



OFFICE OF CONSUMER ADVOCATE
COMMONWEALTH OF PENNSYLVANIA
555 Walnut Street 5th Floor, Forum Place
Harrisburg, PA 17101-1923

IRWIN A. POPOWSKY
Consumer Advocate

(717) 783-5048
(Fax) 717-783-7152

February 28, 2006

Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
Room 1A
888 First Street, N.E.
Washington, DC 20426

Re: *PJM Interconnection, L.L.C.*
Docket Nos. ER05-1410-000 *et al.* and
EL05-148-000 *et al.*

Dear Secretary Salas:

Please find for e-filing the Comments on the Technical Conference on February 3, 2006, in the above reference proceedings.

Respectfully Submitted,

/s/ - Adrienne E. Clair

Glen L. Ortman
Adrienne E. Clair
Stinson Morrison Hecker LLP
1150 18th Street NW, Suite 800
Washington, D.C. 20036
For: Old Dominion Electric Cooperative

/s/ filed electronically

Aron J. Beatty
David T. Evrard
Assistant Consumer Advocates
Pennsylvania Office of Consumer
Advocate
555 Walnut Street
5th Floor, Forum Place
Harrisburg, PA 17101-1923

/s/ filed electronically

D. Mathias Roussy, Jr.
Assistant Attorney General
Insurance and Utilities Regulatory Section
Office of the Attorney General
900 East Main Street
Richmond, Virginia 23219

/s/ filed electronically

Sean T. Beeny, Esq.
Denise C. Goulet, Esq.
Miller, Balis & O'Neil, P.C.
1140 Nineteenth Street, N.W., Suite 700
Washington, D.C. 20036-6602
For: North Carolina Electric Membership
Corporation

/s/ filed electronically

Thomas K. Austin, Esq.
Associate General Counsel
North Carolina Electric Membership
Corporation
3400 Sumner Boulevard
Raleigh, NC 27616
For: North Carolina Electric Membership
Corporation

/s/ filed electronically

Patricia A. Smith, Esq.
People's Counsel
Theresa V. Czarski, Esq.
Deputy People's Counsel
William F. Fields, Esq.
Assistant People's Counsel
Maryland Office of People's Counsel
6 St. Paul St., Suite 2102
Baltimore, MD 21202

/s/ filed electronically

Chris Thomas
Director of Policy
Illinois Citizens Utility Board
208 S. LaSalle, Suite 1760
Chicago, IL 60604

/s/ filed electronically

John Michael Adragna
Denise C. Goulet
Miller, Balis & O'Neil, P.C.
1140 Nineteenth Street, N.W., Suite 700
Washington, D.C. 20036
For: Borough of Chambersburg

/s/ filed electronically

Mr. Richard Hamsher
Superintendent of Electric Department
Borough of Chambersburg
100 South Second Street
Chambersburg, PA 17201
For: Counsel for Borough of
Chambersburg

/s/ filed electronically

Sandra Mattavous-Frye
Deputy People's Counsel
Lopa Parikh
Assistant People's Counsel
Office of the People's Counsel for the
District of Columbia
1133 15th Street, N.W., Suite 500
Washington, D.C. 20005

/s/ filed electronically

Patrick E. McCullar
President & CEO
Delaware Municipal Electric Corporation
860 Buttner Place
Dover, DE 19904

/s/ David J. Dulick

David J. Dulick
General Counsel
Allegheny Electric Cooperative, Inc.
P.O. Box 1266
Harrisburg, PA 17108
For: Allegheny Electric Cooperative, Inc.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, LLC	Docket Nos. ER05-1410-000 and EL05-148-000
PJM Interconnection, LLC	Docket No. ER06-456-000
District of Columbia Public Service Commission	Docket No. EL05-145-000
PJM Interconnection, LLC	Docket No. ER06-309-000
PJM Interconnection, LLC	Docket No. ER06-406-000
American Electric Power Service Corporation	Docket No. EL06-50-000 (not consolidated)

**POST TECHNICAL CONFERENCE COMMENTS OF
COLLATION OF CONSUMERS FOR RELIABILITY**

Coalition of Consumers for Reliability:

Pennsylvania Office of Consumer Advocate
Maryland Office of People's Counsel
District of Columbia Office of People's Counsel
Old Dominion Electric Cooperative
North Carolina Electric Membership Corporation
Borough of Chambersburg, Pennsylvania
Illinois Citizens Utility Board
Virginia Division of Consumer Counsel
Allegheny Electric Cooperative, Inc.
Delaware Municipal Electric Corporation

Dated: February 28, 2006

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POST TECHNICAL CONFERENCE COMMENTS OF
COALITION OF CONSUMERS FOR RELIABILITY

In response to the Commission's January 19, 2006 Supplemental Notice of Commission Technical Conference inviting the submission of written comments following the Technical Conference, the Coalition of Consumers for Reliability ("CCR"), hereby submits comments urging the Commission to reject the Reliability Pricing Model ("RPM") filed by PJM Interconnection, L.L.C. ("PJM") in Docket Nos. ER05-1410-000 and EL05-148-000 as an ineffective and unreasonably expensive means of improving generation adequacy in PJM. RPM will not resolve the generation and transmission capacity adequacy concerns existing in PJM's markets today. More targeted and far less expensive modifications to the existing capacity market structure exist for addressing these concerns.

I. Introduction/Executive Summary

We applaud the Commission's willingness to continue the discussion of the Reliability Pricing Model ("RPM") proposed by PJM and filed with the Commission on August 31, 2005. The Technical Conference of February 3, 2006, provided an important opportunity to further identify critical issues related to long-term reliability and to discuss potential solutions to those issues.

There appeared to be general agreement at the Technical Conference that there is a need to modify the existing capacity construct. There is also agreement on the need to build more transmission. The disagreement is over whether the existing capacity construct should be modified or scrapped and replaced with an entirely new model.

The central question in the debate regarding capacity adequacy in PJM is whether or not specific problems that have been identified are so severe as to require the complete restructuring of the existing model. We believe that PJM should focus on resolving the actual type and scale of problems at hand rather than responding to a worst case scenario built from a series of worst case assumptions. There has been an effort to portray the generation adequacy issues in PJM as akin to the problems California experienced in 1999-2000 or to the problems in New England that have led to a proliferation of RMR contracts. These unrealistic comparisons are unhelpful in the effort to find workable solutions to issues in PJM's footprint. The Commission should look beyond the hyperbole and focus on the facts.

Despite allegations of generation capacity planning inadequacies, PJM enjoys a system-wide reserve margin of 23% above peak load. Investment in new generation has slowed from the frenetic pace of the early part of this decade, but there are still significant annual additions of generation resources. Demand resources have also seen significant growth in the

past year. All of this is occurring at a time when PJM's analysis of market revenues indicates that no one should be investing in new resources. PJM's analysis must be viewed in light of these facts. It is also important to note that this occurred in a period when transmission capacity expanded far slower than generation capacity. This failure to expand the transmission system to address economic congestion has left consumers at risk for higher capacity and energy prices.

There are natural concerns about the severity of the risk related to generation retirements, particularly those in New Jersey in 2004. However, the severity of retirement risk must be viewed in light of an inadequate 90-day retirement notice requirement and a minimalist transmission grid that is far too susceptible to surprises. Addressing just these two factors would substantially alleviate the concern over generation retirement. We are disturbed by the almost complete lack of attention on this issue to date within the PJM transmission planning process.

