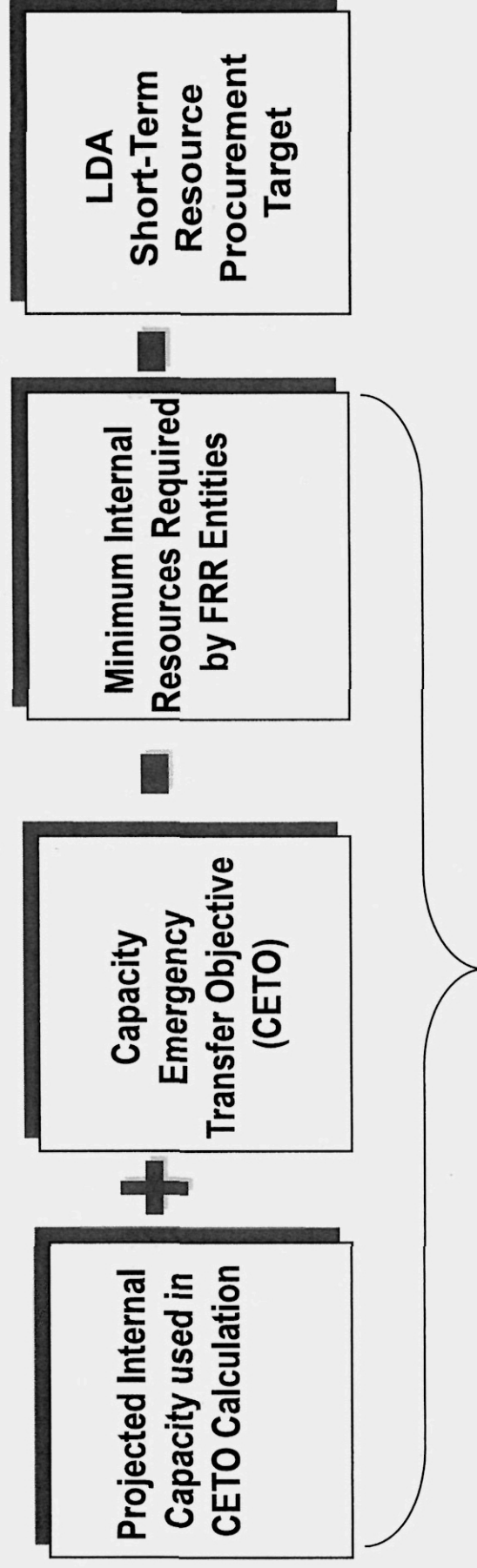
- The **PJM RTO Target Level** is determined as PJM Region Reliability Requirement less RTO Short-Term Resource Procurement Target.
- PJM Region Reliability Requirement is equal to Preliminary RTO Peak Load Forecast times Forecast Pool Requirement less Preliminary FRR UCAP Obligations in PJM. Region.



PJM Region Reliability Requirement

$$* \text{ FPR} = (1 + \text{IRM}) * (1 - \text{Pool-wide Avg. EFORD})$$

- Individual **LDA Target Level** is determined as LDA Reliability Requirement less LDA Short-Term Resource Procurement Target.
- LDA Reliability Requirement is equal to Projected Internal Capacity (UCAP) used in CETO calculation plus CETO less the minimum Internal Resources required by FRR Entities located in the LDA.



LDA Reliability Requirement



Cost of New Entry (CONE)

- Based on the cost to install a new combustion turbine.
- Gross CONE for PJM Region and five CONE Areas are posted in OATT, Section 5.10(a) (iv) (A).
- For 16/17 Delivery Year, Benchmark CONE for PJM Region and five CONE Areas are the gross CONE values posted in OATT.
- For subsequent Delivery Years, Benchmark CONE for PJM Region and a CONE area will be the CONE values used for PJM Region and such CONE Area in the Base Residual Auction for the prior Delivery Year.
- The Benchmark CONE values are escalated using the most recently published twelve-month change in Total Other Production Plant Index shown in Handy Whitman Index (HWI) of Public Utility Construction Costs.
- Escalated Benchmark CONE values are used in the development of the VRR Curves for PJM Region and modeled LDAs.



Cost of New Entry (CONE)

CONE Values (in ICAP terms) escalated by Handy Whitman Index for 16/17 Delivery Year:

**CONE for PJM
Region**

\$382/MW-day

**Cone Region 1
AE, DPL, JCPL,
PECO, PSEG, &
RECO**

\$418/MW-day

**Cone Region 2
BGE & PEPSCO**

\$390/MW-day

**Cone Region 3
AEP, APS,
COMED, DAY,
ATSI, DEOK, DUQ**

\$382/MW-day

**Cone Region 4
METED,
PENELEC, & PPL**

\$401/MW-day

**Cone Region 5
DOM**

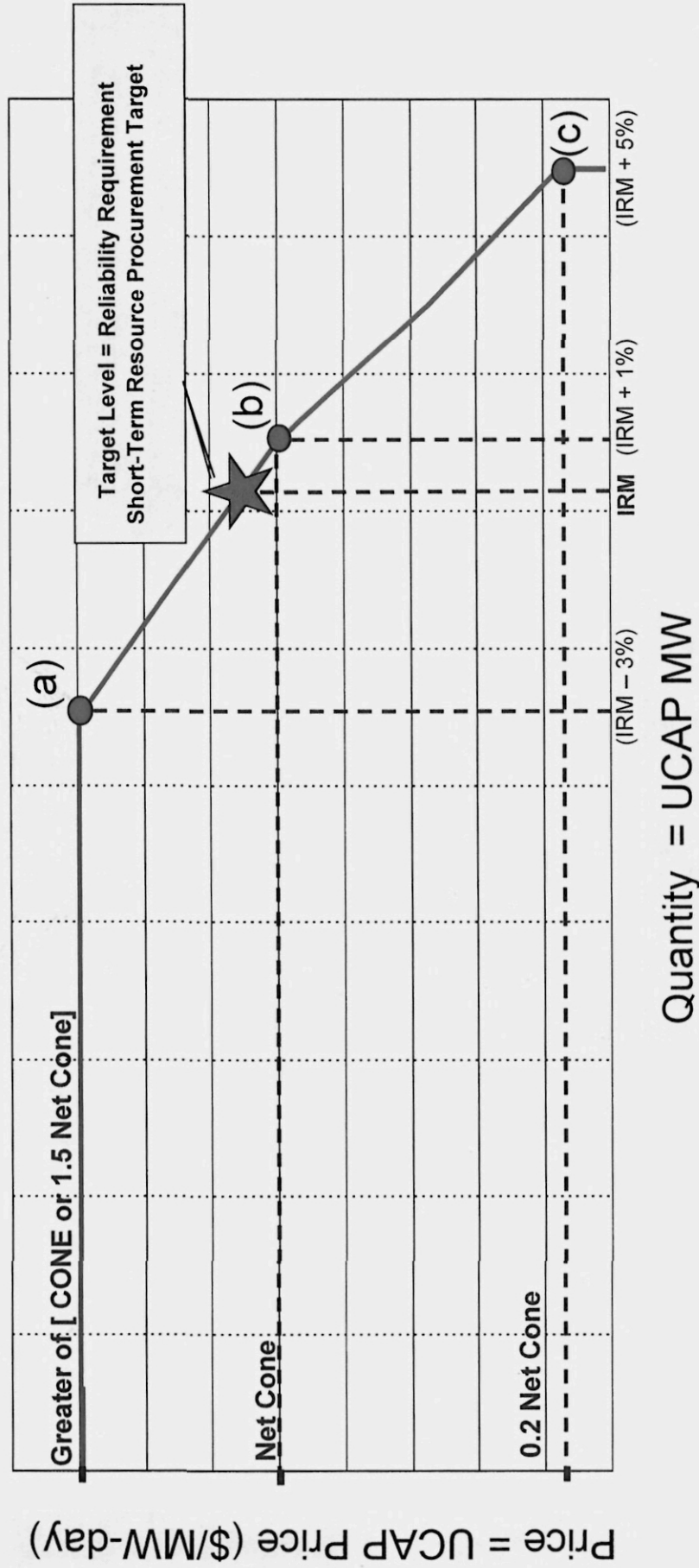
\$342/MW-day

If the LDA combines transmission zones with differing CONE values, the lowest value is used for the development of the VRR Curve in the LDA.



