

Introduction

ConsumerPowerline (CPLN) would like to thank the BPU for soliciting industry proposals for meeting the demand response goals contained in New Jersey's Energy Master Plan. As an established demand response provider with over 28MW of demand response capacity in New Jersey, CPLN appreciates the opportunity to provide input in New Jersey's demand response planning process.

These comments are organized into four sections:

1. An argument for why the market-based approach is preferable to the EDC approach.
2. Program design.
3. An implementation proposal that would function within PJM's RPM system.
4. An implementation proposal independent of RPM.

Our goal in these comments is to present what we believe to be the lowest cost method of meeting New Jersey's demand response goals. At no point do we propose a privileged role for CPLN or any other company. We welcome the opportunity to compete in New Jersey's demand response market, but acknowledge that no one company can be all things to all people. Instead, we believe that an approach that lets all market participants make best use of their distinctive abilities will bring the greatest quantity of demand response to New Jersey at the lowest cost to the State's ratepayers and taxpayers.

1. The case for market based demand response

CPLN believes that competitive markets for demand response produce superior results to EDC-only programs. Real-world examples support this belief. As one example, take PJM's capacity market: There is one set of wholesale demand response programs (with regionally variable pricing) across PJM, but most states allow independent DR providers to while one (Kentucky) does not. Across PJM, demand response accounts for slightly less than 3% of total capacity, but in Kentucky, there is **no** participation in any of PJM's DR programs. Similarly, ISO-NE, with a long history of competitive demand response, boasts some of the highest demand response rates in the country; areas such as MISO and the Pacific Northwest, which have competitive demand response market, have little to no demand response.

Although PJM does not break down demand response participation by independent vs. EDC, based on our own sales information and conversations with other DR providers, we believe that between 30% and 50% of the demand response currently deployed in New Jersey comes from independent providers.

Beyond these empirical examples, we believe that there strong theoretical reasons why a competitive demand response market is better for consumers. These reasons include:

- **Better alignment of incentives.** EDCs are, ultimately, in the business of selling electricity, and often take a less than enthusiastic approach to demand response. Although some EDCs have run effective demand response programs,

others perceive DR as financially unattractive. The BPU may, of course, mandate DR programs, but this can lead to a command-and-control regulation that may result in less efficient programs. In contrast, demand response providers are highly motivated to create the maximum amount of DR capacity, and need little encouragement to aggressively seek opportunities to enroll end-users in DR programs.

- **Improved measurement and verification.** In EDC-run programs, the same entity is responsible for meeting DR targets, enrolling customers, and evaluating performance. This creates a natural conflict of interest that may undermine confidence in reported demand response quantities. It would be possible for the BPU to audit EDC programs, but this would add a level of complexity and expense that would ultimately fall upon ratepayers or taxpayers. When demand response is provided by third parties, the EDCs verify performance as a routine part of settlement procedures. As the EDCs have a built-in incentive to critically evaluate DR provider's results, this creates a natural system of checks and balances that leads to higher-quality demand response and more accurate reporting.
- **Competitive prices and customer service.** Independent DR providers compete on price and customer service. To be successful, DR providers generally need to offer a better revenue split, have a deep understanding of end-users' needs, and provide responsive customer service. All of these features will lead to a better program from the point of view of New Jersey's electricity consumers.
- **Diversity of suppliers.** Some demand response providers provide a wide range of services. Others specialize in certain industries or vertical market segments, and others aim to provide demand response to residential customers. Because of this diversity, a competitive market gives end-users more opportunities to find a DR provider who matches their needs. EDCs typically offer a small number of demand response programs, leaving end-users with the choice of trying to fit their needs to those programs or simply not participating in demand response.
- **Avoidance of hidden subsidies.** EDCs are large, financially complex companies. It can be difficult or impossible to determine if any one segment of their business is operating at a loss, and, if so, how that loss is being distributed across their other lines of business. This leads to a risk that demand response programs are unknowingly subsidized by other ratepayers. This is not to say that subsidies for demand response are inappropriate, but that they are better addressed through transparent public processes.