In PJM, transmission infrastructure has not kept pace with load growth. In the near future, steps will need to be taken to address those problems. This includes the modifications to the RTEP as currently underway in PJM, but also incorporation of a methodology to evaluate a declining generation profile. The local reliability problems RPM purports to address are based on violations of *transmission* reliability criteria. Transmission planning needs to evolve to reflect the current competitive, non-integrated resource planning environment. This, in concert with market-based incremental changes to the current PJM capacity construct will address all the concerns raised by RPM proponents.¹

¹ CCR has advocated for an "Enhanced Integrated Transmission and Capacity Construct" ("EITCC") in previous comments and filings in this proceeding. We still support EITCC as the most robust alternative to RPM developed through the PJM stakeholder process to date. However, we are not excluding consideration of other alternative approaches that may be developed.

Below, we identify the flaws, inadequacies, and damaging aspects of the RPM proposal. We also identify appropriate responses that can be implemented within the current market structure to address some problems that actually exist in the PJM footprint.

An overall perspective on our comments can be seen through our approaches to fundamental issues.

1. The existing capacity adequacy model in PJM can supply all of the reasonably foreseeable needs of a reliable system if it is appropriately modified. This, in no way, requires the establishment of a completely new and vastly more expensive capacity adequacy model.
2. Changes must be made to ensure that locational requirements are satisfied and these changes can be made within the existing model by establishing an appropriate approach for identifying and responding to local needs. However, while capacity is close to being short in a few regions, this is due to special circumstances where the effects of insufficient transmission resources are compounded by general market prices for energy and capacity that are insufficient to support older, peaking units. These special conditions do not exist in much of PJM and PJM should not adopt a capacity model that assumes this.
3. Changes must be made to ensure that transmission planning will satisfy reasonably foreseeable needs for transmission resources. Required changes can be made within the existing PJM capacity planning model. We note that capacity planning already fully incorporates the results of the transmission planning process. However, such changes can only be successful if critical, additional capabilities are included in transmission planning. Chief among these is the inclusion of generation retirement risk as a component of reliability analysis.
4. Full year, forward commitments on a reasonable clearing horizon will improve PJM's ability to identify potential reliability problems and prevent short-term capacity inadequacy. These changes can be made within PJM's existing model.
5. An administratively determined variable resource requirement ("VRR") is unnecessary and undesirable because market forces, within the existing market clearing model for capacity, better establish the value of capacity whether it is scarce or plentiful. There is no conflict between markets setting prices and the requirements for forward commitment, for mandatory one year commitments, or for local requirements.

In addition, we highlight serious factual errors and flaws in the conclusions upon which RPM is based. These include:

1. The Cost of New Entry (“CONE”) upon which the VRR is based contains serious errors due to incorrect assumptions about plant costs. This single assumption alone overprices the VRR by as much as \$11,500/MW-year. This illustrates that a highly interventionist, administrative model such as RPM can have unjust and unreasonable results even with enormous amounts of preparation. We note that our concerns with the VRR approach are fundamental and cannot be overcome simply by correcting these substantial errors.
2. The use of a required 4-year forward commitment is based on seriously erroneous assumptions regarding the time required to construct new resources. In fact, the new resources used as a reference point can normally be constructed within two and a half years or less.
3. Repeated claims that RPM will lead to construction of new resources conflict directly with how investors describe their requirements for financing new projects.
4. No provider of demand side resources has come forward to explain how RPM will increase their participation.

We have not been able to engage in constructive dialogue with PJM since prior to the last technical Conference in June 2005. In light of the major flaws in the RPM, we believe that further discussions would be useful. We urge the Commission to allow an opportunity for more stakeholder discussions rather than approving the RPM filing given the substantial areas of controversy, inadequate documentation, and unexplained assumptions that exist on the record in this proceeding.²

² There also have been numerous substantive challenges to RPM and questions about RPM's efficacy that were raised under the CCR Protest filed on October 19th 2005. PJM has either failed to respond or to adequately respond to these concerns, including, questions of methodology and conclusion on the VRR demand curve described in Jonathan Wallach's affidavit in our Protest.

II. Current Model (Panel I)

Everyone on Panel I agreed that there are problems under the status quo. However, the consequences and extents of the shortcomings in areas other than capacity continue to be understated. The nature and extent of “problems” under the status quo deserves more thorough analysis and discussion.

A. The starting point must be to ensure effective transmission planning

As we noted in our comments, and as PJM explained in its opening presentations, the current transmission planning process needs significant reform. It does not employ specific planning tools, such as an effective approach to economic efficiency and forecasts of generation retirements, to be able to identify problems and propose solutions.³ Moreover, transmission investment for base reliability over the last several years has been meager, particularly in comparison to generation investment.

PJM recently highlighted that approved transmission upgrades for the RTEP are nearly \$2 billion⁴. This is vastly outstripped by investments in generation. To put this in perspective, the PJM market, which has purportedly failed due to the structure of the current capacity market, has attracted 20,456 MW of new resources as in-service or under-construction⁵. Using a proxy capital cost of \$500/kW, this suggests that generator resource investment totals approximately \$10 billion.

³ Tr. at 11, 77-78.

⁴ <http://www.pjm.com/contributions/news-releases/2005/20051207-pjm-approves-464-million-in-transmission-syste.pdf>

⁵ As of January 30th 2006 per <ftp://ftp.pjm.com/pub/reports/planning/rto/20060131-RTO.pdf>

The imbalance between transmission and generation investment is even more striking in view of how transmission investments have been allocated. A detailed breakdown of the \$2 billion for RTEP transmission upgrades is in Table 1.⁶

Table 1 – Allocation of PJM Transmission Investments

<u>RTEP Cost Breakdown</u> (in millions)	<u>Generators & Merchant Transmission</u>	<u>Baseline Upgrades</u>	<u>Total</u>
In-Service	\$308	\$217	\$525
Under-Construction	\$73	\$59	\$132
Sub-Total “Actual” Spending	\$381	\$276	\$657
Engineering/Under Study	\$152	\$1,051	\$1,203
Total “Announced” Spending	\$533	\$1,327	\$1,860

Note that actual transmission spending for in-service or under-construction projects is only \$657 million or 35% of the announced total. The other \$1,203 million or 65% is in engineering or under-study⁷. Moreover, a substantial portion of the value of in-service or under-construction spending was paid for generator interconnection (includes some merchant transmission) and not for baseline reliability or system expansion. Merchant generation investment, for other than reliability or system expansion, makes up 58% or \$381 of \$657 million of the actual transmission spending to date. Or, said another way, PJM’s planning process only spent \$276 million for projects in-service or under-construction (outside of merchant related transmission investment) during a period of almost \$10 billion in generator resource investment. And, at least \$152 million of announced transmission spending has been in response to sudden and immediate reliability problems rather than part of a systematic expansion

⁶ Calculations based on data in the December 2005 PJM Regional Transmission Expansion Plan report pages 3-5 found at <http://www.pjm.com/planning/rtep-baseline-reports/downloads/rtep-dec2005.pdf>

⁷ This is not to suggest that planned projects that have not begun construction are meaningless, but that the in-service and under-construction category is apples-to-apples to the \$10 billion in generation investment.

of the transmission grid⁸. For comparison purposes, this \$152 million of crisis management represents 55% or a significant portion of the \$276 million in actual non-merchant related transmission investment. This is far too meager a quantity of investment for reliability upgrades in a system that has a peak load and reserve requirement of over 160,000 MWs, and growing, and that spans parts or all of 12 states and the District of Columbia.