- **Net E&AS Revenue Offset is calculated in ICAP terms:**
 - Net Energy Revenue Offset is based on energy revenue data for a reference combustion turbine.
 - Based on an assumption that the reference resource is dispatched for both Day-Ahead & Real-Time Energy Markets on a Peak-Hour Dispatch basis.
 - Net Energy Revenue Offset is calculated using a historical average of the three most recent calendar years.
 - Ancillary Services Offset of \$2,199/MW-year is used per tariff

Illustrative Example of a VRR Curve



A VRR Curve is defined for the PJM Region.
Individual VRR Curves are defined for each Constrained LDA.

- The price (y-axis) in UCAP terms at each point on the VRR curve is calculated as:

Point (a) =

$$\frac{\text{Greater of } [\text{CONE or } 1.5 \text{ (CONE - Net E\&AS)}]}{1 - \text{Pool Wide Avg EFORD}}$$

Point (b) =

$$\frac{[1.0 (\text{CONE} - \text{Net E\&AS})]}{1 - \text{Pool Wide Avg EFORD}}$$

Point (c) =

$$\frac{[0.2 (\text{CONE} - \text{Net E\&AS})]}{1 - \text{Pool Wide Avg EFORD}}$$

$$\text{Net CONE} = \text{CONE} - \text{Net E\&AS}$$

Since Net CONE is in ICAP terms we divide by (1 – Pool Wide Average EFORD) to convert the price to UCAP terms.

- The quantity for each point (x-axis) on the VRR curve is based on the Reliability Requirement (*Rel Req*) in unforced capacity less Short-Term Resource Procurement (STRP) Target:

$$\text{Point (a)} = \left[\text{Rel Req} \frac{(100\% + \text{IRM} - 3\%)}{(100\% + \text{IRM})} \right] - \frac{\text{STRP}}{\text{Target}}$$

$$\text{Point (b)} = \left[\text{Rel Req} \frac{(100\% + \text{IRM} + 1\%)}{(100\% + \text{IRM})} \right] - \frac{\text{STRP}}{\text{Target}}$$

$$\text{Point (c)} = \left[\text{Rel Req} \frac{(100\% + \text{IRM} + 5\%)}{(100\% + \text{IRM})} \right] - \frac{\text{STRP}}{\text{Target}}$$

Plot VRR Curve using the following three reference points:

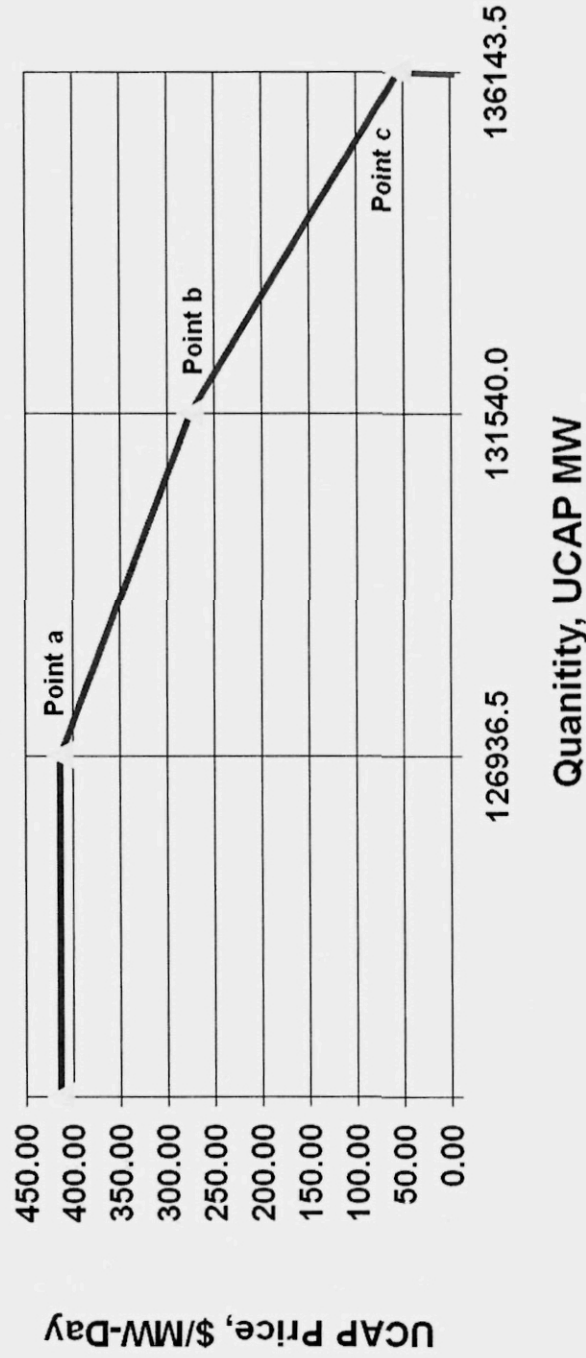
Point	Price (UCAP Price)	Quantity (UCAP MW)
a	$\frac{\text{Greater of } [CONE - NetE \& AS]]}{1 - \text{Pool Wide } EFORd}$	$\left[\frac{RelReq}{\left(\frac{100\% + IRM - 3\%}{100\% + IRM} \right)} \right] - \text{STRP Target}$
b	$\left[\frac{1.0(CONE - NetE \& AS)]}{1 - \text{Pool Wide } EFORd} \right]$	$\left[\frac{RelReq}{\left(\frac{100\% + IRM + 1\%}{100\% + IRM} \right)} \right] - \text{STRP Target}$
c	$\left[\frac{0.2(CONE - NetE \& AS)]}{1 - \text{Pool Wide } EFORd} \right]$	$\left[\frac{RelReq}{\left(\frac{100\% + IRM + 5\%}{100\% + IRM} \right)} \right] - \text{STRP Target}$

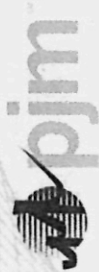
Where:	Rel Req =	STRP Target =
RTO VRR Curve	PJM Region Reliability Requirement	RTO Short Term Resource Procurement (STRP) Target
LDA VRR Curve	LDA Reliability Requirement	LDA Short Term Resource Procurement (STRP) Target