2. Program Design

Our proposed program is, at its core, quite simple: We propose that New Jersey treat demand response as a capacity resource, and create a Demand Response Portfolio

Standard (DRPS) similar to existing, successful, renewable portfolio standards. A state-wide demand response target would be established for every year based on the goals of the energy master plan, and this target would be divided across the EDCs proportionately to their share of load.

To manage the ultimate cost to ratepayers, we recommend that the BPU set a cap price for demand response capacity. For 2009, we recommend setting this cap at 120% of the current price for capacity in New Jersey, or \$83,798 per MW-year. In future years, this price cap should be adjusted up or down depending on program performance in 2009.

Answers to the specific questions listed in part 2 of docket EO08060421 are provided below, in the same order as asked:

- To allow for the limited time before the start of the 2009 energy year, program targets should be slightly back-loaded. We recommend that the total goal of 600MW be divided over the number of months between program approval and June 2011, and annual targets be set based on this number. For example, if the program was finalized on December 1, 2008, it would cover a total of 30 months and target $600/30 = 20\text{MW}$ of new DR per month. Since there would be six months remaining before the start of energy year 2009, the target for 2009 would be $6 \times 20 = 120\text{MW}$ of new DR. The targets for 2010 and 2011 would be $12 \times 20 = 240\text{MW}$ of new DR in each year.
- Specific program design and the procurement process depend on whether the program runs within or independently of RPM/ILR, as discussed in the following sections.
- Total DR should be procured from multiple sources, based strictly on least-cost bids.
- The program should be statewide. Demand resources should be required to be located within New Jersey, but beyond that, there should be no requirement that any EDCs demand resources are located within any particular service area. We believe that this is the most economically efficient method of meeting demand response goals. Each EDC has a different customer base, some of which may be more able to provide economical demand response. Additionally, the small size of some of New Jersey's EDCs may make it difficult for them to find sufficient demand resources within their own customer base without raising prices to unacceptably high levels. Unless the BPU considers the location of demand resources to be a policy goal in itself, the flexibility to meet DR goals from anywhere in the state will make the program more flexible, and, ultimately, more successful.
- The decision as to what customer classes to target should be left to the individual demand response providers. As discussed above, the various DR providers specialize in different markets, and allowing a competitive market

to determine customer mix ensures that all options will be explored and the most cost-effective mix provided.

- The program should allow participation in PJM's energy and ancillary services markets. We see no disadvantage to allowing this participation, and believe that in the absence of reasons to the contrary, the additional revenue streams from these markets will reduce the cost to ratepayers.
- The initial program should cover the three years from June 1, 2009 to May 31, 2012. After the start of each energy year, auction performance should be analyzed, and a new rate cap announced for the following year. After the start of the final delivery year on June 1, 2011, overall program performance should be analyzed, along with any changes to wholesale market structure, and a decision made as to whether to extend, modify, or restructure the program.
- The program timeline varies depending on if the program works within or independently of RPM.
- Beyond the benefits commonly associated with demand response, we believe that the market based approach presented here guarantees New Jersey ratepayers and taxpayers the lowest-cost solution that meets the goals set forth in the energy master plan. The reasons for this are presented throughout this section, but in summary: (1) price competition will create incentives for DR providers to seek lowest cost solutions, reward those providers who are able to provide DR for the lowest cost, and weed out those with ineffective business models or inefficient program delivery; (2) geographic and customer type flexibility allows the market to identify and deliver the most cost-effective sources of demand response; and (3) an auction-based selection process automatically identifies the lowest-cost solution without requiring a resource intensive and possibly error prone RFP process.
- We believe that the competitive market will be able to meet the 600MW by 2012 goal at a price at or lower than the price cap of \$83,798/MW-year. We base this belief on recent experience in the SWMAAC capacity market. In that market, local shortages raised capacity prices to \$76,690/MW-year (2008) and \$86,505/MW-year (2009). In response to these prices, approximately 300MW of new demand response capacity was added in slightly more than one year's time. Total load in New Jersey is about 150% of load in SWMAAC, indicating a proportionately higher potential for demand response. This result gives us confidence that similar prices New Jersey will be able to provide 200MW per year in new demand response. As a supporting argument, we note that at RPM capacity prices between \$54,312 and \$69,831/MW-year, demand response has been created in New Jersey at almost the rate required to reach the 600MW by 2012 goal.