We are convinced that improvements to the transmission planning process are the first critical steps that need to be taken to address reliability issues in PJM today. A transmission planning process that looks out ten, fifteen, or more years into the future and employs economic efficiency, sensitivity scenario, and generation retirement analyses will be much better able to identify local area problems with enough advance warning to implement appropriate solutions (transmission upgrades, special RFPs, special pricing options, etc.). PJM has started discussions with the stakeholders on improving the transmission planning process, and appears to be moving forward with some of the aforementioned changes. It is critical that as these discussions continue attention remains focused particularly on including generator retirements, and that PJM with FERC's support has the ability to ensure that the plans actually result in needed improvements to PJM's transmission infrastructure.

In addition to the flaws in the current transmission planning process, there may be problems in specific local areas that are unlikely to be resolved even with a more robust transmission planning process and the current market structures for energy, ancillary services, and capacity. We support the development of targeted solutions for these relatively intractable

⁸ \$17 and 65 million for NJ retirements (<http://www.pjm.com/planning/rtep-baseline-reports/downloads/sixth-addendum-2002-rtep-baseline.pdf>) and <http://www.pjm.com/planning/rtep-baseline-reports/downloads/20050113-addendum-rtep.pdf>) and \$70 million for Potomac River Station outside of the District of Columbia (<http://www.pjm.com/planning/rtep-baseline-reports/downloads/20050113-addendum-rtep.pdf>)

local problems. We do not support the adoption of the flawed and overly broad solution that PJM proposes in RPM.

Instead, PJM wants to abandon a capacity auction process that has served PJM well since the inception of competitive wholesale markets, has maintained a system-wide reserve margin in excess of the required 15%, and, as depicted in Table 2, is projected (by PJM) to still provide a 23 percent reserve margin for the 2006-2007 planning year.⁹ The robust reserve margins depicted in Table 2 are the result of a continuous series of new resource additions in PJM over the last eight years.

Table 2 – PJM Forecast Reserve Margins



⁹

See <http://www.pjm.com/planning/res-adequacy/downloads/20060130-forecasted-reserve-margin.pdf>

These margins persist despite the “[recent] very high level of generation retirements” that PJM references in its prepared comments for the Technical Conference.¹⁰ The actual “recent” retirement levels, depicted in Table 3, show that unusual levels of retirements occurred only in 2003-2004 and dropped to a low level after that.

Table 3 Actual and Announced Generation Retirements (MWs) in Pennsylvania, New Jersey, Maryland, Delaware, and the District of Columbia¹¹

<u>1999-2002</u>	<u>2003-2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>Total</u>
300	1,759	481	none	732	836	4,108

It is difficult to view Tables 2 and 3 together and find a serious, system-wide problem.

PJM’s presented statistics at the February 3rd Technical Conference that reflect significant retirements in new expansion areas, primarily in Illinois. However, PJM’s generation queues do NOT capture the bulk of new generation investment in those same areas.¹² For purposes of consistent comparison, the specified area covered by this table experienced just over 4,000 MWs of retirements while the same area attracted almost 19,000 MWs of new resource investment. If transmission investment for reasons other than generation interconnection had kept pace, retirements would not pose a problem.

¹⁰ *Statements of Audrey A. Zibelman and Andrew Ott for Technical Conference*, February 3, 2006, at 6.

¹¹ The data was compiled from the PJM February 3rd Testimony and various planning materials (<http://www.pjm.com/contributions/news-releases/2006/20060203-pjm-rpm-tc-testimony.pdf>, <http://www.pjm.com/planning/project-queues/gen-retirements/pjm-gen-retirement-list-20051021.pdf>, and <http://www.pjm.com/planning/project-queues/gen-retirements/pjm-gen-retirement-list-future-20050927.pdf>) for the specified region.

¹² Of the 3,957 MWs of retirements in 2004 shown on Figure 7 in PJM’s February 3rd Testimony (pg. 8) almost 3,500 MWs of those retirements occurred in Illinois. PJM’s generation interconnection queues only show under 500 MW of new resource additions in Illinois. Because PJM queue only recently started capturing the new investment in that area, a review of EIA-860 data would be helpful to see the bigger picture of investment in the state of Illinois of over 12,000 MWs from 1999-2004.

There appears to be some uncertainty over this retirement issue as evidenced by Chairman Kelliher's statement that "last year [2005] was a net loss; that retirements outpaced additions".¹³ In the more traditional area of PJM, there were retirements of 1,759 MWs during 2003-2004 as shown in Table 3 above. During this same 2003-2004 period for the same area, Form EIA-860 reveals that there were 6,757 MWs of new generating resources added for a net supply increase of about 5,000 MWs. There may have been a minor net reduction of fewer than 500 MWs in 2005 for this same area, but this is not significant given the two prior years. As of January 30, 2006, there are 3,858 MWs under construction in PJM, which make it highly unlikely that retirements in the next two years (estimated by PJM to be 732 MWs) will exceed new additions.

Several panelists commented on the chart in the PJM State of the Markets Report 2004 that supports PJM assertions about the inability of combined cycle and combustion turbine resources to earn sufficient annual revenues under the status quo to support their operations.¹⁴ PJM seems to be claiming that it is not reasonable or rational to expect investment in new generation facilities based on its analysis. Yet, how does PJM explain continuing investment in new generation?¹⁵

¹³ Tr. at 80.

¹⁴ *PJM State of the Markets 2004*.

¹⁵ We are not certain but we suggest that part of the explanation is that there are elements of today's wholesale marketplace that are not fully understood, such as the prices in bilateral contracts, the expectation of future revenues (as opposed to past historic revenues), and perhaps other factors understood by investors and developers but not others.

B. The Commission has authority to implement a long-term commitment model

Given the lack of assurance that RPM will produce the results intended, a number of parties have discussed the need for a mechanism that directly achieves a long-term commitment to generation developers to assure that there will continue to be adequate generation capacity on the system. This concept first appeared in the case as a part of the RPM proposal itself.¹⁶ PJM touts its Backstop Reliability mechanism as an important aspect of RPM's ability to assure reliability.¹⁷ Pursuant to the tariff provisions that detail this mechanism, if the RPM markets have not produced new investment and reliability criteria are not met, PJM will hold an auction in which the winners will have an assurance of a long-term revenue stream of up to fifteen years.¹⁸ Winners will enter into a contract with PJM.¹⁹ The revenue for the winners will come from a charge on all Load Serving Entities in the PJM region.²⁰

Mr. Judge (First Energy) stated his company's position that, essentially, the PJM Backstop reliability mechanism should move from the background to the forefront and be the primary tool used to assure resource adequacy.²¹ Mr. Sheffield (Morgan Stanley) also discussed the need to establish long-term commitments to generation developers in order to achieve

¹⁶ Proposed Tariff Attachment Y, Section 16; PJM's August 31, 2005 Filing Letter, p. 55 and 90-1.

¹⁷ Filing Letter, p. 55.

¹⁸ Filing Letter at p. 90-1; Proposed Tariff Attachment Y, Section 16.3 and 16.4.b.

¹⁹ *Id.* at Section 16.4.e.iii.

²⁰ *Id.* at Section 16.4.e.ii.

²¹ Tr. at 66 (Judge).

financing for new plants.²² Further, Mr. Fields (Maryland Office of the People’s Counsel) described an alternative proposed in the CCR Protest that suggests that directly achieving long-term commitments to generation owners through a market mechanism.²³ In response to these proposals, Chairman Kelliher stated a concern that mandating long-term commitments is beyond the jurisdiction of the Commission.²⁴

We hope that the Chairman’s concern does not extend to the backstop mechanism contained in the RPM filing. We take note of the skepticism expressed over the ability of the market to produce the necessary capital investment to maintain resources that are sufficient to adequately serve future load. If the Commission concludes that the critical Backstop Mechanism contained in the RPM proposal could not be instituted (because the Commission lacks the authority to approve a multi-year contractual commitment), then a thorough reassessment of RPM by all stakeholders, particularly the state regulatory bodies, would be appropriate and necessary.

