

PJM LONG-TERM CONTRACTING FORUM

FORUM 2 PROCEEDINGS – Building Solutions

January 17-18, 2008
Washington, DC



EXECUTIVE SUMMARY

PJM sponsored the second of two Long-Term Contracting Forums on January 17 and 18, 2008. This was a follow-on to the first Forum, which was held on September 6 and 7, 2007. The forums are intended to provide a platform for stakeholders in the PJM footprint to address issues associated with entering into long-term contracts for the purchase of power in the PJM footprint. This was to be accomplished first by identifying the needs of these stakeholders, the obstacles they face in meeting their needs, potential ways to overcome the obstacles and then, in Forum 2, identifying specific steps that will be taken to address those obstacles that are identified as priorities and “doable” from a cost, time and value perspective.

Forum Goals

The ultimate goal of these Forums is to resolve issues that prevent those desiring to enter into long-term contracts for the sale or purchase of power from doing so. The goal of the first Forum (*Forum 1*) was to define the problem in detail and to provide participants with a better understanding of the goals of the stakeholders desiring to enter into long-term contracts. The list of goals, obstacles and potential solutions generated in Forum 1 was used to help guide discussions in Forum 2. These discussions were intended to result in the development and prioritization of specific goals and objectives, and a set of action plans to archive those goals.

Forum Format

Forum 2 was comprised of four sessions. These were:

- Workshop 1: Addressing Risks
- Workshop 2: Building Infrastructure
- Workshop 3: Examining Market Solutions
- Wrap-up Session 4: Prioritized Action Plan and Next Steps

For each of the workshops, the participants were directed to sit at one of six tables. Seating was prearranged by the facilitation team to best assure a diversity of viewpoints. The facilitator briefly refreshed the participants' recollections of the goals, obstacles and potential solutions gleaned from Forum 1 on each of the subject areas and asked that they identify problems they want to solve, discuss means of solving them and report back with suggested solutions, timeframes, priorities and leadership on each. Each group was given forms to help their discussion and reporting.

After the allotted time for discussion each group gave a brief summary of their recommendations and took questions from the other participants. When the reports were complete, the facilitation team took the written reporting forms and where feasible, consolidated like suggestions and put them on whiteboards. The participants were given a chance to vote on their priorities. These priorities were announced at the wrap-up session, during which volunteers were solicited to take the lead on any of the suggested solutions.

MAJOR THEMES

Building from the priorities identified in the first forum on long-term contracting, a significant number of suggested solutions were identified, discussed and recorded at this subsequent session. These are set forth in detail in the descriptions of each work session that follow. Once the issues were prioritized through the voting, it became readily apparent that there were a number of proposed solutions that carried through all three sets of problems, i.e., addressing risk, building infrastructure and developing market solutions. These are as follows.

Education: Educating policy makers (state legislators, Congress, Governors), those who implement policy (state regulatory commissions, state environmental/siting agencies, and to a lesser degree FERC) and the public was the number one priority in every session. The goal of this education is to provide an understanding of the significant challenges facing the industry to assist policy makers in making intelligent decisions that are in turn understood by the public. Some of the challenges include explaining the need for infrastructure, getting infrastructure sited, built and operational, and addressing the rising costs of infrastructure and fuels. While the participants understand the need and support initiatives for deployment of environmentally friendly alternatives to more traditionally fueled generation and to transmission (including DSR¹ and efficiency) there was a clear recognition that none of these alone or collectively will in the near to medium term meet incremental demand. The education process can be accomplished by any or all segments of the industry. PJM was identified as a source of data and logical “honest broker.”

Coordination, consultation, communication, and collaboration: The participants also put a very high priority on getting the various decisions-makers to work more effectively together. Suggestions included getting state regulators, energy departments, environmental and siting agencies to act in a timely, coordinated manner, implementing consistent policies, and understanding the impact of their decisions and the growing need for infrastructure. Participants recommended that there be more coordination of environmental constraints that prevent building in load pockets, and more clarity on environmental rules (e.g., “leakage” on GHG rules).

Predictable processes and political stability: Forum 1 identified the risks of tariff changes, regulatory policy changes and legislation (especially GHG legislation) as obstacles to long-term contracting. Forum 2 affirmed that predictability and stability are very high priorities.

¹ There are numerous acronyms used throughout this report. A list of acronyms is provided as a reference at the end of this document.

Suggested means of dealing with these risks included timing PJM's tariff changes so that they allow for any changes to be priced into recurring auctions, such as RPM and state RFPs and auctions. Education of policy makers is intended to keep them from making rash or uninformed decisions. Coordination and communication would presumably diminish the likelihood of inconsistent agency decisions that must be resolved, which impact the expected cost of performance and, especially in the case of infrastructure, can delay deployment.

Making siting work: Siting transmission and generation was identified as an obstacle to getting transmission and generation deployed. Delays in deployment of infrastructure set the stage for cascading problems of the type identified as obstacles to long-term contracting. More infrastructure deployment can relieve market power problems, whereas less infrastructure deployment can create or exacerbate market power problems, especially in the face of growing demand. If market power concerns grow, prices may need to be subject to progressively more administration or mitigation. This scenario is less desirable than the alternative of having a return to supply/demand equilibrium and allowing prices to go to market, sending the signals they are supposed to send which would maintain something much nearer to equilibrium. Among the suggested solutions for siting and other obstacles to getting infrastructure deployed were regional transmission planning, getting "buy in up front" on need determinations, and finding a mechanism to share the benefits of lower cost power flowing to higher cost areas or otherwise resolving cost allocation issues. A number of workgroups suggested making modifications to the existing generation queue process, including changes to the initial fees, different major milestones, and batch processing of requests. FERC has initiated an inquiry on queuing issues. Joint ownership gained significant support not only as a means to engage a variety of constituencies in support of infrastructure projects, but also as a way to get them financed.

Again, education of policy makers and especially in the case of transmission on the need for new infrastructure would be an important part of making siting work, as would coordination between states, between states and the federal government, and within states (between agencies) and PJM are critical elements for success. In the case of failure to resolve transmission siting issues in a timely manner, there was a surprising amount of support for FERC exercising its backstop siting authority.

Steering revenues to new generation: In both Forums there was widespread consensus that new generation is needed to keep up with growing demand. Moreover, there was little, if any, debate over whether the costs of new generation are rising rapidly – they are. And, there was support for getting a revenue stream that is sufficient to incent new investment. The consensus broke down over the issue of whether there should be different energy and capacity prices paid to new versus existing generation. Suggested ways to target revenue to new generation included scarcity pricing, targeting RPM revenues, creating a revenue stream that is longer than the RPM and state auction streams of today, and through mid- to long-term purchase power agreements with new generators, e.g., through RFPs, "reliability backstop" RFPs (where markets have failed to bring in new generation to serve growing load), and longer terms for RPM and state auctions.

Demand response: It is not surprising that more effective demand response programs came up as a recommendation in every work session. Underlying this support is the proposition recognized in both Forums that demand response creates elasticity, which in turn reduces the possibility of exercising market power which creates positive versions of the cascading impacts discussed above. Charting a familiar course, the participants recommended better coordination of efforts to expand demand response between states and between states, PJM and FERC. Additionally, Forum workgroups recommended the deployment of smart meters and a variety of ways of assuring that price signals are sent and received at a level indicative of a competitive market, including scarcity pricing and a move away from administratively set market pricing.

Portfolio purchases: As was suggested in Forum 1, the participants recommended that state sanctioned auctions vary the terms of their requests for offers so as to create a portfolio of supply sources at varying prices, for varying terms, and perhaps even varying terms and conditions.