2012/13 RTO VRR Curve with FRR Adjustment

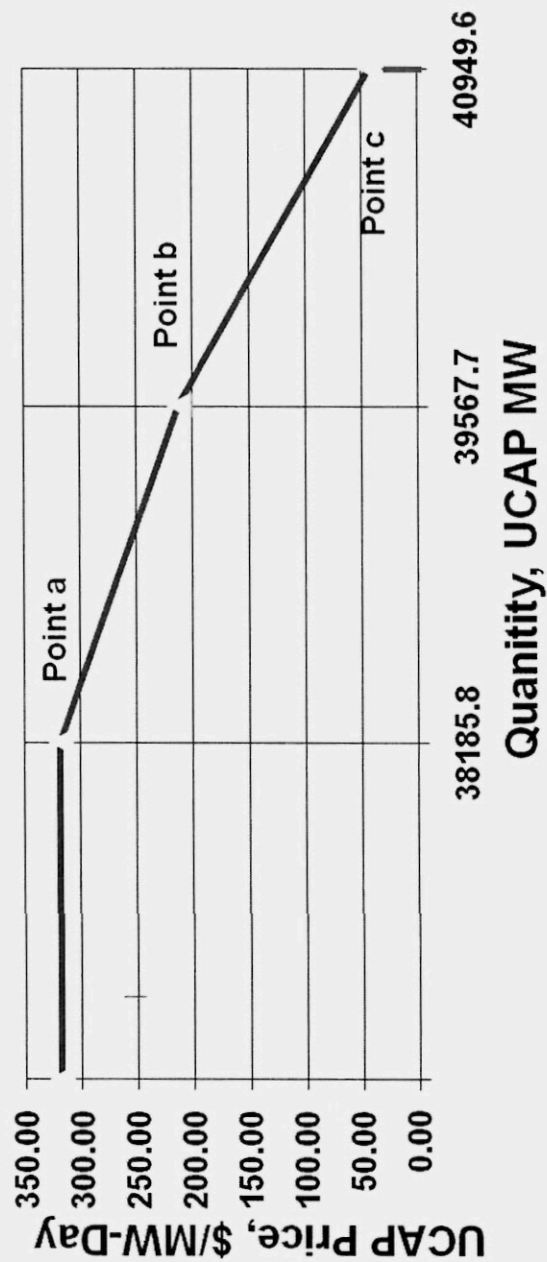
PJM Variable Resource Requirement Curve with FRR Adjustment 2012/2013





2012/13 EMAAC VRR Curve

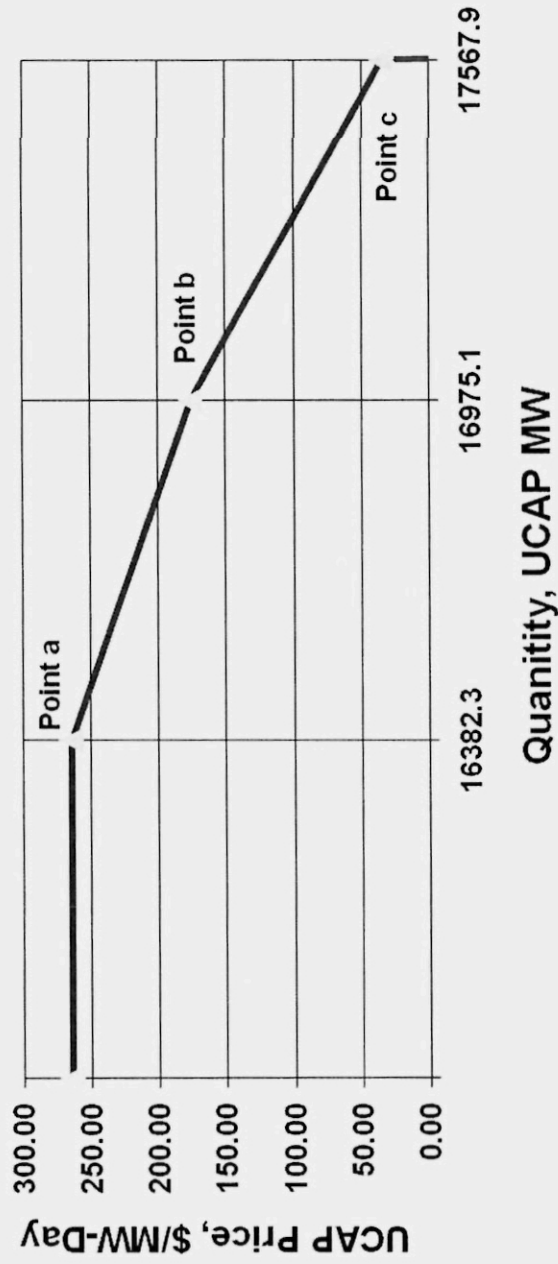
EMAAC Variable Resource Requirement Curve 2012/2013





2012/13 SWMAAC VRR Curve

SWMAAC Variable Resource Requirement Curve 2012/2013



Transition Report & Agency Review

**Public Utilities Commission
of Ohio**

Prepared for

**Governor-Elect
Ted Strickland**

December 29, 2006

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I. EXECUTIVE SUMMARY

The Public Utilities Commission of Ohio can, and should be, a critical player in Ohio's economic development strategy. This report summarizes by topic area the issues that will be presented over the next twelve to eighteen months and also discusses how the PUCO can support the Turn Around Ohio action agenda. Perhaps the most important change that needs to occur is to re-imagine the PUCO's role from a reactive umpire of disputes into a proactive organization that helps the new Governor drive his agenda to Turn Around Ohio. These issues are discussed in greater depth in the attached report.

A summary organized by importance and timeliness is:

A. Critical Facts About The PUCO

1. **Organization:** The PUCO is a five-member independent commission. PUCO Commissioners serve staggered five-year terms. Commissioners are nominated by a PUCO Nominating Council and appointed by the Governor. The Chair is selected by the Governor from among the independent Commissioners. The PUCO is a Chair-driven organization where policy and direction is largely determined by the Governor's appointee.
2. **Funding:** The PUCO is not funded from GRF. PUCO funding comes from an assessment or tax on utilities that is independent of GRF revenue constraints. In the past, even though it had no impact on GRF, the PUCO's budget has been cut when other GRF-funded agencies were also subject to budget cuts.
3. **Role in Economic Development:** Historically, the PUCO supported economic development policy by subsidizing industrial rates, creating jobs through infrastructure projects, and supporting energy efficiency. Deregulation has reduced, but not eliminated, this leverage points.
4. **Impending Increases in Rates.** Without exception, utility rates are expected to increase across the board. In electric markets, there is a reasonable potential for rate shock as Ohio's "Market Development Period" ends in 2008. When this happened in Maryland, rates increased by 72%, the state legislature attempted to "fire" the entire commission, and businesses and consumers were extremely displeased. Ohio will experience some increase, but hopefully, not at the level experienced in Maryland. In telecommunications, the PUCO has just granted AT&T limited deregulation that will allow it to raise rates by \$1.25 per month in most parts of Ohio. In water, Ohio American Water has requested the right to raise rates throughout Franklin County.