If the Commission’s authority to order a utility such as PJM to adopt tariff provisions that institute a long-term buying arrangement, such as PJM’s Reliability Backstop, is in question, then it is logical to ask if FERC has the authority to approve the basic RPM construct proposed by PJM. The basic tenant of the RPM proposal is to force load to buy capacity through a central auction for a one year term starting four years from now. If the Commission does not have the authority to direct PJM to hold an auction for capacity for a

²² Tr. at 201, 218 (Sheffield)

²³ Tr. at 79 (Fields); CCR Protest, p. 70-2.

²⁴ Tr. at 81, 219 (Kelliher)

period of up to fifteen years, then it is unclear why it has authority to approve an auction for a 4-year forward period.

III. RPM Flaws (Panels I & II)

In this section of our comments we discuss flaws and inaccuracies in PJM's current RPM proposal.

A. Generator compensation

The topic of “missing money” continues to creep into the resource adequacy debate as some advocates of RPM seek to achieve a desirable revenue outcome for a particular asset class, i.e., peaking units. Commentors on all three panels describe the VRR curve as a mechanism for allocating the “missing money” in the current PJM wholesale market structure. The concept of “missing money,” and where to “find” it, is an intriguing one that deserves further discussion. Some panelists define the missing money as the difference between an uncapped/unmitigated energy market and the existing capped/mitigated energy market.²⁵ PJM defines the problem as the difference between historical annual market revenues and the annual revenues needed by its proxy peaking unit, based on its CONE analysis.²⁶ Substantively, PJM and other RPM supporters urge a focus on what is “Reasonable Revenue for Merchant Assets” using an administrative cost of service price schedule for a particular class of assets. This worldview requires one to disregard the inconvenient record of actual generation and transmission investment. Additionally, this approach overlooks the administrative windfall profits to other assets.

The opposite side of the “missing money” issue was seldom mentioned at the Technical Conference. Under PJM's proposed VRR curve, the long term target value for capacity is approximately \$125/MW-day, i.e., the CONE annual revenue estimate minus

²⁵ Tr. at 84-85 (Fahey); 143 (Philips); 210 (Hyzinski).

²⁶ 2004 PJM State of the Markets report.

historical energy and ancillary services revenues.²⁷ This compares to an average market capacity price in PJM over the last six years of approximately \$46/MW-day. This is an increase of 270%; on an annual basis, this amounts to a \$5 billion increase in capacity revenues under expected conditions at the time the RPM is proposed to be implemented.²⁸ Under scarcity conditions, the VRR curve would produce close to \$12 billion dollars in additional capacity revenues per year.

The fact that there has continued to be significant investment in new plants in PJM raises serious doubt as to the validity of claims of “missing money.” Investors will not put money into a market in which the design results in their being significantly undercompensated. Also, these claims of missing money must be considered in light of the claims of market savings. PJM has claimed that its markets are saving consumers \$500 million per year.²⁹ If there is indeed \$5 billion in “missing money, “ then one must conclude that the \$500 million in market savings results, in fact, in a \$4.5 billion net cost.

If the overarching policy goal is a market process rather than an administrative program, the focus of any resource adequacy policy should be seeking consensus on reasonably defined obligations, and on dealing with exceptions as exceptions and not as systemic issues. The policy focus in a market oriented approach should be on “Reasonable Obligations to be Cleared.” A reasonably defined resource adequacy obligation could require adding a local capacity element as an incremental modification to the current capacity model while preserving the largely successful market aspects of today. The only thing left, then, would be for the market

²⁷ Cite to 8/31/05 filing and RPM Simulations of January 2006.

²⁸ *RPM 2006: Windfall Profits for Existing Base Load Units in PJM*, Synapse Energy Economics, February 2006, available at www.synapse-energy.com .

²⁹ Tr. at p. 8.

to “clear” this properly defined obligation as it has done in the past, continues to do today, and should be able to do in the future.³⁰

If the Commission is convinced that administrative price setting is necessary or that local areas must be defined at so granular a level that a market process is not possible, then the RPM is still not the appropriate answer. There should be no need for extremely granular local capacity areas if today’s numerous transmission problems and the too short retirement lead-time are addressed. If a small area capacity problem is identified, resolution should be successful through either building transmission or a direct competitive auction. There are significantly better and more cost effective administrative approaches than RPM.

We maintain that the magnitude of the “missing money” concept applies, if at all, only to a few resources that are not earning significant inframarginal revenues. As documented in two studies of base load plants in Pennsylvania and Northern Illinois, many PJM resources have substantially increased their inframarginal energy revenues in the past few years (as natural gas prices have increased at a pace significantly faster than nuclear or coal fuels).³¹ In addition, due to age and stranded cost treatments, many of the base load plants in PJM have very low capital cost recovery needs. These base load units do not appear to be “missing” any money. Providing them with substantially increased capacity revenues under a VRR curve, as proposed by PJM, is likely to create a pure windfall for these units.

³⁰ In the PJM market, for example, much of the resource adequacy obligation either clears or the risk gets managed as a result of other factors, e.g. state default auctions in New Jersey on a 3-year term, Maryland on a 1-year term, Delaware on a variety of terms, rate caps in Pennsylvania through 2009-2011, Virginia through 2010, and regulated utilities covering a great deal of the expanded PJM footprint like AEP.

³¹ The two Synapse Energy Economics reports are: *Capacity Revenues for Existing, Base Load Generation in the PJM Interconnection* (June, 2005) and *RPM Case Study: Higher Costs for Consumers, Windfall Profits for Exelon* (October, 2005). Both reports are available at www.synapse-energy.com.

Additionally, the revenue requirements upon which PJM's VRR is calculated appear to be inflated.³² On a PJM system-wide basis this "discrepancy" in CONE will cost consumers \$1.9 billion each year at the RPM long term average price. For further discussion, see Attachment A to these comments, Affidavit of Ezra D. Hausman. In particular, the inclusion of dual fuel capability and SCR pollution technology in PJM's CONE estimates is illogical given the limited number of operational hours for these peaking units. In fact, of the nine examples of recently built peaking units in PJM's study, not one was built with dual fuel or SCR capabilities. If PJM's CONE values are inflated, then all capacity values under the VRR curve are also inflated. The financial impact of these modeling inaccuracies is staggering. PJM's estimated capital costs exceed the actual capital costs of new peaking units by almost 16 percent. This translates into an additional cost of as much as \$11,700 per MW-year.

We urge the Commission to thoroughly evaluate the cost implications of approving PJM's RPM proposal. Both the theory and the application of the VRR curve are based on a long-term average price at \$125/MW-day. PJM has not demonstrated how payments at this level to existing, possibly fully depreciated units can survive the application of the "just and reasonable rates" standard of the Federal Power Act.

B. Accepting RPM on Faith

The dramatic change that PJM proposes in the structure of its capacity market requires a sound evidentiary basis to justify increasing the cost of electricity to consumers by billions of dollars annually. The current evidence in the record of this case does not provide this basis. Rather, PJM's proposal relies on untested, unproven and illogical assumptions. During

³² *RPM 2006: Windfall Profits for Existing Base Load Units in PJM*, Synapse Energy Economics, February 2, 2006, available at www.synapse-energy.com.

the Technical Conference, Commissioner Kelly asked Mr. Ott if RPM would encourage investment in new generation as a matter of faith.³³ We maintain that there are three significant aspects of the RPM proposal that we are being asked to accept on faith.