Examining existing and proposed market models: As could be anticipated from Forum 1, there was a wide dichotomy of views on whether markets needed to be changed and, if so, how to change them. Those pushing for change believed that markets are not working. Therefore, they cannot contract on a long-term basis at prices that reflect a forward curve derived from those markets. A number of workgroups suggested further examination of these issues and that those who want change should come up with a “workable alternative”. Included in this would be a discussion of the American Forest & Paper Association (AF&PA) proposal to change capacity markets so as to include a reliability call option.

Credit: Perhaps because Jeff Bladen addressed the subject in his presentation, or perhaps because of a resignation of the inevitable, there was little discussion of credit. Forum participants suggested methods of dealing with the issue that included the syndication of credit risk and government guarantees. The former appeared to receive a fair amount of support while the latter garnered little (although a government-sanctioned or sponsored long-term PPA might be effectively the same as a guarantee).

Going Forward

As is obvious from the preceding summary, a significant number of recommendations came out of Forum 2, many similar to those elicited in Forum 1, but better fleshed out, with more consensus and to some degree prioritized. The real test of priorities will be whether an individual or group takes a recommendation and shepards it through the appropriate processes. In this regard, a limited number of proposals brought out volunteers in the final session, although volunteers can take the mantle at virtually any time.

A significant number of proposals have only tangential bearing, if any, on PJM. For instance, it was recognized that retail DSR programs are largely a state function, and PJM's job would be to support state solutions when it can. Coordinating executive state agencies dealing with infrastructure would be the province of a Governor. Many of the proposals already have a process attached to them. These include FERC's work on interconnection queues and market structures. While the Forum participants did not flesh out the appropriate forums for all suggested solutions, most of those not specifically mentioned are fairly easily assigned to an exiting institution or market participant sector.



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INTRODUCTION

PJM planned two forums on the topic of long-term contracting. These proceedings summarize the goals, activities and recommendations associated with the second forum. PJM's goal was to provide a platform for stakeholders in the PJM region to address issues or concerns associated with entering into long-term contracts for the purchase of power in the PJM footprint by identifying:

- The needs of the these stakeholders
- The obstacles meeting their needs
- Potential ways to overcome the obstacles
- Specific steps that can be taken to address those obstacles that are identified as priorities and “doable” from a cost, time and value perspective

The first three of these were the focus of Forum 1. The last, under the umbrella label “Building Solutions”, was the focus of Forum 2.

Forum Development

As in the design of the first forum, an *advisory group* guided the development and selection of the agenda, speakers, facilitators, workshops, and conduct of this event. This group represented regulators, consultants, trade association representatives, utilities, independent power producers, marketers and offices of state consumer counsels and PJM. Members of the *advisory group* are listed in Appendix C. The *advisory group* was aided in this endeavor by the results of a survey of those who attended Forum 1 that requested the participants to identify their priorities from the group of areas of concern identified in Forum 1.

Forum Goals

PJM's first long-term contracting forum provided participants with a better understanding of the goals of stakeholders desiring to enter into long-term contracts, obstacles to meeting those desires and potential solutions. Forum 2 asked the participants to take a look at the goals, obstacles and potential solutions identified in Forum 1 and to define how they could resolve the problems they determined to be most important. The Forum was not intended to be a substitute for other processes for effectuating change - rather the Forum was a place where participants could find consensus, identify differences, and chart a course for dealing with important issues more effectively in the forums that would normally be used to resolve issues.

Forum Format

This forum was composed of three small-group, table-top workshops, followed by a plenary wrap-up session. Each of the first three workshops commenced with a review of the results of Forum 1's discussions of the topic(s) of the session. Forum attendees were organized into six groups comprised of a cross-section of stakeholder interests. Each group had the same opportunity to discuss the subjects designated by the *advisory group* for each workshop. The facilitation team suggested that the participants first identify the problem to be discussed, analyze obstacles and potential solutions, prioritize them and then develop "doable solutions" to those priority problems. The "deliverable" from each group's discussion was an oral report to all the participants on what that particular group had identified as priority issues to be resolved and its suggested action plan for resolving each.

Following each session, the facilitation team met to consolidate like ideas reported by the six groups. These consolidated results were posted and the participants were given the opportunity to vote on what they thought to be their highest priority issues and proposed solutions. The final session was a review of the prior sessions' conclusions. Tallied votes were presented and common themes were highlighted. The final session also served as a point in the Forum where those interested in taking the lead or otherwise helping move action plans to fruition could identify themselves.

Approximately 130 individuals representing PJM's stakeholders attended the Forum in person, with about 40 additional persons participating via telephone. Those attending in person worked over two half-days to build solutions that would enhance long-term contracting opportunities in the PJM footprint. A copy of the Forum agenda is presented in Appendix B.

PROCEEDINGS

What follows is a narrative describing the discussions and conclusions of the participants in Forum 2. It includes summaries of keynote and other addresses intended to set the stage for Forum deliberations. Following those is session-by-session report of the deliberations, starting with a summary of the conclusions of each work session, the reports of each small group, including specific recommendations of each group and the results of voting intended to prioritize suggested actions. A description of the wrap-up session, which includes consolidated recommendations, concludes these Proceedings.

- Appendix A is the agenda for the forum
- Appendix B lists the members of the *advisory group*
- Appendix C is a list of forum attendees
- Appendix D provides definitions of acronyms used herein

Opening Remarks

Opening remarks were presented by Andy Ott, Vice President, Market Operations for PJM. Andy explained that the PJM Stakeholder Process differs in purpose from this and similar forums being sponsored by PJM. These forums are designed to allow stakeholders to come together to discuss issues in a more collaborative manner than some other meetings. He emphasized that the deliverable for the forums is a roadmap for resolving problems and that it might not always be PJM that can implement that change; it might be the states, FERC or even Congress.

Setting the Stage

The *Advisory group* invited three Speakers to address the participants on selected subjects.

Commissioner Allen Freifeld of the Maryland Public Service Commission gave the keynote address at lunch. Commissioner Freifeld explained the serious reliability crisis looming in Maryland, and rest of the Mid-Atlantic region. He identified the source of this crisis – lack of new generation construction, steady load growth, and limited import capabilities to the east. While complimenting PJM for ordering major transmission upgrades, the Commissioner noted the problems getting transmission built. He then described an aggressive and cost effective demand response program that has been ordered in Maryland. The result of which could be an 1,100 MW peak demand reduction. A third solution is to build more generation. The Commissioner announced that the MDPSC will order parties to develop an RFP for new generation to maintain reliability, with an in-service date by summer 2011. The MDPSC will decide whether to issue the RFP after the May 2008 RPM auction. He also said that the MDPSC will consider an RFP for more generation to bring prices down towards the cost

of new entry. The new plant would be treated as a reliability investment, whose costs would be charged as a non-bypassable charge on distribution.

Commissioner Freifeld noted that recapturing a once-regulated plant was not economically feasible and that utility ownership of new plants was not in the ratepayers' interest, being the functional equivalent of a 40-year contract. He explained that he would like to see RFP contract terms of only enough to finance generation and get it built. He also pointed to the portfolio approaches Maryland is developing for its POLR service.

Dr. Joseph Bowring, PJM Market Monitor spoke to the role of the market in PJM. He stressed that the ultimate goal of the market is to provide reproducible results. He pointed out the importance of confidence in market outcomes, and that market power cannot be the incentive for new generation being built. He urged state regulators to work with environmental regulators to address transmission siting issues and the desire to shut down some plants prematurely. The other aspect for regulators is generation. If the market is not getting generation built, some out-of-market steps will need to be taken. This could be RMR or a "backstop" alternative. Dr. Bowring expressed his view that Maryland's proposal will not, as he understood it, undermine markets. He warned that it is just as important that parties not willfully attempt to artificially depress prices as it is not to willfully attempt to artificially raise prices. Dr. Bowring expressed confidence that RPM will work to bring generation on line. Dr. Bowring concluded that he disagrees that building new generation in ones' own service area would increase market power and in response to a question said he would go to FERC to support such new construction.