Total program costs to ratepayers will be much lower than the number arrived at by multiplying capacity prices by megawatts. Each megawatt of demand response capacity displaces a megawatt of capacity that would be otherwise required.

For total program costs, we use a low estimate of \$65,000/MW-year and a price cap of \$83,798/MW-year to establish a range of costs. Assuming that the program starts in December 2008, and using existing RPM capacity prices as the cost of avoided capacity, we estimate program costs at:

Year	Cost of Avoided Capacity	DR Premium (low)	DR Premium (high)	DR Quantity	Cost (low)	Cost (high)
2009	\$69,831.80	\$0.00	\$13,966.20	120MW	\$0.00	\$1,675,944.00
2010	\$63,615.85	\$1,384.15	\$20128.15	360MW	\$498,294.00	\$7,265,574.00
2011	\$40,164.60	\$24,835.40	\$43,633.40	600MW	\$14,901,240.00	\$26,180,040.00

Finally, we note that, if PJM's ILR is still operational, the additional DR capacity will partially come from ILR purchases in excess of capacity needs that the EDCs are required to make under ILR. The exact values of these purchases are unknown, but based on experience for 2008, we believe that offsetting these purchases will make the program net cash positive for 2009, and bring it close to zero cost for 2010.

- The responsible parties for program administration will vary depending on whether the program runs with or independently of RPM/ILR.

3. Program Implementation Within RPM

ConsumerPowerline realizes that the New Jersey BPU has raised objections to PJM's RPM construct. RPM covers a much broader range of capacity resources than just demand response, and the BPU's objections to RPM are largely based on the cost RPM adds to traditional generation resources. CPLN understands the BPU's objections, but believes that, within the relatively narrow field of demand response, a solution that works with the existing RPM system is the preferred option for stimulating additional demand response.

Our reasons for this are entirely pragmatic. First among them is simple timing: Docket EO08060421 covers the time period from June 2009 through May 2012. RPM auctions for this time period have already occurred, and we believe that any wholesale changes to the RPM structure are unlikely to take effect before the 2012/2013 delivery year. If nothing else, the sunk costs associated with changing RPM for years in which the capacity auctions have already taken place might make earlier changes prohibitively expensive. Given this, we believe that RPM is likely to be the capacity market in effect for the time period covered by this proposal, and that it is possible to design a demand response incentive program that works within RPM without necessarily agreeing with RPM as the correct capacity market design.

The most attractive feature of a ‘within-RPM’ program is simplicity of design and implementation. In order to meet the proposed demand response capacity portfolio, New Jersey EDCs would be required to hold enough RPM resources located within one of the four New Jersey PJM zones to meet their share of the DR target. During the delivery year, EDCs would be penalized monthly at the demand response cap rate for the difference between their actual demand resource portfolio and the standard requirements.

This approach provides the BPU with essentially a ‘ready-made’ program, and allows BPU to take advantage of all the work that has gone into integrating DR into the RPM capacity market. Specific advantages include:

- Verification becomes simply a matter of checking that each EDC’s portfolio within PJM’s eRPM system meets DR portfolio standards. The take-or-pay approach gives EDCs ample incentive to meet their DR requirement through any available means, making more complex verification unnecessary.
- No separate measurement and verification effort is required. PJM has already set baseline and M&V standards for demand resources, and has put into place a regime of checks and balances, performance standards, and penalties that ensure demand resources are accurately counted and perform reliably.