The first, as identified by Commissioner Kelly, is PJM's faith that new investment will be encouraged through a one-year payment commitment four years into the future. This is contrary to most of the information provided by investment professionals. They emphasize that investors in generation development take a conservative approach and prefer a known stream of revenues over a number of years. RPM provides one year of known revenue. As PJM's own studies have documented, year-to-year capacity market revenues show significant unpredictability that will continue under an RPM approach despite PJM's administrative efforts to dampen volatility.³⁴ This means that a developer of a new generation project bidding his long run average cost in a small local zone could be accepted in an auction at a high price in one year and not be accepted at that same price in a subsequent year. If the developer lowers his bid in order to be accepted in future years, he may not receive adequate capacity revenues to justify either the completion of his project or its on-going operation.

The second item that we must take on faith is that demand resources will participate in the RPM forward auction. Mr. Ott states that RPM will attract a "totally new type of demand response, and we may or may not get it".³⁵ Providers of demand response resources in today's PJM market have clearly stated that they will be unable to participate in a four-year

³³ Tr. at 99 (Kelly)

³⁴ Affidavit of Benjamin Hobbs, PJM filing of August 31, 2005, in this docket.

³⁵ Tr. at 123 (Ott).

forward market and that the best they can hope for is some limited participation in supplemental auctions.

This is not an issue that has recently surfaced. The Resource Adequacy Mechanism (“RAM”) process that was jointly sponsored by PJM, NY ISO, and ISO-NE proposed a three-year forward mechanism in 2003. A survey of demand response providers at that time indicated that most thought a three-year forward market was too far into the future. PJM’s response appears to be that a “new type” of demand resource will simply appear, despite all the barriers to participation that have hampered efforts over the last several years to integrate demand resources into today’s existing energy markets.

The third area in which we are asked to have faith regarding RPM was illuminated by Mr. Sorenson in his discussion of the need to retain existing generation in congested areas such as Northern NJ. Mr. Sorenson, whose company has ardently supported RPM, notes that RPM may not adequately compensate existing units that need aggressive maintenance programs.³⁶ As a result, consumers may find themselves in the worst of both worlds; paying billions more for a capacity model that doesn’t work as well as paying for the high cost of RMR contracts in an attempt to keep needed generation on line.

Consequently, the evidence and arguments in favor of RPM fail to demonstrate that any of the three critical goals sought to be achieved through RPM, i.e., that it will stimulate new investment, encourage demand resources, and promote the retention of existing needed generation in stressed locations, are obtainable.

³⁶ Tr. at 134 (Sorenson)

C. Installed Reserve Margin targets

Another important issue regarding the RPM proposal was raised in the discussion initiated by Mr. O'Neill. He suggested that all capacity constructs are administrative demand curves in the absence of actual demand establishing a price.³⁷ Mr. O'Neill further suggested that someone has to guess at how to value capacity that exceeds the Installed Reserve Margin ("IRM") or target reserve level currently set at 15 percent.

We maintain that the market is the best means for establishing the value of reserves above IRM, not a VRR curve that PJM or FERC approves based on hopeful administrative assumptions. The wide-spread failure to accurately estimate future values and costs, a pertinent example being the setting of long-term avoided costs for PURPA contracts, is part of what led us to the current restructured retail and wholesale markets. The administrative interventions by PJM should be limited to those necessary to set reserve requirements and establish parameters related to contract length and length of forward commitment. Having set that structure, it should be unnecessary for PJM or the Commission to set prices. As demonstrated in the discussion above of CONE value, PJM's efforts to discern the value of reserves above IRM through the VRR curve contain serious flaws in the underlying assumptions and do not improve upon the current construct of establishing IRM obligations.

PJM's IRM has long been established through a modeling process that includes conservative assumptions regarding load growth, the likelihood of plant outages, the value of

³⁷

Tr. at 127. It has been suggested that a vertical demand curve (penalty for performance failure) and VRR demand curves are simply different administrative choices. Nothing could be further from the truth. This is equivalent to saying a structure in an organized market (e.g. NYMEX) where there is a penalty for failing to follow the rules/ultimately perform with all the other surrounding voluntary interaction between willing buyer and seller on price and terms is the same thing as administratively forcing all buyers and sellers to artificially transact far into the future at a cost of service based price for a particular asset. The process by which price gets set or discovered is probably the most critical element of a functioning market.

demand side response and other factors. In addition, over the past several years, stakeholders have agreed with PJM staff that the IRM resulting from PJM's modeling should be rounded up to ensure an additional element of conservatism and consequently an additional increment of reliability. In other words, the current 15% IRM for the PJM system reflects a prudent level of reliability, not a minimal level upon which we need to build.

Under the current capacity construct, the value of capacity above the 15% IRM determination is established and compensated through bilateral contracts with market participants. From PJM's perspective, the cost of this additional capacity to the system is zero. However, under the current construct, the market has produced a 23 percent reserve margin at a time when PJM required load serving entities to pay for only a 15 percent reserve margin. The current capacity construct achieved this extra reliability without a VRR curve. It is incorrect to say that consumers are not paying for the current 23 percent reserve margin. Consumers pay for reserves above IRM today through bilateral contracts. These bilateral contracts may well include quantities higher than the 15% reserves required by IRM prices higher than those reflected in PJM's existing residual monthly capacity markets. PJM has presented no evidence suggesting that market prices today do not properly value excess reserves in the market.

Nevertheless the real question posed by the VRR should not be about the value of reserves, but rather the quantity of reserves consumers should compensate, if anything, for reserves above IRM. We agree with Mr. O'Neill's assumption that reliability tends to be directly related to the actual reserve margin. However, this is not to say that consumers should be required to pay for capacity in excess of IRM. Thus, it is reasonable to set a point at which it becomes unnecessary to require consumers to pay for the next increment of reserves. This is exactly the concept incorporated in IRM. It is the level where reliability is sufficient that

consumers are not forced to pay for more. Unfortunately, the arguable benefit of compensating reserves above IRM comes with far too high a price tag to satisfy the statutory mandated for just and reasonable rates.

D. The 4-year Extended Resource Clearing Horizons of RPM are Excessive

PJM's arguments for extended 4-year clearing for virtually all resource adequacy obligations focus on a perceived need to integrate generation and transmission planning, provide greater resource certainty, and achieve compatibility with physical resource construction lead-times. While PJM's goals are worthwhile, the proposed 4-year clearing horizon will not contribute to new resource investment, and instead may well perpetuate existing, well-documented flaws in transmission planning. The predominant question PJM and RPM fail to address at the outset is the proper criteria governing the interplay of transmission and generation investment standards.