Jeffrey Bladen, General Manager, Market Strategy, PJM described the results of a consulting study of other commodity markets that PJM commissioned to see if there was anything to learn from those markets that might be pertinent to forward contracting in PJM. These markets included Nordpool, the British power model, North American crude oil, natural gas, coal, mortgage-backed securities, and bandwidth. He explained that it was common that if there was price volatility there was more likely to be forward contracting. Storage availability added another option. Having a standard product and fewer products were more successful in developing liquidity. Benchmarks and basis markets drove transparency and in turn liquidity. Also, credit clearing services (those that offload risk) tend to create a similar effect. Markets with solely long-term contracts tend to negatively impact the ability of others to enter into long-term contracts, primarily because of a lack of transparency and liquidity. Credit risk mitigation mechanisms for long-term products are associated with more liquid longer-term contracting. A significant example is the government's role in mortgage backed securities. Financially settled products enhance liquidity by providing a greater ability to manage risk. . Forward price discovery was found to be very important to liquidity. "Long-term" tended to revolve around the production cycle, i.e., the ability to put in new infrastructure, but was not necessarily bounded by it. The report of the consultants is available on the web page for this forum.

Workshop 1: Addressing Risk

Overview: Forum 1 determined that risk adds costs to long-term contracts, as the further out in the future the contract goes, the less certainty there is of the cost of performing. Proposals to deal with this challenge included the following (in the order prioritized by the participants).

Education: Participants put a high priority on educating those who are viewed as posing a politically-derived risk.

Transparency: More information on forward curve formulations.

Demand side response: A more elastic demand curve was viewed as reducing LMP volatility, or at least the degree of volatility, which in turn would put some limits on longer-term price forecasts. To achieve this, participants recommend a larger investment in DSR, smart meters and retail/wholesale price transparency.

Tariff change process modification: Recommendations included “batching changes,” limiting the number of changes per planning cycle, PJM being sensitive to the impacts of change and stakeholder’s ability to mitigate those impacts if given sufficient lead time.

Portfolio implementation: The participants suggested that state auctions include longer contracts and that PJM develop products to support that endeavor. Some state laws may have to change to allow a portfolio to be put in place.

Consistency of policy between RTO and states: Participants postulated that better coordination would reduce uncertainty and costs.

EBB: PJM agreed to develop an electronic bulletin board to facilitate the matching of buyers and sellers.

Risk spreading: The participants suggested that some method be developed to spread the risk of longer-term contracts across a group of parties best suited to take on specific risks. This could be achieved through mechanisms similar to the spreading of debt risk with a contract (a menu approach), through a clearinghouse or perhaps a “specialist” market maker.

Changing FASB rules: The participants suggested rules to allow buyers to enter into longer-term financial position more readily.

Subject Matter Focus: The first workshop was designed to address a variety of risks that were carried forward from the preceding forum. As prioritized by the survey and, in the case of credit (which did not receive a lot of votes), how it permeated the discussion in Forum 1. These risks were as follows.

PJM risks: which included rule changes (tariff and business practice changes that can add costs), the complexity of rules; marginal losses, congestion and RPM costs.

Regulatory risks: Forum 1 determined that rule changes at the FERC and state levels that can add costs to long-term contracts. These included uncertainty regarding the implementation of carbon credit /allowance markets and the possibility that contract sanctity may be impinged upon.

Political risks highlighted in Forum 1 included legislation, particularly environmental/carbon-related laws and potential emissions allowance or credit markets.

Credit: risks included availability, cost, and duplicative requirements.

Other risks that were identified in Forum 1 but did not garner a large number of votes in the survey were also identified as potential discussion topics. These included fuel/energy price volatility, retail access/quantity risk, supply/demand fluctuations, forward pricing uncertainty, and the “risk of success.”

At the start of the workshop the participants were reminded of the obstacles to solving these issues and potential solutions that were discussed in Forum 1 and asked to report back with one-half hour left in the hour and three-quarter workshop.

Reports: Each table gave a five-minute oral presentation describing its discussions and conclusions. These are set forth in the order they were presented.

Group 4 focused on three proposed solutions:

- **Addressing regional planning on LT issues** especially state-federal jurisdictional issues. This included longer-term transmission planning, and getting a collaborative dialogue moving on market and regulatory structure issues, again looking for a longer-term picture of how the market and regulatory structure will evolve over a 10-15 year period. The group envisioned FERC as the lead in this endeavor (and involving PJM, market participants and other stakeholders and gave it a high priority and a “yesterday” timeframe.

- **Getting a routine process for making PJM tariff changes**, to the goal of making fewer changes and making them less often. The group saw FERC and PJM taking the lead on this, which they viewed as a high priority with a Q2 2009 timeframe.
- **Accelerating the availability of price responsive demand and demand response generally**. The group was looking for price elasticity so as to allow a move from administrative solutions to market solutions. This would require states to be active and in the lead in a time frame from 2008-2015 for technology and a shorter time frame for making policy decisions enabling a transition from administrative to market solutions. Again, this was a high priority for the group.

Group 1 proposed that:

- **PJM quantify the impact of tariff changes** and thereby make the value of changes more transparent. They postulated that this should produce more market sensitivity on PJM's part to the impact of changes. An example was the implementation of marginal losses. The group also suggested that changes should preferably occur on a planning year basis, but recognized that there may be a need to have exceptions.
- **Terms of contracts**: Fixed price and portfolio approaches were highlighted. The group observed a movement away from fixed-price RFPs to RFPs with a portfolio aspect (longer-term, medium-term and even spot). It saw a greater chance of longer-term contracting for unit-specific transactions. The group concluded that no contract standardization is required; rather there is a need to look more closely at how risk is apportioned between buyers and sellers. Making these changes was viewed by the group as the responsibility of market participants.
- **Education**: In discussing regulatory and political risk, the group struggled with a solution but found education of legislators and regulators to be both the most important and the most significant challenge. The group viewed this to be the responsibility of market participants.

Group 5 advocated the following.

- **Increased coordination**: The group thought it would be helpful to look at coordination between state retail procurement and PJM events, e.g., RPM. They would like to see this implemented amongst the PJM, states and stakeholders in the last quarter of 2008.
- **A PJM and stakeholder effort to facilitate LT contracting**. This would include PJM and the stakeholders establishing an EBB to match sellers and buyers by the end of 2008. The group also suggested that it would like to see standardized contracts that would itemize risk in a menu and allow for assignment between parties. PJM, EEI and the stakeholders were chosen as likely candidates to develop this and the proposed target was the last quarter of 2008.
- **Developing PJM auctions and related events around state procurements**. This would require coordination with PJM, states and stakeholders and the proposed implementation was the last quarter of 2009.

- **Enacting/amending state laws to accommodate a portfolio approach** especially in restructured states. These would be the responsibility of the states. The group envisioned these in the 2009-2012 time frame.

Group 3 proposed the following with respect to risk sharing.

- **Risk syndication:** The group recognized that there are a myriad risks and many views of how they should be valued. They suggested that buyers and sellers look into whether there is a way to syndicate these risks, perhaps in multiparty contracts.
- **Market maker/specialist:** The group proposed overcoming illiquidity in forward markets with a market maker, perhaps the government offering a guarantee to mitigate part of the risk.
- **Having FASB change its rules** to give buyers the ability to hold more long-term financial hedges that would perhaps result in more liquidity in longer-term financial markets.
- **Smaller standard wholesale blocks:** The group suggested that in order to be able to see the wholesale price at the retail level, the standardized 50MW block be supplemented with 5MW blocks. This is something traders could implement.