B. Time Sensitive Issues

1. **Appointments to PUCO Nominating Council and Open PUCO Commissioner's Slot.** By January 12, the Governor, through his staff, should make three direct appointments to the PUCO Nominating Council. By February 9, the Governor will receive four names from the Nominating Council for possible appointment as a PUCO Commissioner. The Governor has 30 days to appoint one of the four names or to reject the entire slate. The open PUCO slot begins on April 11.
2. **Rehearing On AT&T's Rate Increase.** If the Governor wishes to oppose the recently granted rate increase to AT&T for local service, he should, through staff, express that view clearly and request that the PUCO through its rehearing process re-examine the level of actual competition in Ohio and its impact on consumers. A decision on rehearing will likely be rendered by the PUCO in February. If the Governor does not wish to take a position, then no action is necessary.
3. **Electric Restructuring Negotiations to Avoid Rate Shock & To Promote Turn Around Ohio Policies.** Electric restructuring is perhaps the most important single PUCO issue for the next twelve-months. The utilities, industry groups, and PUCO commissioners are already having discussions about how to prevent economic dislocation and whether some form of re-regulation is appropriate. Several commenters requested that the new Administration be involved in this early process so that it is not faced with a fait-accompli or a deal that is crafted without the Governor's guidance. Importantly, the magnitude of this issue also creates the possibility to reach agreements on other parts of the Governor's agenda including clean coal and alternative fuels. This process is already beginning but is unlikely to "take off" until February or March.
4. **Expiration of Ohio Coal Tax Credit.** One commenter noted that the Ohio Tax Credit for use of Ohio coal is scheduled to terminate in June 2007. Action should be taken before then, if desired, to extend the tax credit.
5. **Potential \$150 Million Local Tax Shortfall from Supreme Court Decision On Natural Gas Pipeline Taxation.** The Board of Tax Appeals has ruled that distribution pipelines should not be taxed as utility property. The case is pending on appeal to the Ohio Supreme Court. If it is upheld, local school districts (mostly in rural areas) will be required to repay \$150 million to \$180 million in overpaid taxes. The gas companies are looking to discuss a settlement to allow decreased future tax rates in exchange for not requiring the local districts to repay the overcollected taxes.

6. **Implementation of Turn Around Ohio Policies.** Last, but not least, there needs to be proactive efforts to initiate and implement the Turn Around Ohio agenda with respect to energy and broadband communications. All too often, personnel time is spent addressing the latest immediate crisis rather than working on long range policy initiatives. The implementation of the Governor's forward-thinking agenda should be not obstructed by the need to respond to daily issues.

II. ELECTRIC

1. General Overview.

A fair reading of the electric comments received is that the local electric distribution utilities are guardedly optimistic and that other commenters believe that the last decade of electric deregulation and competition has failed to achieve its stated goals. In Ohio competitive electric markets, especially retail, have not developed. Factors contributing to this failure include the disruptive impact of hurricanes, international supply disruptions (both actual and anticipated), increasing cost of environmental compliance, and the weak Ohio economy. Commenters also suggested that other factors included: plant siting, the delay in the use of clean coal and renewable energy technologies, a lack of openness and transparency, and uncertainty about electricity transmission. Most respondents felt that the Ohio Legislature would act in 2007 and that an opportunity existed for the PUCO to play an important role in developing a forward-looking electric market structure.

While a number of thoughtful policy recommendations were presented, this portion of our analysis is limited to those issues likely to arise in the first few months of the new Administration. Several of the issues are interrelated and call for a comprehensive approach. As Turn Around Ohio clearly envisions a comprehensive and integrated approach, this need is not surprising. Major issues which are likely to require immediate attention are listed below.

2. Electric Restructuring & Increased Rates For Generation.

It is important to understand that Ohio has divided electric rates into separate components for generation and distribution. Generation prices are subject to deregulation, while transmission charges are more fully regulated.

In 1999 the Ohio General Assembly deregulated electric generation in Ohio. Since 2001 utilities have been transitioning, via a five year Market Development Period (MDP) ending in 2005 and thereafter Rate Stabilization Plans (RSP), to a fully regulated marketplace. During the MDP robust competitive markets did not form, requiring the need for additional time for market development, while also allowing utilities to slowly move toward a fully deregulated marketplace. The RSPs were voluntarily negotiated and agreed upon in order to continue to allow for controlled market development. These RSPs generally expire at the end of 2008.

In Maryland, prices increased between 40% and 100% in the two years following the end of the Maryland MDP. In parts of Baltimore, electric rates increased 72%. The public outcry was so great that the Maryland Legislature voted to "fire" the entire Maryland Public Service Commission by legislatively eliminating their positions.

Prices have almost universally increased as a result of deregulation: Connecticut, up 72%; Delaware up 100-59%; Illinois up 40%; New Jersey up 13%; Pennsylvania up 93%;). In Maine and Virginia, there are fears of a similar increase.

Here, in Ohio, the question is not whether prices will increase, but by how much and how fast. AMP-Ohio and OMEA report that they "have seen wholesale electric rates increase as much as 40 percent in recent years as situational effects on the market, such as hurricanes (fuel prices), were materially amplified by flawed federal regulatory policies (transmission costs) and the failings of the current deregulated market (including lack of new generation and transmission infrastructure and misguided attempts to create markets in a way that assures prices well above costs)." It is very unlikely that prices will increase at rate experienced in Maryland, however, all parties consulted in the preparation of the Transition Team report said that industry rate and regulatory structure needed to be defined for the long-term post 2008 environment.

For example, First Energy noted that: "Given the slow development of the market and volatile wholesale market prices, the electric utilities agreed to stabilize generation prices at PUCO-approved market-based rates through 2008. Decisions must now be made whether generation pricing will be set purely by the market, whether a return to a form of regulation is needed, or a hybrid of the two would best serve customers and the State of Ohio, and maintain the financial viability and integrity of the state's electric utilities in the post-2008 period."

AEP writes that: The PUCO and other stakeholders will require significant engagement to assure an outcome suitable to the Governor, State Legislature, customers and utility shareholders. A significant debate currently underway is utility recovery of investment in new generation capacity and transmission and distribution infrastructure. PUCO Chairman Schriber is critical to enabling success with stakeholders. Successor to Commissioner Jones should be integral to the solution, along with other Commissioners."

An overwhelming majority said that all stakeholders must be involved in any attempt to fix the current market structure. A number of the commenters felt they had not been adequately included in the design or implementation of Ohio's electric restructuring. Many felt inadequate attention had been paid to rate shock, electric reliability, industrial development, energy conservation, and supply and demand options. One especially telling point is that not one respondent labeled the PUCO as an innovator, either nationally or in the Midwest.

A utility executive noted

The current absence of a long-term horizon, and the associated planning security, makes it impossible to contemplate the construction of new generation capacity in Ohio.

Long-term planning and certainty is a critical component of financing new generating capacity. Before deregulation, a number of financing mechanisms existed that were

backstopped by ratepayers. The "obligation to pay" was judiciously applied and resulted in significantly lower capital and construction costs. Many have commented on the need for new electricity plants, particularly ones with low emission profiles. Yet, without a commitment from the PUCO that ensures cost recovery, fewer new electric power plants may be built. The construction of electric power plants is directly related to the type of regulated, hybrid, or unregulated electric utility market allowed in Ohio. The PUCO should look at the traditional and new financing mechanisms that have been developed in other states as an integral part of its effort to provide low-cost and sustainable energy in Ohio. This can be done in conjunction with market restructuring reforms.