1. Transmission leads generation, as it should - PJM incorrectly attributes to RPM a unique ability to integrate transmission planning into capacity planning. In fact, the results of the current PJM transmission planning process are already fully integrated into the current PJM capacity model. This is as it should be since regulated transmission necessarily leads resource investment as the basic equivalent of the highway system.
2. Incorrect conclusions on reasonable generation resource lead-times - PJM incorrectly concludes that time required to construct new resources dictates a 4-year forward commitment as an absolute requirement. PJM appears to reach this conclusion based on a schedule provided by Mr. Pasteris (transmittal letter pg. 75-76) showing a combustion turbine ("CT") taking as much as 4-years from concept to full commercial operation. However, PJM's proposed business rules for PJM restrict participation in RPM auctions to planned projects that have executed a Facility Study Agreement ("FSA"). In other words, only those projects that are prepared to begin construction may participate. Referring to the project schedule provided by Mr. Pasteris (affidavit pg. 23), it is clear that he anticipates an FSA occurring roughly one and a half years into his four schedule. In other words, the lag from auction participation is about two and a half years, not four years. Thus, the business rules for RPM are inconsistent with the assumption inherent in RPM that a four year forward commitment requirement is necessary. It appears, using PJM's linking of the forward commitment to the time required to construct new

resources, that an appropriate forward commitment within RPM is no more than two and a half years. Logically, a 4-year forward commitment by a resource that can complete construction within two and a half years will require that projects intentionally delay construction to ensure that they are eligible to receive capacity revenues at the time that they begin operations. This analysis would support forward commitment substantially shorter than four years. Other markets also indicate something less than a 4-year forward commitment is both feasible and reasonable. The New York capacity market clears 1-month prior to the commitment period and New England appears, in principle, to have selected a 3-year forward clearing of resource obligations. PJM's own proposal does not support the 4-year forward commitment aspect of RPM.

IV. Alternatives (all Panels)

Early in the Technical Conference, Commissioner Kelley asked Mr. Ott if there was a market mechanism that could be substituted for the administrative aspects of RPM and the VRR curve.³⁸ Mr. Ott's answer was that RPM used administrative determinations that were "informed" by market decisions through a feedback mechanism.³⁹ This response ignores the alternatives suggested both in the stakeholder process at PJM and in the protests filed October 19, 2005 in this proceeding. Our answer is the Enhanced Integrated Transmission and Capacity Construct ("EITCC") model.

The CCR has proposed EITCC as an incremental approach to resolving existing and anticipated capacity adequacy problems in PJM. The EITCC incorporates the following:

- In response to PJM's concern about a lack of knowledge about capacity in the near term, we have included a 1-year commitment requirement.
- In response to PJM's expressed need for a forward commitment, we have included a market-based process that allows participants to acquire resources up to three years in advance of a planning year.
- In order to ensure that existing demand resources may participate in the capacity model, we do not require a long forward commitment.
- In recognition of PJM's concerns regarding local capacity shortages, EITCC includes a specific construct for identifying local areas where capacity and transmission shortage are problematic, and for establishing appropriate price signals within these local areas.
- To ensure that market participants may draw on the widest possible set of capacity resources, extensive improvements in the PJM transmission planning process are proposed. This is the cornerstone of the EITCC because this minimizes local scarcity and promotes a wide market with reasonable prices.

³⁸ Tr. at 96.

³⁹ Tr. at 97-98.

The CCR points out that the RPM was repeatedly rejected by a substantial majority of stakeholders in PJM, the RPM does not enjoy broad support within PJM or before this Commission. The CCR continues to view EITCC as a workable alternative to RPM and is willing to work with PJM to develop detailed business rules to support implementation.

V. Conclusion

PJM's premise for RPM, i.e. that RPM is needed to provide price certainty and stability, stands in stark contrast to the Commission's goal of facilitating the development of competitive markets for electricity. Mr. Ott states that "the key fundamental policy decision [is] a sloped demand curve to provide price certainty and stability".⁴⁰

Market mechanisms are about risk and uncertainty. Thus, if the goal in RPM is to recreate the certainty and stability of the historical non-market approaching to ensuring generation adequacy, i.e. cost based regulation, there are more effective and less costly means of achieving this goal.⁴¹ Because new investment under RPM is a matter of faith, the only thing certain with PJM's proposed non-market mechanism is that capacity will cost significantly more under administrative pricing. Moreover it is ironic that PJM, a champion of market mechanisms for establishing prices, is now advocating a non-market based solution as the only appropriate way to ensure reliability. The cost risk of RPM is not worth the experiment. We hope that the Commission will pause and require more analysis before approving this grand adventure that PJM so ardently advocates. We recommend the following:

- That the Commission reject the RPM filing or, alternatively, set PJM's filing for a full evidentiary hearing.
- That the Commission direct PJM, through the stakeholder process, to pursue timely incremental modifications to the existing capacity construct, including:
 - Increase the obligation term to 1-year
 - Set the IRM on a forward 3-year basis

⁴⁰ Tr. at 113.

⁴¹ Tr. at 160 (Comments on behalf of Virginia Attorney General Consumer Protection Division)

- Select a reasonable clearing horizon, i.e. under 1-year, to hold the final auction prior to the start of the delivery term
- Add a reasonable local element similar to that as advocated by EITCC or by even other RPM supporters⁴²
- That the Commission direct PJM, through the stakeholder process, to finalize and to implement the necessary improvements to the transmission, including:
 - Longer planning horizons
 - Scenario based planning covering reasonable retirement risks
 - Develop regulated transmission investment criteria that incorporate an effective approach to reducing congestion. This will directly encourage a broader market and avoid capacity and energy price spikes in areas that currently have constraints on transmission access.
- That the Commission find the 90-day resource retirement notification is unjust and unreasonable and direct PJM to file the appropriate changes in a timely manner to increase the notice to at least 1-year

Respectfully Submitted,

/s/ - Adrienne E. Clair

Glen L. Ortman
 Adrienne E. Clair
 Stinson Morrison Hecker LLP
 1150 18th Street NW, Suite 800
 Washington, D.C. 20036
For: Old Dominion Electric Cooperative

/s/ filed electronically

Aron J. Beatty
 David T. Evrard
 Assistant Consumer Advocates
 Pennsylvania Office of Consumer
 Advocate
 555 Walnut Street
 5th Floor, Forum Place
 Harrisburg, PA 17101-1923

⁴² The EITCC proposal incorporates a reasonable local capacity element. This local element though recognizes that any capacity resource obligation can be split into a common part and a local part based on limited transmission capability into an area. This preserves the bulk of the existing market approach for the bulk of the market. This concept appears to have been indirectly supported by Mirant-WPC-NRG as a solution in their November 23, 2005 answer to PJM in which they advocate this general approach as a temporary solution. This supports the EITCC proposal that local areas can be introduced as an incremental change and in a timely manner. *Motion for leave to answer and answer of the Mirant Parties, Williams Power Co., Inc., and NRG companies re PJM Interconnection LLC under ER05-1410, et al.*

/s/ filed electronically

D. Mathias Roussy, Jr.
Assistant Attorney General
Insurance and Utilities Regulatory Section
Office of the Attorney General
900 East Main Street
Richmond, Virginia 23219

/s/ filed electronically

Sean T. Beeny, Esq.
Denise C. Goulet, Esq.
Miller, Balis & O'Neil, P.C.
1140 Nineteenth Street, N.W., Suite 700
Washington, D.C. 20036-6602
For: North Carolina Electric Membership
Corporation

/s/ filed electronically

Thomas K. Austin, Esq.
Associate General Counsel
North Carolina Electric Membership
Corporation
3400 Sumner Boulevard
Raleigh, NC 27616
For: North Carolina Electric Membership
Corporation

/s/ filed electronically

Patricia A. Smith, Esq.
People's Counsel
Theresa V. Czarski, Esq.
Deputy People's Counsel
William F. Fields, Esq.
Assistant People's Counsel
Maryland Office of People's Counsel
6 St. Paul St., Suite 2102
Baltimore, MD 21202

/s/ filed electronically

Chris Thomas
Director of Policy
Illinois Citizens Utility Board
208 S. LaSalle, Suite 1760
Chicago, IL 60604

/s/ filed electronically

John Michael Adragna
Denise C. Goulet
Miller, Balis & O'Neil, P.C.
1140 Nineteenth Street, N.W., Suite 700
Washington, D.C. 20036
For: Borough of Chambersburg

/s/ filed electronically

Mr. Richard Hamsher
Superintendent of Electric Department
Borough of Chambersburg
100 South Second Street
Chambersburg, PA 17201
For: Counsel for Borough of
Chambersburg

/s/ filed electronically

Sandra Mattavous-Frye
Deputy People's Counsel
Lopa Parikh
Assistant People's Counsel
Office of the People's Counsel for the
District of Columbia
1133 15th Street, N.W., Suite 500
Washington, D.C. 20005

/s/ filed electronically

Patrick E. McCullar
President & CEO
Delaware Municipal Electric Corporation
860 Buttner Place
Dover, DE 19904

/s/ David J. Dulick

David J. Dulick
General Counsel
Allegheny Electric Cooperative, Inc.
P.O. Box 1266
Harrisburg, PA 17108
For: Allegheny Electric Cooperative, Inc.