Group 2 was looking for the following.

- **Consistency between State and PJM objectives** was the group's number 1 priority. They saw OPSI as the logical leader, also the PUCs, PJM and state governments.
- **Coordination within state governments**, i.e., the environmental and the reliability planning sides in each state. The group looked to the PUCs, governors' offices and OPSI as potential facilitators. This too was a high priority.
- **Implementation of longer-term commitments** in the state auctions/RFPs, especially if the markets were "fixed". Again, this would be a state PUC issue.
- **Better price discovery**, e.g., through smart meters and DSR rates. This would be the province of PJM and the states, and the group assigned a low priority to this.

Group 6 reported spending a lot of time addressing the problem statement. Model changes, regulatory uncertainty and political risk are the biggest barriers to LT contracting, and the question of whether there should be tweaks in the development process. They questioned whether the tweaks come so often that the market does not have time to sort them out and respond to the issues. They agreed that no one wants regulatory risk. They suggested that the following could help remove barriers to LT contracting.

- **More transparency** being provided by sellers to buyers, e.g., by making utility modeling more available to buyers.
- **Packaging regulatory filings into batches.** Responsibility for this would rest with PJM and immediate implementation was requested.
- **Delaying implementation of changes that can't be hedged.** Again, the example was the rapid implementation of marginal losses. More lead time would help entities get their books in order. The group suggested that PJM implement this immediately.
- **An independent third-party clearinghouse for credit.** The group suggested that market participants take the lead on implementing this proposal as soon as possible.

Prioritization: As noted above, the facilitation team consolidated these proposals and the Forum participants were given an opportunity to vote for their priority items. The following shows the results.

PROPOSAL	TOTAL VOTES	PRIORITY VOTES
Educate Legislators and Regulators About Risk	30	9
Transparency – provide LT Curve Information	23	6
Demand Side Response <ul style="list-style-type: none"> o Investment needed o Smart meters o Price discovery – retail/wholesale 	20	4
Tariff Changes <ul style="list-style-type: none"> o Batch Filing of Changes (2/0) o Lead time on tariff change implementation where change impact can't be hedged (4/3) o Quantify impact of tariff changes (transparency) (7/2) o Market “sensitivity” (1/1) o Routing Process of tariff changes (2/0) 	19	6
BGS Auctions <ul style="list-style-type: none"> o Implement longer-term contracts o Develop PJM products to support auctions 	19	2
Portfolio Approach - change state laws to accommodate portfolio purchases that include LT contracts	18	2
Consistency of policy between RTO and states	16	2
Electronic Bulletin Board - facilitate contracts between buyers and sellers	6	0
Portfolio Approach <ul style="list-style-type: none"> o 3- to 5-year fixed price o unit specific could be longer 	4	0
Third-Party Clearinghouse	9	2
Develop “specialist” to help clarify differing risk quantification - government guarantee	4	1
Develop standardized contracts that include menu selections	3	0
Accounting Standards - Change FASB 133 so as not to foreclose buyers from entering into LT hedges	2	0

Workshop 2: Building Infrastructure

Overview and Conclusions: The goal of Workshop 2 was to find ways to get infrastructure (generation and transmission) constructed. There seemed to be unanimous consensus from the participants on the need for additional infrastructure and there was a variety of suggestions for getting it built:

Educating the public, the regulators and the politicians about the need for infrastructure was the top priority and critical to getting past obstacles and actually getting infrastructure in place.

Modifying generation interconnection queue procedures, including better integration with the RPM, changing the entry fee and significant milestones.

Collaboration, clarity and coordination. In the same vein, the participants emphasized the need for a collaborative process and coordination across the various approval granting bodies (State, Federal and RTO), and with PJM processes such as RPM and long range transmission planning. Both joint state transmission planning and use of the Federal siting backstop received significant support, as did the idea of establishing a 'one-stop' shopping process for approvals. Participants support getting states to "buy in" early in the approval process on the need for particular infrastructure developments and thereby clear the way for deciding how to get it constructed (rather than whether to do so). Participants also suggested that there be more coordination to deal with environmental constraints that prevent building in load pockets and providing more clarity on environmental issues.

Joint ownership was recognized as a means of getting past objections to infrastructure development by enlisting the support of a variety of constituencies.

Addressing cost allocation and low-cost export issues, both with respect to allocation of the costs of new infrastructure generally and transmission specifically also was a high priority. One suggestion for dealing with the dislocations that are perceived when transmission is built in a low price area to move power to a high price area was to develop a benefit sharing arrangement.

Development of demand side response again received significant support. The participants recognized the need to send market-based (as opposed to administratively set) price signals, including scarcity pricing. They further supported addressing Federal/State issues and the deployment of smart meters.

State RFP reliability backstops received support in areas where markets fail.

Subject Matter Focus: Forum 1 focused on these as necessary for reliability, market power mitigation and fuel diversity. While there was a clear need seen for new infrastructure, there was a long list obstacles to getting infrastructure built. These could be categorized as:

Financing and economics: The revenue stream from energy, even with RPM payments, is not high enough to support new generation. Meanwhile, construction costs are escalating, credit is tough for many entities to secure, the extent and cost of future environmental regulation is unclear. Additionally, interconnecting to the grid can be a slow and expensive process, and potentially risky because of uncertainty regarding planned transmission. In addition, there is the perception that those who already own generation will not build, yet they may be the only ones with the balance sheet strength to build.

Siting challenges: ‘NIMBYism’ makes it difficult to site generation, especially in load pockets. It makes siting transmission even more difficult.

Potential solutions identified in Forum 1 included state incentives, joint ownership, capacity markets, and resource adequacy requirements on LSEs. With respect to siting, consumer/regulator/political education and regional transmission planning were highlighted. From a market power perspective, participants in Forum 1 gave suggestions that included dealing with market power/depth/liquidity through such options as more transmission, more demand-side response, treating DSR and supply the same, removing barriers to entry for generation, and creating a national RTO to own and finance transmission.

Reports: Each table gave a five-minute presentation describing its discussions and conclusions. Again, these are set forth in the order they were discussed.

Group 6 felt the following were important issues to resolve.

- **Generation interconnection queue issues**, including phantom generation and the queue changes when a project drops out. The group felt that these are issues for the FERC and the RTOs. They noted a recent FERC conference on the subject.
- **Better coordination of environmental restraints** of the sort that keep generation from getting built in load pockets, e.g., the desire for cleaner air and the resulting impact on power prices. This is for Federal and State regulators.
- **The need for more clarity on looming environmental regulation** – RGGI, leakage and uncertainty on whether there will be a Federal standard, as opposed to regional standard adopted by the states.
- **Need to get prices to where they will support new investment.** The group felt that this is a FERC and RTO issue and should be given high priority attention.
- **Better retail and wholesale price signals for demand response.** This would require actions by FERC, RTOs, and States, that could include smart meters and time-of-use rates. This would include looking at capacity and scarcity pricing issues.

- **Federal Siting:** Making sure Federal transmission siting backstop authority gets used and makes a difference. This is FERC's province, and was viewed by the group as a high priority.
- **Addressing challenges in cost allocation related to transmission projects.** The group noted that RTEP has made progress but there is still debate over allocation.
- **Gauging the impact of the long-term contracting "dilemma" on construction of new generation.** In discussions, the group found some indication that 5-7 year contracts were enough and they are relatively easy to get. Others saw 15 years as necessary.