The PUCO will need to immediately begin talks with legislators, energy utilities, consumer groups, industrial and commercial users, residential consumers, farmers, and other relevant stakeholders. This consultation needs to include electric generators, as well as vendors of new technologies and distributed generation operators. Utility ownership of electric generation plants, the economic viability of industrial development rates, ensuring the reliability of and funding for local distribution, and the use of green and renewable sources of energy are a few of the issues that would need to be reexamined. A regulatory proceeding needs to be designed that will allow for full input and should be completed in a relatively short time frame. Legislation may be needed.

This impending crisis creates the opportunity to negotiate an agreement on a wide variety of issues ranging from clean coal, alternative energy to targeted funds for economic development. On and off the record, stakeholders, including some utilities, have indicated that some form of reregulation should be on the negotiating table.

3. Supporting Increased Use Of Ohio Coal & Expanded Generating Capacity

The construction of large clean coal electricity generating plants is a key issue which should be part of any negotiated solution to electric market restructuring. The central regulatory issue is cost recovery. In a deregulated market investors would not be assured of cost recovery. Regulators have energy siting responsibilities and a need to ensure that Ohioans are served by reliable and affordable electric service. Because of the important role coal plays in the Ohio economy, the construction of a leading edge clean coal technology electricity generating plan will accomplish a number of important state goals.

Deciding "Who pays?" has long been a central feature of state utility regulation. In an unregulated market, the answer is straight forward; the shareholder initially pays and plans to recover the investment through future sales. In a regulated market, the regulatory commission decides the ratio of costs initially borne by ratepayers and shareholders. In a hybrid market with a negotiated Rate Stabilization Plan, cost recovery is problematical, yet ultimately within the authority of the PUCO.

Industrial and residential users expressed concern that the cost recovery outlined by the PUCO for clean coal plants is too generous. The PUCO may need to address this in a proceeding, particularly in regards to the precedent set for future generating plants and

the benefits to Ohio' residential, industrial, and commercial consumers. Clean coal should also be considered as part of a portfolio of "clean energy." For example, in Pennsylvania a renewable portfolio standard was developed with a set-aside for coal-waste that can be used to generate electricity, thereby preventing a portion of it from leaching into the underground water. The PUCO should take a close look at this and other innovative programs.

AEP's position is that: "Integrated Gasification Combined Cycle (IGCC) electric generation will play a critical role in contributing to Clean Air standards now and into the future. AEP Ohio believes that its 629MW IGCC proposed plant in Meigs County, Ohio is an important part of the Companies plan to add new generating capacity in its operating service territory. In conjunction with its [Provider of Last Resort] (POLR) obligation, this IGCC plant will add tremendous investment tax base and jobs in the region. However, as the Company has previously stated, the investment and a reasonable regulated rate of return must be recoverable from rate payers. . . .Coal continues to be this nation's most abundant fuel and proven reserves holds this fuel as a viable alternative to foreign energy imports as long as its use is consistent with federal and state clean air standards. In addition, the mid-west geographic region, including Ohio, can be in a position to be part of the supply mix creating additional investment and jobs. [F]uel cost recovery should be a recoverable cost along with the recovery of generating plant investment."

4. Increased Rates For Infrastructure.

In addition to increased generation rates, Ohioans will almost certainly be asked to pay higher distribution rates. First Energy observes that: "As with much of the infrastructure in the state, the distribution and sub-transmission systems of electric utilities are in dire need of significant and long-term replacement and an upgrade program for the benefit of existing customers and to support economic retention and growth. A modernized ratemaking formula is needed to assure such work is completed in a timely fashion and to avoid capital impairment issues faced by utilities and protracted litigation encountered in comprehensive rate filings at the PUCO."

Similarly, "AEP Ohio believes additional investment in Distribution electric infrastructure is needed to achieve growing customer and Commission reliability improvement expectations. These expectations are increasing at the heels of very low historical prices and over a decade of unchanged rates. Electric infrastructure investment will enhance Ohio economic development along with improving electric reliability in the digital age. It will be imperative that Commission opinions and decisions in electric infrastructure investment requirements remain consistent during changes in administration."

5. Increased Use of Renewable Energy Resources & Expanded Conservation.

Many individuals and organizations consulted called for a "portfolio" approach that would allow and encourage a wide range of fuels to be used in the generation of electricity. Concern was expressed that environmental issues would make the current reliance on coal unaffordable. Many also said that clean coal technologies will be an immense benefit for Ohio. Some expressed a worry that renewable resources may not be an economic alternative.

In a portfolio approach all demand and supply options are on the table and eligible as ways to lower electric costs and to minimize price volatility. Investments in demand side technologies could winterize more homes, farms, and businesses; lower peak demand; and relieve transmission congestion. Supply side investments could bring renewable energy suppliers into the mix, reduce pollution, and encourage the growth and development of distributed energy providers, as well as improving the efficiency of utility plants.

Viewed from a Turn Around Ohio perspective, opening up utility markets to sustainable renewable energy providers would greatly assist Ohio's emerging green technology firms. Just as the US government helped fledgling US airlines develop by paying for their delivery of US mail, so too can an open market approach help green technology firms. Utility purchasing power would serve as an "anchor tenant"—through their green energy purchases—for green firms as they help grow the Ohio economy.

First Energy writes that: All forms of alternative energy must be considered as well as demand response programs to fulfill the electrical needs of Ohioans. After analysis, the types of generation resources to be pursued, including demand response, should be prioritized so that those that are most economically viable and with the best chance of fulfilling Ohio energy needs for the near and long term should be most aggressively funded and pursued.

Many other states have done a lot more than Ohio. Reportedly, we currently rank 25th in terms of promoting demand side management programs. This has hurt our coal industry, our electric distribution utilities, and the rest of the Ohio economy. Paybacks reported in other states for their energy innovation investments reveal a return of four times investment. On the supply side, a portfolio investment in a low emission distributed generation plan near a load center may reduce transmission line congestion. This could eliminate the need to build new transmission or even generation. A portfolio approach that reduced demand could ease seasonal electricity peaks.

One commenter summed this up succinctly

These programs will save billions of dollars each year within a few years of implementation, and are an essential tool to compensate for the rate impacts that are going to occur due to past failures to develop these programs. The importance

and effectiveness of these programs is amply demonstrated by successes in other states. Ohio's start-up programs in the 1990's were highly successful and at least three of the electric utilities expressed a desire to expand them. The termination of these programs in 1996 was neither justified nor explained, and the PUCO commissioners at that time and since then have not engaged in dialogue that would shed light on their reasoning.

The Ohio League of Conservation Voters believes that the PUCO is not committed to conservation or to alternative energy:

Routinely the PUCO gets applications for tariff changes and the commission manages to approve them within 30-days but has taken nearly a full year to rule on an energy efficiency program that was uncontested. The commission has a lack of creativity and interest in how Ohio can work better, there are many other states that have taken the lead in these areas and the PUCO only seems to consider utilities rates.

Energy efficiency programs may be one of the strongest opportunity to create jobs and economic development in Ohio. One study showed that while jobs in the energy sector grew only slightly as a result of a strong efficiency/sustainable energy program, the saved dollars created nearly eight times as many jobs by retaining energy dollars within the state economy instead of exporting them to power plant investors and out-of-state mineral extractors.