87688.DOC

CERTIFICATE OF SERVICE

PJM Interconnection, LLC	Docket Nos. ER05-1410-000 and EL05-148-000
PJM Interconnection, LLC	Docket No. ER06-456-000
District of Columbia Public Service Commission	Docket No. EL05-145-000
PJM Interconnection, LLC	Docket No. ER06-309-000
PJM Interconnection, LLC	Docket No. ER06-406-000
American Electric Power Service Corporation	Docket No. EL06-50-000 (not consolidated)

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

Dated at Harrisburg, PA this 28th day of February 2006.

Respectfully Submitted,

/s/ - Adrienne E. Clair

Glen L. Ortman
Adrienne E. Clair
Stinson Morrison Hecker LLP
1150 18th Street NW, Suite 800
Washington, D.C. 20036
For: Old Dominion Electric Cooperative

/s/ filed electronically

Aron J. Beatty
David T. Evrard
Assistant Consumer Advocates
Pennsylvania Office of Consumer
Advocate
555 Walnut Street
5th Floor, Forum Place
Harrisburg, PA 17101-1923

/s/ filed electronically

D. Mathias Roussy, Jr.
Assistant Attorney General
Insurance and Utilities Regulatory Section
Office of the Attorney General
900 East Main Street
Richmond, Virginia 23219

/s/ filed electronically

Chris Thomas
Director of Policy
Illinois Citizens Utility Board
208 S. LaSalle, Suite 1760
Chicago, IL 60604

/s/ filed electronically

Sean T. Beeny, Esq.
Denise C. Goulet, Esq.
Miller, Balis & O'Neil, P.C.
1140 Nineteenth Street, N.W., Suite 700
Washington, D.C. 20036-6602
For: North Carolina Electric Membership
Corporation

/s/ filed electronically

Thomas K. Austin, Esq.
Associate General Counsel
North Carolina Electric Membership
Corporation
3400 Sumner Boulevard
Raleigh, NC 27616
For: North Carolina Electric Membership
Corporation

/s/ filed electronically

Patricia A. Smith, Esq.
People's Counsel
Theresa V. Czarski, Esq.
Deputy People's Counsel
William F. Fields, Esq.
Assistant People's Counsel
Maryland Office of People's Counsel
6 St. Paul St., Suite 2102
Baltimore, MD 21202

/s/ filed electronically

Patrick E. McCullar
President & CEO
Delaware Municipal Electric Corporation
860 Buttner Place
Dover, DE 19904

/s/ filed electronically

John Michael Adragna
Denise C. Goulet
Miller, Balis & O'Neil, P.C.
1140 Nineteenth Street, N.W., Suite 700
Washington, D.C. 20036
For: Borough of Chambersburg

/s/ filed electronically

Mr. Richard Hamsher
Superintendent of Electric Department
Borough of Chambersburg
100 South Second Street
Chambersburg, PA 17201
For: Counsel for Borough of
Chambersburg

/s/ filed electronically

Sandra Mattavous-Frye
Deputy People's Counsel
Lopa Parikh
Assistant People's Counsel
Office of the People's Counsel for the
District of Columbia
1133 15th Street, N.W., Suite 500
Washington, D.C. 20005

/s/ David J. Dulick

David J. Dulick
General Counsel
Allegheny Electric Cooperative, Inc.
P.O. Box 1266
Harrisburg, PA 17108
For: Allegheny Electric Cooperative, Inc.

ATTACHMENT A

Affidavit of Ezra D. Hausman, Ph.D.

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

PJM Interconnection, L.L.C.) Docket No. ER05-1410-000 and EL05-148-000

**AFFIDAVIT OF EZRA D. HAUSMAN, Ph.D.
ON BEHALF OF COALITON OF CONSUMERS FOR RELIABILITY**

1 I. Introduction and Qualifications

2

3 My name is Ezra D. Hausman, Ph.D., and I am a Senior Associate at Synapse
4 Energy Economics (“Synapse”). Synapse is a research and consulting firm specializing in energy
5 and environmental issues, including electric generation, transmission and distribution system
6 reliability, market design, market power analysis, pricing of electricity, stranded costs,
7 efficiency, renewable energy, environmental quality, and nuclear power.

8 I have worked as a consultant in the electric power industry since 1998,
9 performing a wide range of market analysis, price forecasting and asset valuation studies for
10 clients in the public, private and nonprofit sectors. These studies have included long range price
11 forecasting studies for a number of purposes, including analysis of proposed capacity
12 investments, contract valuation and liquidation studies, market power studies, market transition
13 cost/benefit studies and market design support. I have testified or assisted in the preparation of
14 testimony in a wide range of civil and regulatory cases. In addition to this analytical work, I have
15 spoken at and led several seminars on electricity pricing and hedging transmission cost risk in
16 electricity markets. I have also published peer-reviewed papers on topics related to pricing of
17 electricity and transmission services, and on electricity market dynamics.

1 I hold a Bachelor of Arts degree from Wesleyan University, a Master of Science Degree
2 in Environmental Engineering from Tufts University, a Master of Science degree from Harvard
3 University in Applied Physics, and a Ph.D. from Harvard University in Earth and Planetary
4 Science.

5 I am submitting this affidavit in response to PJM’s proposed Reliability Pricing Model
6 (“RPM”), to express certain concerns I have regarding the structure of the Variable Resource
7 Requirement (VRR) curve underlying the setting of capacity priced in PJM. The concerns that I
8 am detailing here have to do with the process for setting the parameters of the VRR curve, which
9 has undergone remarkably little review considering the enormous implications for costs to
10 consumers. I also discuss a few details of the underlying calculations which are arbitrary at best
11 and unrealistic at worst, again to the considerable detriment of consumers.

12 Please note that I have a large number of concerns about the proposed RPM system,
13 which I see as a poorly targeted, and very possibly ineffective, non-market approach to ensuring
14 reliability, at great expense to electricity consumers. I have addressed and will continue to
15 address those concerns in other venues. However, the comments in this affidavit will be
16 restricted to some serious issues regarding the calculation of the proposed VRR curve.

17 The exact definition of the VRR curve is a fundamental aspect of the determination of the
18 capacity price under RPM. This is because RPM is designed to produce a particular long-term
19 price for capacity, equal to the annualized all-in cost of a new peaking plant minus the revenues
20 such a plant would be expected to earn in the energy and ancillary services market. Under
21 conditions of shortage, RPM is designed to produce a price up to *twice* the cost of such a plant,
22 again net of expected revenues. I will leave aside for now the important question of whether a
23 market operator should even be setting a price in a supposedly competitive market, and whether

1 it makes sense to have a single clearing price for all capacity, whether or not it is profitable in the
2 energy market and/or has already been funded by ratepayers. The question I focus on is, how can
3 you reasonably determine the cost of a hypothetical peaking unit without relying on market
4 forces to minimize cost to consumers?