The history of demand response shows that developing M&V and performance standards is difficult; indeed, few demand response programs have gotten them right on the first try. The fact that working within RPM lets New Jersey avoid all of these issues is a major argument in its favor. Setting up an M&V regime is time consuming and expensive, and might well delay the program to the point where meeting the 600MW by 2012 goal is jeopardized.

- The capacity produced by this program would be automatically integrated into grid operations. There would be no need for New Jersey to develop its own dispatch criteria or notification procedures. This maximizes the new demand response’s contribution to system reliability while avoiding a significant expenditure of time and effort.
- No new markets or modifications to the BGS auction are required.
- The program could be implemented almost immediately, maximizing the time available to meet energy master plan goals.
- Because program requirements would be identical to existing RPM DR requirements, market participants would be able to immediately begin registering resources.
- This approach avoids creating a new, New Jersey-specific, set of demand response rules, which eases administrative burdens, lowers entry barriers and

enables national demand response providers to easily enter the New Jersey market.

- Demand response providers who participate in the New Jersey market would have additional markets to sell their capacity, reducing participation risk. If, for example, a demand response provider enrolled customers beyond their New Jersey commitment, or found that their bids in the capacity auction were not accepted, they would be able to seek customers for their capacity across PJM. This significantly reduces market risk for the provider, enabling greater participation in the New Jersey market.

4. Program Implementation Outside of RPM

It is also possible for New Jersey to implement a demand response portfolio standard that does not function within PJM's RPM system. Implementing a program outside of RPM would require the BPU to resolve several additional issues:

- The BPU would develop performance, baseline, and M&V standards, along with settlement and penalty systems. Because of the complexity of these issues, we recommend that BPU make every attempt to adopt standards developed in on the of the established demand response capacity markets
- The BPU would need to create administrative structures to register demand resources and track EDC DR portfolios.
- Criteria would be developed for when demand response resources would be dispatched, along with procedures for coordinating dispatch with grid operators and notifying the demand resources when they are required to curtail.
- A modified BGS auction is probably the best mechanism for procuring demand resources. The main reason for this is that EDCs need to be able to integrate demand response capacity into their overall purchasing plan; otherwise, they may well end up purchasing capacity in excess of actual requirements, drastically increasing program costs.

Several changes could be made to the BGS format to best accommodate demand response:

- A separate category of demand response capacity would be created, separate from traditional generation capacity. This allows the EDCs to procure the specific amount of demand response they need independently of their other capacity requirements.
- The tranche size for demand response should be smaller than that for traditional generation.
- Allowance should be made for 'planned demand response' that will be enrolled between the BGS auction and the start of the delivery year.
- The demand response auction could be conducted prior to the capacity portion of the BGS auction, allowing EDCs to reduce the amount of

capacity they are required to acquire by the amount of demand response purchased.

- To avoid double-dipping, participants in the New Jersey capacity program should not be allowed to also participate in PJM's RPM capacity market. A verification system would need to be put in place with PJM to ensure that demand response participants are not paid twice for the same capacity.
- There is no fundamental conflict between participation in the New Jersey capacity program and PJM's energy and ancillary services market, and we recommend that demand resources be allowed to do so.

5. Conclusion

In summary, ConsumerPowerline recommends a demand response portfolio standard integrated with the existing RPM capacity market as the best option for meeting the energy master plan demand response goals. We believe that this course will ensure that New Jersey obtains the desired amount of demand response at the lowest cost ratepayers and taxpayers. We also believe that, because this proposal leverages existing programs, it allows for very rapid implementation, providing the best course to provide meaningful additional demand response capacity in 2009.

ConsumerPowerline thanks the BPU for receiving these comments, and would be pleased to provide further information or clarifications at the BPU's request.

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