With respect to renewable energy, alternative fuels and distributed generation, Ohio lags far behind its Midwest compatriots and has done nothing to remove the regulatory barriers to promote these alternatives. This year, the PUCO convened a proceeding to examine whether it should change its policies with regard to net metering, interconnection, standby rates – the rates utilities charge distributed generators for providing supplemental or back-up service – and smart meters. This hearing is required by the Federal Energy Policy Act. The PUCO has not acted on its own staff's recommended response to the Energy Policy Act of 2005. At this time, the PUCO Staff has issued a report which while encouraging in some areas, still does not adequately address the key economic barrier which is to require an overhaul of the utilities' tariffed rates for standby power.

6. Possible Revelation of Previously Undisclosed Side Deals

The Ohio Supreme Court has remanded, in whole and in part, two decided cases back to the PUCO largely because of the PUCO's failure to allow the Ohio's Office of Consumer Counsel to adequately participate in two important electric utility rate stabilization cases. In the case of Duke Energy, generation costs have fluctuated due to quarterly filings as Duke is allowed to receive cost increases that fall into four separate buckets. The Supreme Court found the PUCO allowed increases to Duke Energy without justifying the basis or pointing to evidence to support its decision as required by law. The Court also held that the Commission erred by denying OCC's discovery request to obtain the side

deals that Duke entered into with many of the signatory parties to the Stipulation in this case and acknowledged that these side deals could potentially have been an inducement to sign.

After the Supreme Court decision was issued, a Duke whistleblower filed a civil suit in Federal Court claiming that Duke, through a competitive affiliate, entered into contracts with certain industrial customers who signed the RSP settlement. Allegedly, the terms of the deal required the industrial customers to pay the rate increase while the Duke subsidiary repays these industrial customers the difference between the former rate and the rate increase. Allegedly, these industrial customers could evade the rate increases they endorsed and that were agreed to in the settlement. According to the whistleblower's complaint, the value of the side deals is approximately \$20 million.

7. Grid Interconnection

Ohio has two major multi-state regional electricity grids that provide an opportunity and a challenge. The PJM and MISO grids can provide low-priced electricity to Ohio consumers, but can also divert low-priced power to other states. In a worst case scenario, low-priced power that Ohio relies on could, in a competitive market, end up in New York. The PUCO needs to be an active member of the relevant regulatory entities in order to ensure that Ohio's native electric loads are appropriately protected and that interstate transmission costs are paid by the parties benefiting from interstate power transmissions. PUCO involvement in these grids must be predicated on how the policies developed and costs incurred benefit Ohio. PUCO needs to be an active participant in policymaking and issue development meetings held by federal, national, and interstate entities. PUCO's goal should be to be an opinion leader and to develop a strong alliance with other Midwest states.

8. PUCO Liaison With Turn Around Ohio

The PUCO will play an important role in Turn Around Ohio, even though the PUCO is not a line agency. The development of green or renewable energy firms and the need for electricity and natural gas rates that help restore Ohio's competitive edge mean PUCO will be involved. The PUCO should develop a liaison with the Ohio Department of Development that provides technical assistance on an as needed basis. The current relationship between PUCO and ODOD regarding the LIHEAP program is a positive example of the type of relationship envisioned, as well as the benefits obtainable for Ohio business firms.

9. Electric Utility Workforce Labor Pool

Some utilities have experienced a need for new employees and have begun training and recruitment efforts to meet this need. Community colleges and in-house training have been used. An opportunity may exist to improve these efforts through Turn Around Ohio.

10. Reliability and Service Quality

Consumers have been concerned and complaining for years about service reliability, predominantly in several service territories. Ice-storms have left many thousands of people without power for up to eight days. Problems also include the failure of utilities to routinely trim trees as they had during traditional regulation. On the other end of the spectrum, utilities have leveled rows of large old trees in neighborhoods, leaving stumps and tree debris. There appears to be little effort on the part of the PUCO to adequately investigate whether the utilities have properly spent the money allocated in rates to conduct routine tree-trimming on a cycled basis. A 2003 study by the PUCO staff was ordered to be redone. The new study was used as a basis for a settlement.

In a related matter, AEP has filed a plan to improve service quality, along with a cost-recovery mechanism. Hearings need to be scheduled.

11. Appliance Efficiency Standards

Ohio can embrace a number of technological standards which have been put into practice in other states, but which are not pre-empted by the current Federal appliance standards law. All of these standards are based on a conservative analysis that not only assures that they will save money, but that all major manufacturers already have products available which meet the standards. Since Ohio would be following in the wake of many other states there is little controversy in the passage of these standards.

Appliance standards are a legislative action, not the responsibility of the PUCO. The adoption of the proposed slate of standards will enhance the PUCO's mission to provide safe and affordable electric power to the citizens and businesses of Ohio.

12. Consumer Protection, LIHEAP, and PIPP

PUCO's consumer protection regulations were last reviewed in 2003, with the next review scheduled for 2008. The PUCO should accelerate this review and ensure that LIHEAP and PIPP regulations reflect best practices and consumer concerns. Ohio's utilities, consumer groups, the OCC, and the Department of Development should be included in this review.

13. Supplier diversity

First Energy believes that the PUCO can support supplier diversity for utilities. First Energy urges the Administration to:

1. Strengthen and empower the Ohio Department of Development – Division of Minority Affairs:
2. Ensure appropriate level of dedicated staffing and budget allocation to support active community outreach

3. Support and promote existing Minority /Women Business Enterprise (MWBE) Mentoring Programs
4. Support and promote the Ohio Minority Business Councils;
5. Improve state support for women-owned businesses through advocacy groups
6. Actively engage the PUCO and Ohio GATE Advisory Committee in promoting diversity;
7. Strengthen State of Ohio contract language to support diversity spending by all state agencies – i.e. a 3 percent MWBE requirement
8. Encourage corporations to actively support supplier diversity through formal programs that include goals and commitments.

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

**Centralized Capacity Markets in
Regional Transmission
Organizations and Independent
System Operators.**

: Docket No. AD13-7-000

MECHANICS OF CURRENT CENTRALIZED CAPACITY MARKETS

**Todd A. Snitchler, Chairman
Public Utilities Commission of Ohio**

September 25, 2013

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MECHANICS OF CURRENT CENTRALIZED CAPACITY MARKETS

**Todd A. Snitchler, Chairman
Public Utilities Commission of Ohio**

Good morning. My name is Todd Snitchler and I am the Chairman of the Public Utilities Commission of Ohio. Thank you for inviting me to explain the Ohio Commission's views of the centralized capacity markets.

DISCUSSION

- 1. How effective are the existing centralized capacity markets in assuring that resource adequacy needs are met at just and reasonable rates?**

Ohio is a retail choice state for electric generation service. Generation service in Ohio is deregulated, and we have been monitoring the outcomes of PJM's reliability pricing model (RPM) auctions with great interest. To say the least, the auction results have lacked consistent outcomes from year to year. The results of our monitoring lead me to conclude that it is now time for FERC to initiate a proceeding to review the policies affecting RPM auctions. The Ohio Commission is becoming more and more concerned that the price of capacity for merchant generation is below economic levels as a result of FERC policies for other capacity products in the RPM auctions. I am today, therefore, respectfully requesting that FERC initiate comprehensive proceedings for each regional transmission operator (RTO) to: (1) review whether payments to demand response and energy efficiency

resources are reasonable, (2) examine whether additional safeguards should be established to ensure against financial arbitrage through the purchase of replacement capacity, (3) reevaluate whether the MOPR exemptions are unfairly eroding the price of capacity for merchant generators, (4) determine whether the seams rules should be amended, and (5) decide whether a long-term RPM market should be established.