5 PJM takes the approach of calling on its experts, Raymond L. Pasteris and Joseph E.
6 Bowring, to advise them on the costs and revenues, respectively, to be expected for such a plant.
7 While I do not question these experts' qualifications, I find it troubling that PJM would eliminate
8 any opportunity for the market to find more efficient solutions than the "typical" values their
9 experts determine. These experts have no incentive whatsoever to minimize costs to consumers.
10 They are also in the impossible position of making decisions for the design of a purely
11 hypothetical peaking plant, where every minor judgment call can add up to hundreds of millions
12 of dollars in costs to consumers. The number of judgment calls is considerable, and the inherent
13 uncertainty in making them is enormous. Under these circumstances, each detail should be
14 subject to thorough review and the benefit of the doubt should accrue to consumers. Under
15 PJM's proposal thus far, neither of these is the case.

16

17 **II. Setting of Financial Model Parameters**

18 In order to calculate the all-in cost of a peaking plant, Mr. Pasteris is required to use a financial
19 model with a set of assumptions for financing terms, discount rate, internal rate of return, and
20 other parameters. Those of us involved in economic analysis of energy markets set up and apply
21 such models on a regular basis. I have not had an opportunity to review the underlying details of
22 Mr. Pasteris' financial model, but I have no reason to believe that the particular parameters he
23 has used are in error. What I do take strong issue with is the *application* of the model in this case.

1 Forecast models are properly used to evaluate investments, to compare alternatives, and
2 to engage in long-term planning and risk management. They are inappropriate for price-setting
3 applications such as this one, for two very good reasons. First, they involve substituting an
4 expert's opinion for the reality of the market, even though an expert forecast is always, by
5 definition, inaccurate. Second, once the expert has made certain judgments based on his or her
6 understanding of the fundamentals, there is no opportunity or incentive for the market to find a
7 better solution. Because of these realities, a thorough modeling exercise should include
8 uncertainty analysis and consideration of alternative scenarios. Models are properly used to
9 forecast what the future might hold, acknowledging that considerable uncertainty always
10 remains. Because of this inherent uncertainty, however, they are simply not well suited for the
11 application to which they have been put in this case.

12 As an example of the ambiguity of this sort of model application, I consider Mr.
13 Pasteris' use of a 12% Internal Rate of Return (IRR) for a 20-year project life in evaluating the
14 proxy plant. This value may be reasonable, but one could just as reasonably use different
15 assumptions and come up with an 11% IRR, decreasing system wide RPM payments by 8.3%.
16 How can it be that such an arbitrary judgment call on financing a hypothetical power plant can
17 mean hundreds of millions of dollars saved or lost by consumers? Why is it necessary to assume
18 that this hypothetical peaker would be paid down in 20 years? Why not in 30? This is far too
19 much leverage on what I presume even Mr. Pasteris would agree are uncertain and somewhat
20 arbitrary parameters. Any financial model contains many such parameters which cannot be
21 determined with precision; in this case, the inherent uncertainty translates into enormous,
22 arbitrarily imposed costs on consumers.

1 **III. Gold-Plating the Proxy Peaker**

2 In addition to the myriad opportunities for arbitrary judgments in the financial model, this
3 particular case makes the unusual demand that the expert identify and design a “proxy” peak
4 load-serving plant to represent potential new entry in PJM. This completely eliminates
5 opportunities for the marketplace to find the most efficient solutions. To the contrary, the plant
6 identified by Mr. Pasteris appears to have some features that are completely out of step with
7 market realities, and that have costs which cannot be reconciled with those of actual generating
8 plants in service in PJM.

9 Two examples of particular concern are the decisions to include expensive pollution
10 control, and the inclusion of fuel-switching capability for the hypothetical proxy plant. Because
11 of the low capacity factor of the resources this proxy represents, these costs are simply not
12 realistic—in fact, Mr. Pasteris himself shows that they have not been implemented on any of the
13 real peaking plants he identifies in PJM. The unrealistic inclusion of these technologies on the
14 hypothetical units would cost consumers hundreds of millions of dollars per year. No owner of a
15 peaking plant that runs only a few hours per year would invest in SCRs when it would be much
16 more economical to simply purchase emission allowances for those few hours. And while fuel
17 switching capability may make sense in some regions, to imply that it would be included in any
18 new peaking plant in PJM defies credulity. If I were advising a developer who was considering
19 investing in a peaking plant, I would at least perform a thorough analysis of the costs and
20 benefits of each of these expensive technologies; I would expect that in most cases, neither
21 would be justified.

22 Mr. Pasteris, of course, is not making this recommendation to anyone who will actually
23 have to pay for building a plant. Consumers, on the other hand, would have to pay dearly for this

1 technology through capacity payments, though they will receive no commensurate benefits.
2 Under RPM as currently proposed, consumers would end up paying the price of SCRs on proxy
3 peakers hundreds of times over, but when the real units are built this technology is unlikely to be
4 included.

5 On page 24 of his affidavit, Mr. Pasteris compares his projected peaker cost to the “cost
6 of recently constructed CT projects.” He finds that the proposed proxy plant costs are *higher* by
7 \$67 to \$75 per kw than the average of recent real plants. Mr. Pasteris explains this by noting that
8 *none* of these plants had SCRs or dual fuel capability, which together explain about \$50 of this
9 difference. He then goes on to claim that this “compares closely” to actual costs.

10 This leaves many more questions open than answered, however. How is it reasonable to
11 include technology in the proxy that no real peaker would include? What about the missing \$17
12 to \$25 per kw, which is hardly insignificant given the enormous financial implications of every
13 penny in proxy costs?

14 The unexplained \$75 in increased costs represents 15.8% of the capital cost of the proxy
15 peaker. This translates into an unexplained \$11,700 per MW per year in capacity payments at the
16 RPM target price, and up to twice that in times of shortage. Given a PJM footprint that includes
17 about 164,000 MW of capacity, this unexplained discrepancy would cost PJM consumers over
18 \$1.9 billion *per year* in additional capacity payments at the RPM target price, and again up to
19 twice this, or up to \$3.8 billion per year, at the RPM maximum, purely because the proxy peaker
20 price is \$75/kw too high relative to historical standards. It does not appear that this extremely
21 expensive discrepancy has ever been adequately reviewed.

22
23

1 **IV. General Conclusions**

2 Among the many shortcomings of the RPM proposal, the arbitrary and unjustified setting
3 of model parameters, with very real cost implications for consumers, may be the most troubling.
4 Consumers should not be exposed to billions of dollars of costs based on a particular modeling
5 exercise, without any real opportunity to review and challenge each of the assumptions as well as
6 the underlying approach.

7 A thorough review of all model inputs and consideration of alternative scenarios is
8 essential before RPM can be allowed to go forward. I understand that this would be problematic
9 due to PJM’s desire for immediate FERC approval of its RPM filing. Inconvenience, however, is
10 no reason to pretend that uncertainty does not exist, or to turn a blind eye to arbitrary decisions
11 with huge implications. In one sense, this is an illustration of how administrative price setting
12 under the guise of competitive markets, even when based on expert opinion, is simply a bad idea.
13 But the more immediate concern is that RPM must not be allowed to go forward based on
14 incomplete analysis, inadequate review, and unjustified costs to consumers.

15 This concludes my affidavit.