Group 5 made the following suggestions and observations.

- **RPM changes:** The group reported having a "good discussion" on RPM and whether it needed to be modified or supplemented. They suggested looking at provisions that impact new entry, e.g., whether to target new entry, add incentives, or make pricing more certain. This is for the PJM stakeholder group reviewing RPM, with a target date of Q1 2009.
- **State involvement:** The group discussed whether states should put RFPs out for new supplies, i.e., should it be a backstop? They concluded that timely state action where markets failed or it looks like they will fail is appropriate. This is an item for State Commissioners.
- **Forming a regional state demand response working group.** The group recognized that this is a heavily retail related issue and proposed that the states should play a primary role.
- **Federal and state attention should be paid to DRS rate issues.** The group discussed a recent FERC Order on DSR incentives and the group questioned how the bridge between wholesale and retail pricing is connected, suggesting that there are better ways than deducting retail rates from wholesale prices. The group determined that State action is needed.
- **Resolving generator interconnection queue issues:** The group recognized that PJM and the ISO/RTO council just filed a white paper at FERC. This is a high priority for the group that it would assign to PJM stakeholders.

Group 3 supported the following.

- **National transmission corridors and Federal backstop authority,** something the group thinks the Federal Government should exercise "now".
- **Communication, education and leadership for the public at large.** The group thought it is important to explain why higher energy prices will be the norm, and why new infrastructure is needed. It would assign this effort to government – State, Federal and local for action as soon as possible. In this regard, Group 3 felt that there is a need for new institutions to talk about the

broad public interest in new infrastructure. They felt that this could go beyond utilities and that perhaps a university or new association could take on the task.

- **Better DSR/DSM infrastructure**, e.g. smart metering. Group 3 suggested that the state regulatory commissions determine cost/benefit optimization.

Group 1 made a comprehensive presentation on three general areas (siting, interconnection queues and financing).

Siting

- Policymaker education is needed to demonstrate the options to legislators and policy makers and what the consequences are if they do not act. This should be simplified to the extent possible. PJM and participants should perform this task.
- Efficient use of existing ROWs. Group 1 saw a need to emphasize that when existing ROWs can be used the siting problem goes away to some extent. This is something state regulators can help implement.
- One-stop shopping – The group wants to effectively “bucket” the process for state, local, and FERC approvals.

Interconnection queues

- Additional milestones may be necessary for people to make the ‘go-no-go’ decision and to assure that applicants who are in the queue are still committed and if not, they get out.
- Changes to the \$10,000 entry fee.

Financing - The group endorsed joint ownership by market participants.

Group 2 reported the following.

- **Education:** Group 2 heavily emphasized the need for PJM to be communicating the rationale behind transmission decisions. In this regard, the group identified the need for more backup on costs and benefits, right-of-way costs, and environmental impacts. More backup was also identified as being needed with regard to new generation, specifically, the need for fuel diversity (steam, gas, oil, coal and nuclear) and a sensitivity to environmental impacts. The group’s view is that opponents are saying they are not seeing enough backup to change their positions. The group recommended that a collaborative process is needed with the right decision-makers.
- **A fuel diverse generation portfolio** needs to be put in place and, according to Group 2, it is up to PJM to see that it is done.

Group 4 reported that it spent most of its time talking about transmission. It concluded the following.

- **Joint state transmission planning** should operate in parallel with RTEP. Doing this “up front” would help the level of understanding. This could, according to the group, be accomplished by OPSI with PJM funding.
- **Benefit sharing:** Opposition to transmission from low-cost states might be mitigated with some sort of financial payoff, e.g., counterflow FTRs.
- **Up-Front state buy-in:** The group suggests trying to get states to “buy in” up front on a need determination or at least some standards for getting approval. This could involve getting governors and regional counsels involved, as well as FERC.
- **More demand response:** The group advocated moving from administrative pricing to market based revenue streams.
- **Guarantees for cost recovery** in deregulated states may be needed, e.g., longer-term RFP capacity contracts and short-term energy contracts. This could take access to municipal bonding, federal tax and/or insurance incentives.
- **Moving resource adequacy rules from engineering standards** (e.g. 1 in 10) to an optimal forward-contract portfolio. This would call for action by the states.
- **Incentives for advanced energy technology** may be needed. They could come from the states or the Federal government.

Prioritization: As noted above, the facilitation team consolidated these proposals and the Forum participants were given an opportunity to vote for their priority items. The following shows the results.

PROPOSAL	TOTAL VOTES	PRIORITY VOTES
Communication/Education <ul style="list-style-type: none"> ○ Policymaker (Siting) ○ Collaborative Process with right decision makers ○ Need for LT generation (fuel diversity, environmental impacts) 	32	2
Joint Ownership – transmission and/or generation	26	9
Generation Interconnection Queue <ul style="list-style-type: none"> ○ Better integration between transmission planning and RPM ○ Changes to entry fee ○ Changes to milestones 	25	3
Benefit sharing between low cost exporting regions and higher cost consuming regions – counterflow FTR	24	9
Transmission Planning/Siting <ul style="list-style-type: none"> ○ Support National Corridors/ROWs ○ Support Joint State Transmission Planning ○ Address Cost Allocation Impediments ○ State Up-front buy-in for need determination ○ One-stop Shopping 	22	6
Ensure forward prices support new entry where needed	20	8
Demand Response <ul style="list-style-type: none"> ○ Move from administrative to market revenue flows ○ Address scarcity pricing ○ Regional/State demand response group ○ Address federal state issues ○ Smart meters/conservation 	20	5
<u>Better Price Signals</u>		
Environmental <ul style="list-style-type: none"> ○ More coordination of environmental constraints that prevent building in load pocket ○ More clarity on environmental rules (e.g., “leakage” on GHG rules) 	18	1
Reliability Backstop - State RFP targeted at addressing reliability problems where markets have failed	15	3

PROPOSAL	TOTAL VOTES	PRIORITY VOTES
Need for Transmission <ul style="list-style-type: none"> o Who benefits? o Account for ROW costs o New institutions for infrastructure benefiting public interest having infrastructure oversight authority 	7	0
Resource Adequacy - Remove rules from engineering standards to forward contract portfolio	1	1
Guarantees for cost recovery - 7 year capacity contract with shorter term energy contract	0	0
Development of longer-term positions on the load side – facilitate with credits or tax incentives	0	0
New institutions for infrastructure benefiting broad public interest having infrastructure oversight authority	0	0
Investigate ways to augment price certainty for new entrants	0	0
Revisit new entry price design	0	0

Workshop 3: Examining Market Solutions

Overview and Conclusions: The third and final workshop in Forum 2 was dedicated to a discussion of potential market solutions to the long-term contracting obstacles. There was a significant degree of difference in the participants’ perceptions of the relative success or failure of the existing PJM market. There was, however, agreement that it is not in anyone’s interest to have structural change imposed by a political body without due regard for the impacts. Similarly, there was not any reported desire to eliminate or radically restructure the existing market. The participants viewed the following as potential actions items.

Education: Again, the highest priority action item identified by the participants was education of the public and policy makers, including legislators. This was viewed as something PJM, OPSI and the stakeholders would all participate in.

Increased and targeted revenue streams for generators. There appeared to be consensus that the historical revenue stream derived from energy and RPM payments has not been enough to stimulate investment in new generation. The reported disagreements were over how to accomplish this, i.e., whether to continue a using single-price paradigm, to bifurcate the revenue stream between new and existing generators, to adjust the CONE embedded in the RPM, to use scarcity pricing or to explore other methods. There appeared to be a consensus that parties opposing the current market design need to present an alternative. There was a call for a discussion to be initiated on the American Forest & Paper Association proposal that in return for capacity payment, generators agree to provide a call option in energy at a rate that is the lesser of a cost based or market price.