2. What modifications, if any, would you recommend be made to capacity markets in general or to specific capacity market design elements?

The Ohio Commission has identified four distinct areas that merit attention. As markets have evolved to include Demand Response (DR), Energy Efficiency (EE) and other products, it is in our best interest for FERC to ensure that auction bidders are competing on a level playing field. It is also appropriate to view these comments in proper context. First, DR, EE and other products have a place in the energy marketplace and are helpful in mitigating costs at peak demand. Second, successful operation of a reliable energy grid must be built around long-term, stable, high-capacity resources and should not overly rely on peak-shaving tools to design and operate the grid. Finally, long-term successful operation of the grid

requires that the system be designed to deliver power to those who seek to use it, rather than encourage a reduction in productivity simply to achieve a larger policy goal.

a. Demand Response

In comments within the past 12 months, the Ohio Commission has requested in two separate proceedings that FERC initiate a comprehensive rulemaking investigation of demand response in the PJM region. The Ohio Commission maintains that the unlimited Annual DR product has an important and valuable role in ensuring reliability via its participation in the RPM BRA as an element in the capacity resource mix, as does generation. The Ohio Commission is concerned, however, that other DR products are contributing to DR oversaturation to the overall detriment of reliability because these resources have fewer obligations to deliver, compared with actual generation and the unlimited Annual DR product.

I am today, therefore, renewing the Ohio Commission's previous requests that FERC initiate a rulemaking investigation to review whether it should significantly reduce or begin to phase out all reduced DR capacity resources (i.e., the Limited and Extended Summer DR products). The Ohio Commission maintains that FERC should review whether all capacity products participating in the BRA should ultimately be subject to the same availability requirements as generation, in

that they must be physically available and respond on par with generation.

FERC's investigation also should work to ensure that penalties for nonperformance are uniform for both DR and generation and such penalties are sufficiently stringent to ensure that all capacity resources meet their respective obligations for delivery.

Until the phase-out of the Limited and Extended Summer DR capacity products is effectuated, I recommended that FERC move to significantly reduce the level of compensation for these products. As noted earlier, these DR products, because of the fewer obligations placed on them, are not comparable with physical generation capacity resources. Specifically, until FERC can phase out these lesser DR products, FERC should move in the short term to reduce the annual compensation to DR capacity resources available on a limited basis. For example, because the Extended Summer product is only required to be made available at 10-hour increments for an unlimited number of interruptions during a six-month period, the full capacity clearing price should be adjusted downward by at least 50 percent to take into consideration that the product is only available as a capacity resource for a limited number of hours. FERC should also ensure that the Extended Summer DR product is only eligible to receive compensation for the six-month period that the product is made available for delivery.

Because the Limited DR capacity product is only required each delivery year to be made available ten times for up to a six hour-period over a four-month period, the price for this capacity product should be materially reduced. Even taking into consideration the fact that the Limited DR product will be called to deliver only at peak usage times, I believe a 70 percent discount to the full RPM capacity price should be considered. Consistent with my recommendation concerning compensation for the Extended Summer product, I maintain that compensation for Limited DR should only be made during the four-month period it is required to deliver as a capacity resource. Finally, once the reduced DR capacity products are eliminated, FERC should move to ensure that the Annual DR product is made available on an unlimited basis beyond its 10-hour performance requirement.

As discussed in more detail later concerning replacement capacity, FERC should: (1) limit the proliferation of DR buy-back financial trades in the RPM; (2) establish credit requirements for DR participants that are adequate to cover commitments in the event of a default; and (3) FERC should require DR providers to demonstrate that DR quantities offered and cleared in the RPM auctions are physically available and actually deliverable to the LDA to which it has offered or committed.

b. Energy Efficiency

Similar to demand response, payments for energy efficiency also deserve scrutiny. FERC should seize this opportunity to investigate whether capacity payments to energy efficiency should be adjusted to ensure more economic payments for physical generation resources. After all, the cost saving associated with investing in energy efficiency should be sufficient monetary incentive to secure such new technologies. Offering a secondary source of compensation has the potential to distort market prices and impact long-term system reliability. Taking into consideration that energy efficiency is not comparable to physical generation that produces electrons I believe that FERC should seek to reduce EE's RPM compensation to a reduced percentage of the BRA's clearing price.

c. Replacement Capacity

Concerning replacement capacity, I recommend that FERC generically investigate this issue and whether it is being used more frequently as a financial tool to generate additional cash flows through financial arbitrage, rather than to provide physical resources intended to promote reliability. That is, FERC should move to ensure that those offering into the RPM auctions actually intend to deliver the physical dispatchable capacity product that is offered and cleared in the RPM administrative process. The capacity market has been premised on maintaining

reliability by procuring physical capacity products. Consequently, I believe that FERC should consider placing a 10 percent cap on the purchase of replacement capacity for the various capacity products. FERC should also establish penalties for the purchase of replacement capacity for the purpose of meeting RPM commitments (i.e., replacement capacity purchases in excess of 10 percent). Finally, to take into consideration the potential for a legitimate anomalous event, FERC should adopt rules establishing a waiver process so RPM participants can demonstrate that any excessive purchase of replacement capacity is a unique one-off situation resulting from an unexpected exogenous occurrence, such as a forced generation outage resulting from an act of nature. For those market participants who routinely rely on replacement capacity in excess of 10 percent, FERC should, in the very near term, determine whether such behavior warrants the imposition of more stringent credit requirements in the case of default.

d. Minimum Offer Price Rule

I am increasingly concerned about the application of the minimum offer price rule (MOPR) and its long-term consequences on merchant generation in PJM. Specifically, under PJM's recently revised MOPR, vertically integrated utilities and municipal-owned utilities receive exemptions from MOPR while merchant and state-sponsored generation must qualify for the more onerous competi-

tive exemption test or unit-specific exemption from MOPR. As the Ohio Commission previously commented to FERC, it is inherently contradictory to allow state-subsidized generation to bid into a competitive market. I submit, however, that there is no difference between generation receiving state subsidies and vertically integrated utilities which were built with ratepayer support. The existence of any subsidies serves to erode the market while failing to send the appropriate price signals for the construction of new, unsubsidized, merchant generation. At a minimum, I believe all capacity providers should be subject to the same rules to ensure that merchant generation offers are on par with all other generation offers in RPM.

Under the current MOPR exemptions, Ohio's capacity payments are potentially subsidizing new vertically integrated generation. This is essentially the situation that FERC was attempting to avoid by approving the MOPR. For example, the results of the last base residual auction highlight that RPM continues to provide, through imports, a high level of subsidy to vertically integrated and non-physical participants, while failing to provide for a significant increase in new generation within PJM's borders. Specifically, the 2016/2017 Base Residual Auction results reflect a significant increase in capacity imports. However, there was only 116.60 MW of new generation (including existing generation uprates) as compared

to the previous auction year, which saw a record for new generation.¹ If existing generation uprates are removed, then the new generation is actually less than the amount that cleared in the previous auction. In light of the significant number of coal plant retirements, this represents a low and potentially unacceptable amount of new generation, with the potential to impact system reliability to such an extent that transmission solutions will not be sufficient to correct the deficiency.