Stability: Participants recognized the value of stability, both political and revenue-related, i.e., developing a stable market environment and assuring that new generation gets a dependable revenue stream for a long enough period to be able to get financing. These goals, however invoke something of a conflict because in order to achieve them some change will be necessary, which in itself will reduce confidence in the stability of the market design.

Information Dissemination: As in other workshops, participants asked that more information be provided by PJM and the MMU.

Subject Matter Focus: Some participants in Forum 1 asserted that the perceived inability to contract was a result of PJM's market structure. They focused on high market clearing prices generated when natural gas is at the margin, volatile power prices triggered by volatility in natural gas markets and the impact such volatility will have on forward price curves used in the long-term contracting process. Additionally, Forum 1 participants asserted that having a virtual guarantee of receiving the MCP takes away generators' incentive to enter into long-term contracts. This also manifests itself in a discontent with the fact that many low-operating cost generators, most notably formerly regulated nuclear facilities, receive high LMP MCPs (and thus earn significant profits), yet there is not a lot of evidence of new generation being spurred by these profits. Many in Forum 1 thought that these payments were being increased by RPM and despite this increase still there was not enough evidence of new generation being built or planned to justify the MCP payments. In the end, this generates distrust of the market, or at least of market results that is so strong that some participants are calling for significant structural change or, short of that, reregulation. The key issue in workshop 3 was structured to give participants the opportunity to identify and discuss potential market/market structure changes that could enhance long-term contracting opportunities.

Reports: As in the previous 2 workshops, each table gave a five-minute presentation describing its discussions and conclusions. These are set forth in the order they were presented.

Group 3 reported having focused on the revenue stream needed to get new generation constructed. Generators – both current owners and those looking to invest in new assets – think that the market structure is moving in the right direction, but that there is still not enough money to incent new generation. The group also focused not just on getting new generation, but getting it in a timely fashion. They noted the potential for a reliability gap – generation not being operational in the needed time frame, and a lack of confidence in the 'halls of government'. They did not, however, arrive at a consensus on how to solve this problem. They developed the following three suggested goals.

- **Getting more money to generators:** not just to enough to keep existing assets maintained and operating, but enough to build new assets or repower existing ones. The group did not differentiate between new and existing assets. The group reported

having talked about whether there should be a different type of asset in the CONE calculation, i.e., whether it should be something else that would give a higher number?

- **Political stability:** RPM is there but there is no confidence that government will allow RPM to be there in the long-term – three year options do not give investors the reasonable assurance that they need.
- **Consumer confidence:** Consumers must have reasonable assurance that the capacity will be there. The group postulated that consumers know they will have to pay more, but they need assurance that they will have the same reliable service as before.

The group suggested that PJM, FERC and regional governments should be taking the lead on these matters.

Group 6 reported having a “lively discussion” over administrated markets and whether they are over-administrated and pondered whether they should be left alone so that a forward curve could develop. The group expressed concern that legislative policy makers have a tendency “to screw things up.” In order to address these, the group proposed the following action items.

- **Education:** A concerted effort to educate public and state policy makers. The group views PJM as a tremendous resource for data and suggested that other constituents – industry associations, utilities and competitive suppliers – should be part of the effort. The group views this as a high priority for immediate action.
- **New Pricing Methodology:** The group suggested that a non-single price policy for new generation could be explored, but that the burden should be on opponents of the single price structure for capacity. They disagreed on the priority however – some thought high, others low.

Group 1 did not come to a consensus on any action items. They reported buyers and sellers being on “different wave-lengths” on the role of LMP and that more in the group like the single price paradigm than dislike it. Some think it drives pricing in a way that is unreasonable outside of the PJM-operated markets. Some states have a concern about paying for capacity in RPM and then having to pay market price for energy. Some wanted to explore other options. They appeared to agree, however, that stakeholders need to figure it out or the forum to address the problem will be Congress. The group did not think FERC would listen. They agreed that opponents need to come up with an alternative and noted the existence of the American Forest and Paper Association proposal. The group noted that the states could be the locus for this discussion.

Group 2: reported that they agreed that despite growing disagreement over market approaches, we “should not just demolish the market.” They agreed that there is an incentive “to have more of these types of discussions” and that PJM and the MMU work with

stakeholders to provide more “useful” and timely information, as opposed to simply providing data. They ultimately focused on DSR, both at the wholesale and retail levels.

- **Wholesale:** The group agreed that elasticity and demand response need a whole lot more work and suggested 1) looking for best practices on DSR including practices outside PJM, 2) addressing scarcity pricing to allow prices to go high enough to incent DSR, and 3) developing objective measurements to verify that programs are being implemented properly.
- **Retail:** The group focused on education and suggested that 1) PJM should bring ideas to the states, 2) states must do their own education on what can be done at the retail level, and 3) that this might be an OPSI objective, in conjunction with the states, PJM and stakeholders.

Group 4 reported that there was significant interest in the American Forest & Paper Association paper and, more specifically, looking at financial call options, especially being applied to legacy assets. There was no agreement, but some viewed this as an “intriguing idea.” They also discussed returning to regulation (a cost-based model) for RFPs or joint agency actions. Again, there was no agreement. Ultimately, Group 4 suggested the following.

- **Facilitating demand response with a good retail rate design.** This is primarily something states have are responsible for and the group suggested that it be the highest priority. To facilitate this, the group suggested that a research agenda be developed and that consumers and states be educated. They thought that PJM could facilitate and FEC encourage such an effort.
- **Aligning LT energy contracts with transmission rights** to address basis issues and congestion risks, something for PJM to do.
- **Disaggregating risk** by getting third parties to take on/syndicate some risks. This would be something for market participants to take on.

Group 5 suggested the following.

- **Education for state legislatures on market conditions.** They agreed that education needs to go beyond regulators to legislatures and suggested that PJM needs to be the ‘honest broker’.
- **AF&PA proposal** needs a discussion forum.
- **Targeting RPM revenues:** The group talked about developing a method to target RPM revenues toward new units and away from existing units, but not all agreed.

Prioritization: The facilitation team consolidated these proposals during the reports themselves (as opposed to after)² and the Forum participants were given an opportunity to vote for their priority items. The following shows the results.

PROPOSAL	TOTAL VOTES	PRIORITY VOTES
Education – Public, policy makers, and legislatures	37	8
Consider a method to target RPM Revenues more towards new units and away from existing units	28	10
Is Current Market Model OK? <ul style="list-style-type: none"> ○ Single clearing price LMP ○ Less cost based ○ Up to opponents to determine a workable alternative 	25	5
Scarcity Pricing	23	6
Political Stability <ul style="list-style-type: none"> ○ RPM Government Support ○ Reasonable assurance for LT Prices 	22	4
Discussion Forum for AF&PA	11	0
Dissemination of Information	10	3
MMU and PJM work with stakeholders to provide more useful information	7	0
Align LT contracts with transmission rights	4	0
Conflicting objectives between buyers and sellers – role of LMP	3	0
Generators need more \$\$	2	1
Disaggregating risks – third party	1	0
Increase cost of new entry (CONE) above the CC type generator	0	0

² This is significant because the facilitation group did not list demand response for voting. Demand response gathered significant attention in each of the other work sessions and given its impact on elasticity and the follow-on impacts on market power and ultimately the ability to significantly diminish the need for caps and mitigation, the facilitators would have expected a significant vote for demand response. As a result, the Executive Summary “take aways” assume that such a vote would have occurred.

WRAP-UP SESSION

The final session was a plenary session intended to consolidate the results from the three workshops. There was a significant degree of overlap in content of the recommendations and observation from the workshops. Likely due to the relatively short time given in the workshops, the number of potential subjects to address and the diverse interests at each table, the participants did not regularly report out consensus priorities and timeframes within each group. Furthermore, the facilitation team did not expect the priorities of a particular table to necessarily be reflective of those of the greater participant pool.

In order to divine priorities on a more global basis, the facilitation team attempted to consolidate the results of each workshop, and then present those consolidated results for communal voting. Each participant was given five “dots” per workshop with which to cast his or her votes. One dot was marked “1” to signify each participant’s top priority. Participants were allowed to place all their dots on one subject, or spread them any other way they saw fit. Votes were tabulated both by overall number of dots and the number of first priority dots for each workshop. These are set forth above along with a narrative description of the reports of each group for each workshop.

As a caveat to presenting the results of the voting, the facilitator took appropriate note of a number of potential or perceived imperfections in the voting process. These included, for example:

- The stakeholder/constituent group attending the Forum might not have been reflective of their proportion in the PJM marketplace, and;
- Imperfections in consolidating similar ideas for voting that could result in a split of votes on essentially the same recommendation.

The facilitator advised the participants that the real mark of a priority (and ‘doability’) is whether someone steps up to organize actions to implement a particular proposal. Put another way, simply getting a lot of votes in the Forum will not affect change. Change will only come when someone or some group chooses to take “ownership” and drive the recommendation to fruition through the appropriate approval and implementation processes.

The facilitator then presented the consolidated results of the workshops and the corresponding votes to the plenary session. He solicited comments and volunteers to take ownership of an of the recommended action items. The results were as follows:

Workshop 1: Addressing Risk

Recommended action items	votes	priority votes	Forum	suggested lead	Volunteer "owner(s)"
Education of legislatures and commissions	30	9	OPSI/Legislatures	OPSI, PJM	OPSI/Ohio Consumers' Council
Increasing transparency – better forward price curve formation	23	6	PJM	PJM	
Adopting a portfolio approach, changing state laws if necessary	18	2			
Longer contract terms for base gas auctions	4	0	States	States*	
Base gas auction, different products, PJM facilitation of new products	19	2			
Demand response	20	4	States, PJM		
Making the PJM tariff change process more predictable and routine	19	6	PJM	PJM	Andy Ott, PJM
Improved coordination/consistency of policy between RTO and states	16	2	States, PJM, FERC		
Third party clearinghouse	9	2	PJM		
EBB	6	0	PJM		Andy Ott, PJM
Specialist/market maker	4	1			
Standardizing contracts	3	0	EEI		
Changing accounting standards	2	0	FASB		
Apportioning risk	0	0	Buyers/Sellers		
Multiparty contracts to spread risks amongst a variety of parties	0	0	Buyers/Sellers		
Standard block sizing change (50MW to perhaps 5MW)	0	0	Merchants, EEI	Merchants	
Consistency of policy within state agencies	0	0	Governors Offices		

Workshop 2: Building Infrastructure

Recommended action items	votes	priority votes	suggested forum/leader	Volunteer "owner(s)"
Education, including communication and education to deal with NIMBY issues	32	2		
Joint ownership	26	9		
Fixing things that may impede interconnection of generation - fixing queuing problems	25	2		
Linking RPM to the planning process				
Incentives for new entry- RPM changes to assure forward prices are sufficient to support new generation	20	8		
Transmission planning and siting – making the Federal backstop active and effective, joint planning, , getting state buy-in on need up front, one-stop shopping	22	6		
Addressing cost/benefit/allocation issues	24	9		
Demand response enhancement/expansion	20	6		
Coordination and clarification of environmental rules	18	1	States (Governors offices) federal congress	
Reliability backstop generation	15	3		
Resource adequacy	1	1		

Workshop 3: Market Solutions

Recommended action items	votes	priority votes	suggested forum/leader	Volunteer "owner(s)"
Education	37	8		
Target RPM revenues	28	10		
Demand response				
Examine current market model to determine if it is working	25	5		
Scarcity pricing	23	6		
Increasing political stability of RPM, longer-term contracts	22	4		
Discussion forum for AF&PA	11	0		
Dissemination of information	10	3		
MMU and PJM work with stakeholders to provide more useful information	7	0		
Align LT contracts with transmission rights	4	0		
Conflicting objectives between buyers and sellers – role of LMP	3	0		
Generators need more \$\$	2	1		
Disaggregating risks – third party	1	0		

APPENDIX A: AGENDA

TIME	ACTIVITY	HOST / PARTICIPANTS	LOCATION
Thu. Jan. 17, 2008	Day 1	All Participants	The Fairmont, Washington, D.C.
11 a.m. – Noon	Registration	All Participants	Ballroom Foyer
Noon – 1:00 p.m.	<ul style="list-style-type: none"> ▪ Working Lunch with Forum Overview ▪ Keynote by Commissioner Allen Freifeld 	<ul style="list-style-type: none"> ▪ Andy Ott, PJM ▪ Comm. Freifeld, MDPSC ▪ All Participants 	Ballroom I
1:00 – 1:15 p.m.	Move to Workshops & Complete Registration	All Participants	Ballroom II
1:15 – 2:00 p.m.	<ul style="list-style-type: none"> ▪ Perspective on Long-term Contracting in Wholesale Markets ▪ Discussion of Forward Market Analysis 	<ul style="list-style-type: none"> ▪ Dr. Joseph Bowring, PJM MMU ▪ Jeff Bladen, PJM 	Ballroom II
2:00 – 3:45 p.m.	Key Issue Workshop 1: Addressing Risks	All Participants	Ballroom II
3:45 – 4:00 p.m.	Networking Break	All Participants	Ballroom Foyer
4:00 – 5:45 p.m.	Key Issue Workshop 2: Building Infrastructure	All Participants	Ballroom II
5:45 – 7:30 p.m.	Hosted Reception and Dinner	All Participants	Colonnade
Fri. Jan. 18, 2008	Day 2	All Participants	The Fairmont, Washington, D.C.
7:30 – 8:30 a.m.	Continental Breakfast & Networking	All Participants	Ballroom Foyer & Ballroom II
8:30 – 10:15 a.m.	Key Issue Workshop 3: Examining Market Solutions	All Participants	Ballroom II
10:15 – 10:45 a.m.	Networking Break	All Participants	Ballroom Foyer
10:45 – 11:45 a.m.	Prioritized Action Plan & Next Steps	Facilitator, All Participants	Ballroom II
11:45 a.m. – Noon	Concluding Remarks	Andy Ott, PJM	Ballroom II

APPENDIX B: LIST OF MEMBERS OF THE ADVISORY GROUP

Alegretti	Dan	Constellation
Anderson	John	ELCON
Barua	Rajnish	OPSI
Barker	Jason	Constellation
Berg	Bill	Exelon
Centolella	Paul	PUCO
Conopask	Jeffrey	SMECO
Griffiths	Dan	PA DEP
Johnson	Jeff	KYPSC
Hughes	John	ELCON
Kelly	Kevin	FERC
Kelly	Susan	APPA
Popowsky	Sonny	Consumer Advocate of Pennsylvania
Proctor	Martin	Constellation
Tezak	Christine	Stanford Washington Research Group
Wolfe	Samuel	NJBPU

APPENDIX C: LIST OF FORUM ATTENDEES

Last Name	First Name	Company Name
Alesius	Alan	PJM Interconnection
Allegretti	Daniel	Constellation Energy Resources
Anders	David	PJM Interconnection
Anderson	John	ELCON
Applebaum	David	FPL Energy Power Marketing, Inc.
Austin	Larry	PJM Interconnection
Bandera	Derek	Reliant Energy Wholesale Generation, L.L.C.
Barker	Jason	Constellation Energy Commodities Group, Inc.
Barua	Rajnish	OPSI
Bellis	Jim	FirstEnergy Solutions Corp.
Benckek	James	FirstEnergy Corp
Berg	Bill	Exelon
Bloom	David	Delaware Public Service Commission
Bowring	Joe	PJM Interconnection
Boyle	Sean	FPL Energy PMI
Boyle	Stephen	PJM Interconnection
Bradley	Mike	Dynegy Inc.
Brodbeck	John	Coral Power, L.L.C.
Brosius	Michael	UBS Energy LLC
Brudner	Sherri	Macquarie Cook Power
Bucci	Cindy	SMECO
Bursaw	Christopher	Competitive Power Ventures, Inc.