I question whether the RPM is failing to send the proper economic price signals to incent merchant generators to build within PJM. Instead of parsing out participants as MOPR currently operates, FERC should focus on ensuring that all participants in a centralized capacity market are subject to the same rules in order for that market to function appropriately. Consequently, I submit that discriminatory treatment of similarly situated facilities should not be allowed. That is, PJM's MOPR currently provides an automatic exemption to vertically-integrated and most municipal-owned generation; while requiring merchant generators to seek an essentially open-ended waiver under different requirements. To the extent that some vertically-integrated participants are unwilling or are unable due to membership rules to be subject to the same MOPR rules as merchant generators, FERC

¹

See PJM's 2016/2017 RPM Base Residual Auction Results:
<http://www.pjm.com/sitecore%20modules/web/~media/committees-groups/task-forces/cstf/20130626/20130626-item-03-2016-2017-base-residual-auction-report.ashx>.

should consider if such entities, subject to the varying manners in which different organizations operate, should function as Fixed Resource Requirement (FRR) companies outside of the RPM market.

- 3. Centralized capacity market design elements necessarily interact with each other and with the energy and ancillary services markets. Are there problems created by this interaction that should be addressed to improve the functioning of centralized capacity markets or energy markets?**

The Ohio Commission is unaware of problems in the interaction between the centralized capacity market and energy markets.

- 4. Regional capacity markets also interact with each other. What are the implications of regional differences in capacity market designs?**

It is inherent that regional capacity markets have differences; this is a function of how each regional market developed over time and FERC's approval of separate market designs proposed by each region. There are very limited ways to rationally reconcile the current regional differences between capacity markets; one is to create a single RTO market. The Ohio Commission avers that FERC should not take such an action. Moreover, there is value in allowing each region to have its own capacity market based on each region's individual geography, generation, fuel and natural resources, load and other characteristics.

The seam between two RTOs, especially those with separate market designs, does create issues for capacity market participants. For example, 7,493.7 MW of capacity imports offered into PJM's 2016/2017 Base Residual Auction represents an increase of 90.4 percent, or 3,558.4 MW, over the imports offered into the 2015/2016 auction. All but 11 MW of the 7,482.7 MW of offered imports cleared the auction and nearly two thirds of them, or 4,723.1 MW, came from MISO. Because MISO is predominately served by vertically integrated utilities in a developing centralized capacity market, PJM's more mature capacity market with higher prices and longer bidding horizons is attractive to imports. The result is that PJM's RPM is increasingly providing funding to participants that fail to provide "iron in the ground" within PJM while further eroding the PJM capacity price. This market behavior reduces the value of membership in PJM and makes participation in the annual auction uncertain and has detrimental impacts on PJM members and ultimately energy consumers. As stated previously, I believe that subsidized generation offers, such as those submitted by MISO's vertically integrated utilities, are detrimental to a fully competitive centralized capacity market design and should be further evaluated by FERC. Furthermore, with only 64 percent of the imports having confirmed firm transmission service at the time of the auction, it is possible that some of the imports may prove to be not only uneconomic, but undeliverable as well. This potential for a serious reliability issue is a cause for caution and con-

cern. Therefore, I recommend that FERC require all external resources to have firm transmission service approved by PJM prior to submitting offers into PJM's RPM.

With the rising level of imports from MISO to PJM, I am concerned whether there is a capacity deliverability issue between MISO and PJM. Thus, I support the joint comments filed by OPSI and OMS in FERC Docket AD-16 for the FERC Technical Conference on Capacity Deliverability held on June 20, 2013. Specifically, the OPSI/OMS comments call for a more in-depth analysis and initial fact-finding on the following critical issues: (1) the possibility and significance of any cost shifts between the two RTOs; (2) the reliability impact of any proposed revised deliverability schemes; (3) whether further work on capacity deliverability is cost effective; (4) the overall additional incremental joint deliverability benefit over that currently occurring; (5) whether any proposals can be cost effectively and realistically implemented, and (6) the long-term rate impact on each RTO's retail customers. It is important to conduct an accurate fact finding that provides RTOs and all stakeholders with the requisite information to advance vital coordination, while still allowing RTOs to maintain their unique characteristics.

5. What is the impact on centralized capacity markets of transmission system upgrades and expansions? Can transmission planning be more effectively integrated with or accounted for in the design elements of centralized capacity markets?

In Ohio, the capacity markets have spurred substantial investments in transmission but at the expense of new generation to replace retiring coal plants. Many generators see price volatility and too much risk in the one-year capacity market to commit to new generation projects. In contrast, transmission expansion offers a guaranteed rate of return. Because the RPM lacks financial certainty for generation from year to year, it is apparent that companies are relying more on transmission upgrades to relieve congestion and constraints. That was shown in the 2015/2016 RPM in the constrained ATSI zone when the clearing price exceeded the (MOPR) rate. For example, utilities are pursuing transmission expansion to resolve the constraints in the ATSI zone, as opposed to building new generation facilities in that LDA. Given that companies are almost exclusively pursuing transmission solutions, I believe that FERC should determine whether a long-term market for new generation capacity resources is warranted. Specifically, I recommend that FERC investigate whether the three-year-out, one-year-ahead market for capacity should be extended beyond the one-year time frame to three, five, or even seven years. FERC should also determine whether a longer RPM timeframe should apply to only new generation resources, to both new and existing

facilities, or whether new, individual long-term capacity markets should be established separately for existing and new generation capacity resources to ensure long-term system reliability. The need to monitor both generation and transmission solutions requires greater cooperation between FERC and state regulators to ensure a proper balance is struck in ensuring system reliability.

The Ohio Commission maintains that additional time for guaranteed longer term funding will allow for more certainty in the RPM, will reduce risk, will correspondingly reduce the cost of capital, and will incent the construction of more new generation resources.

CONCLUSION

I believe FERC should examine four distinct areas of the capacity market: (1) demand response, (2) energy efficiency, (3) replacement capacity, and the (4) minimum offer price rule. In regards to demand response, I request that FERC review whether it should significantly reduce or begin to phase out all reduced DR capacity resources. Similarly, I believe FERC should investigate whether capacity payments to energy efficiency should be adjusted to ensure more economic payments for physical generation resources. Concerning replacement capacity, FERC should move to ensure that those offering into the RPM auctions actually intend to deliver the physical dispatchable capacity product that is offered and cleared in the RPM administrative process. In regards to MOPR, I believe that FERC should

make every effort to ensure that all capacity providers are subject to the same rules.

In addition, FERC should initiate a comprehensive proceeding to determine whether seams rules should be amended. This proceeding should be an in-depth analysis and initial fact-finding that provides RTOs and all stakeholders with the requisite information to advance vital coordination, while still allowing RTOs to maintain their unique characteristics.

Finally, FERC should determine whether a long-term market for new generation capacity resources is warranted. Specifically, I recommend that FERC investigate whether the three- or five year-out, one-year-ahead market for capacity should be extended beyond the one-year time frame.

/s/ Todd A. Snitchler

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