Buttner	Sarah	Delaware Public Service Commission
Cardano	Mark	GenPower
Centolella	Paul	Public Utilities Commission of Ohio
Chirdon	Gordon	Sempra Generation
Choo	Lee-Ken	FERC
Clover	Bernita	Duquesne Light Co.
Conopask	Jeffrey	Southern Md. Electric Cooperative
Covino	Susan	PJM Interconnection
Crowley	Jack	Exelon Generation Company, LLC
Cunningham	Michael	Exelon Generation Company, LLC
Cvengros	Laura	URC Gov
Dahlquist	Duane	Blue Ridge Power Agency
Dion	Phillip	FERC
Dolan	Dan	Electric Power Supply Association
Edmonds	Brian	Office of the People's Counsel for the District of Columbia
Ericson	Christine	Illinois Commerce Commission
Esposito	Kathleen	Crested Butte Catalysts, LLC
Esposito	Pat	NRG Power Marketing, Inc.
Esposito	Peter	Crested Butte Catalysts, LLC
Farley	Brian	FirstEnergy Solutions Corp.
Filomena	Guy	PSC State of Maryland
Fitch	Neal	Reliant Energy, Inc.
Fitzpatrick	Terrance	Electric Power Generation Assoc.
Foreman	John	FPL Energy PMI

Freeman	Michael	Exelon Generation Company, LLC
Freifeld	Allen	Maryland Public Service Commission
Gallagher	Betty	ComEd
Galligan	Craig	Allegheny Energy Supply Company, LLC
Gdowik	John	PJM Interconnection
Groerer	Kenneth	Reliant Energy Wholesale Generation, L.L.C.
Giles	Steven	Allegheny Electric Cooperative, Inc.
Glazer	Craig	PJM Interconnection
Griffiths	Dan	Pennsylvania Department of Environmental Protection
Holligan	Jeff	BP Energy
Hornby	Rick	Synapse Energy Economics
Horton	Dana	AEP
Huddleston	Barry	Dynegy Inc.
Hughes	John	ELCON
Huis	Diane	NCEMC
Hupf	John	Tenaska
Huyler	Kevin	Federal Energy Regulatory Commission
Jain	Hemant	Hess Corporation
Jeremko	Steve	NYSE&G
Johnson	Jeff	Kentucky Public Service Commission
Jolly	Margarett	Rockland Electric
Karandrikas	Vicki	McNees Wallace & Nurick LLC
Kelly	John M.	American Public Power Association
Kelly	Stephen	Competitive Power Ventures

Kennedy	Beth	Southern Maryland Electric Cooperative
Kilbourne	Becky	NECC
Kirkwood	Martin	FERC
Konicki	Roberta	Sempra Energy Trading, LLC
Krizmanich	Thomas	Macquarie Cook Power Inc.
Lee	Jin	PJM Interconnection
Manion	Evelyn	PJM Interconnection
Martin	Valerie	FERC
McCarthy	Bob	Wellsboro Electric Company
McCullar	Patrick	DEMEC, Inc.
McKim	Rob	Amerex Energy Services
McNamara	Sean	PJM Interconnection
Mohre	David	NRECA
Morais	Matthew	PJM Interconnection
Mount	Colin	Allegheny Energy
Ogenyi	Gloria	Conectiv Energy
Ott	Andrew	PJM Interconnection
Pannell	Olenger	FirstEnergy Solutions Corp.
Philips	Marjorie	PSEG Energy Resources & Trade LLC
Popowsky	Sonny	Consumer Advocate of Pennsylvania
Ragsdale	Lee	North Carolina Electric Membership Corporation
Regan	Dennis	PJM Interconnection
Reuter	Robert	Potomac Electric Power
Rich	Lisa	Dynegy Power Marketing, Inc.

Roberts	Jacqueline	Ohio Consumers' Counsel
Roberts	Jeffrey	Amerex Energy Services
Robinson	Evelyn	PJM Interconnection
Rose	Maggie	Amerex Energy Services
Schaub	Peter	Pepco Holdings, Inc.
Scott	Mark	Old Dominion Electric Cooperative
Seff	Dylan	Citigroup Energy, Inc.
Singh	Harry	FERC
Soucy	Michel	Brookfield Energy Marketing Inc.
Stanco	Whitney	Stanford Financial Group
Stanek	Jason	FERC / Commissioner Moeller
Strickland	Carolyn	PJM Interconnection
Stroud	Delia	Exelon Generation Company, LLC
Stroup	Kerry	PJM Interconnection
Tatum	Ed	Old Dominion
Theodore	Sharon	Electric Power Supply Association
Tolstykh	Alex	Morgan Stanley Capital Group, Inc.
Trayers	Barry	Sempra Energy Trading Corp.
Twiggs	Thane	Direct Energy
Vayda	Brian	American PowerNet Management, L. P.
Verna	Jim	Exelon Power Team
Vinson	Donnie	DB Energy Trading, L.L.C.
Whitehead	William	PJM Interconnection
Wilhelm	John	PJM Interconnection



Williamson	Terry	PJM Interconnection
Wilson	Bertram	Castlebridge Energy Group
Wolfe	Samuel	New Jersey Board of Public Utilities
Wooley	Valerie	Mirant Energy Trading, LLC
Yacker	Marc	ELCON

APPENDIX D: ACRONYMS

AF&PA – American Forest and Paper Association

AMP – American Municipal Power

ARR – Auction Revenue Rights

BPA – Bonneville Power Authority

CONE – Cost of New Entry

CTR – Financial Capacity Rights (conceptual)

CUB – Citizens Utility Board

DEMEC – Delaware Municipal Electric Cooperative

DSR – demand side response

EBB – Electronic Bulletin Board

EEL – Edison Electric Institute

ELCON – Electric Consumers

FERC – Federal Energy Regulatory Commission

FTR – Financial Transmission Rights

GHG – Green House Gas

ICE - Intercontinental Exchange

ISDA – International Swaps and Derivatives Association

ISO – Independent System Operator

KYPSC – Kentucky Public Service Commission

LMP – Locational Marginal Price

LSE – Load Serving Entity

LT – Long-term

MCP – market clearing price

NIMBY – not in my backyard

NJBPU – New Jersey Bureau of Public Utilities

OPSI – Organization of PJM States, Inc.

PA DEP Pennsylvania Department of Environmental Protection

POLR - provider of last resort

PPA – Purchase Power Agreement

PSEG – Public Service Electric and Gas

PUCO – Public Utility Commission of Ohio

RGGI – Regional Greenhouse Gas Initiative

RFP – Request for Proposal

RPM – Reliability Pricing Model

RMR – Reliability Must Run

ROW – Right of Way

RPS – renewable portfolio standard

RTEP – Regional Transmission Expansion Plan

RTO – Regional Transmission Organization

SRP – Salt River Project