

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION

ACT 129 ENERGY EFFICIENCY AND
CONSERVATION PROGRAM PHASE TWO

Docket No. M-2012-2289411

COMMENTS ON BEHALF OF VIRIDITY ENERGY, INC. IN RESPONSE TO THE ACT 129 ENERGY
EFFICIENCY AND CONSERVATION PROGRAM PHASE TWO SECRETARIAL LETTER

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April 17, 2012

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Viridity respectfully files these Comments with respect to Question 3 set forth in the Secretarial Letter entered in this proceeding on March 17, 2012.

3. Inclusion of a Demand Response Curtailment Program

Viridity supports the inclusion of demand response curtailment programs in the next round of EE&C programs. We note at the outset that “Act 129 further directs that the Commission must set new incremental consumption and peak demand reductions if the benefits of the Program and plans exceed the costs.” In its discussion regarding inclusion of a demand response curtailment program in the Secretarial Letter the Commission focuses only upon the ‘peak demand’ portion of this mandate. This focus is misplaced because demand response programs do cause consumption (that is, energy as opposed to capacity) reductions. Indeed, the customer benefits (most particularly benefits enjoyed by non-participants) from demand response-induced energy reductions are several times larger than the other benefits, and therefore should not be ignored in the analysis.

While demand response programs can be used to cut peaks and save capacity costs, the benefits associated with load management in the energy markets are considerably greater and should be incorporated into the Commission's analysis of cost effectiveness.

One of the principal benefits of demand response is the mitigating effect it has on price excursions which occur during hot weather periods when energy prices become quite volatile. Demand response has been shown to reduce these prices during such periods. The evidence indicates that these benefits are substantial.

While the benefits of demand response in capacity markets are great, the benefits that demand response can bring to energy prices are even greater. Active participation of DR in the energy markets will enhance the likelihood that energy rates satisfy the Just and Reasonable standard.

The energy markets are larger than the capacity markets and the energy portion of a typical customer's bill is much larger than the capacity portion of the bill. On average, fuel costs have traditionally represented about 50% of the all-in costs of energy. Program rules that allow the full capacity and energy value of demand response to be realized by participating consumers are an essential component of efficient, competitive markets. One 'data point' from the PJM interconnection illustrates the potential value: During the August 2006 heat wave, when PJM experienced an all-time peak, the participation of demand response bidding into the energy market reduced Locational Marginal Prices by as much as \$600/Mwh at the peak. Payments were reduced by \$230 million on the peak day alone and by \$650 million during the month.¹ These customer savings were experienced in one RTO, in one month. The potential savings

¹ Demand Response in Wholesale Markets, FERC Docket No. AD07-11-009; Testimony of PJM Witness Andrew Ott, April 23, 2007.

from continuous full-scale participation by demand response in day ahead and real time energy markets is profound. Simply put, the dampening effect of demand response on clearing prices will make all customers better off. Indeed, the principal beneficiaries of the ‘price mitigating effect’ of demand response are non-participating customers, i.e., (those customers that do not or cannot curtail their usage.) The cost associated with this \$600 million benefit was \$5 million. An impressive benefit/cost ratio by any measure.

This effect of demand response has been noted many times by PJM. For example, in its 2005 Report to FERC “Assessment of PJM Load Response Programs” the RTO noted: “Thus, in 2005, even using an average \$.50 per MWh of overall price reduction (in LMP) multiplied by the average hourly load during the load reductions of 87,811 MW equals \$43,906 per hour, or about \$182,122,088 for the 4,148 hours of load reductions.” The cost beneficial effect of payments to encourage demand response was laid out quite clearly in that same report: It observed in its “Assessment of PJM Load Response Programs, Report to FERC” (2005): “In summary, direct administrative costs for the PJM Economic Program were about \$0.50 per MWh of actual load reductions in 2005. It was about \$1 per MWh in 2004, 2003, and 2002. The subsidy costs were about \$13 per MWh of load reductions in 2002, about \$6 per MWh of load reductions in 2003, about \$4 per MWh of load reductions in 2004 and \$28 per MWh in 2005. Thus, total program costs were approximately \$14 per MWh, in 2002, about \$7 per MWh in 2003, about \$5 per MWh in 2004 and about \$29 per MWh of load reductions in 2005. **The benefits of the Economic Program when measured as the impact on overall market prices were much larger than the costs.** These benefits are a direct function of prevailing market price levels and will thus increase if prices rise compared to 2005 levels or decrease if prices decrease compared to 2005 levels. The evaluation of the benefits associated with overall market price reductions must consider that these benefits do not necessarily represent an increase in market efficiency but represent a transfer from generation to load, in the short term. Whether this results in a lower

overall market cost in the long run remains to be seen. **Regardless, the potential benefits of increasing demand side responsiveness in improved efficiency of the market are large and certainly exceed the relatively small program costs by a wide margin. These benefit calculations do not include any calculation of reliability benefits of the demand side programs. It was not necessary to make such a calculation to demonstrate that there are substantial net benefits to the Economic Program.**” (Emphasis added)

High energy prices have occurred in the past and will occur again in the future. The precise day and hour cannot be predicted with certainty but the fact that they will occur is certain. So long as extremely hot weather occurs on occasion, electricity prices will follow their usual course. Demand response will mitigate the price move. And as illustrated above, the programs that facilitate that demand response are quite cost effective.

The price dampening effect of demand response has not been factored into any analysis presented to the Commission. Obviously, it should be considered because it represents a significant benefit to the ratepayers and a major factor in a comprehensive cost/benefit analysis.

ACT 129 requires the Commission to conduct cost-effectiveness analyses of the DR Curtailment programs by November 2013. Thus, a contingency plan must be in place if the EDC's are to initiate a DR program for 2013. Viridity believes there is sufficient evidence to believe that those programs will be found cost-effective and therefore the Commission should put a contingency plan in place through its August 2, 2012 Final Implementation Order.

One approach is for the Commission to direct the EDCs to continue their existing DR programs for an additional summer season through September of 2013. This approach has several advantages. First, it would provide certainty for EDCs, CSPs and customers. The EDCs could then easily build the programs into their EE&C plans. Secondly, it would provide the Commission more time to both evaluate the cost-effectiveness of the programs, as well as vet

potential program improvements with the EDCs and stakeholders. The resulting 2014 programs would undoubtedly benefit from a more thorough, less rushed evaluation and subsequent planning cycle.

The Legislature has granted the Commission the flexibility to apply a peak load reduction eligibility criteria that is different from the current "Top 100 Hour" approach. The Commission should exercise this flexibility. Rather than imposing an obligation on the EDCs to forecast the top 100 hours, the Commission should rely on a market mechanism (and customers) to insure that reductions occur during peak hours. Customers will curtail when it is most in their interest to do so. Thus, customers will curtail when prices are at their highest. Prices are at their highest during peak load conditions. Thus, a program which ties customer payments to high market prices will incent reductions when peaks are being reached. EDCs are relieved of the obligation to forecast specific peak hours and instead, the real time interaction between curtailment service providers and their customers is used to insure that curtailments have capacity value.

Conclusion

Viridity appreciates the opportunity to comment on Phase Two of the Energy Efficiency and Conservation Programs. The Statewide Evaluator should be directed to consider the benefits set forth herein when evaluating the cost effectiveness of demand response programs. Continuation of the demand response programs will provide a benefit to Pennsylvania. We respectfully request that the Commission enter these Comments to the March 17, 2012 Secretarial Letter into the record. We look forward to participating in the process going forward and contributing our experience and expertise. Thank you again for the opportunity to comment on this important matter.

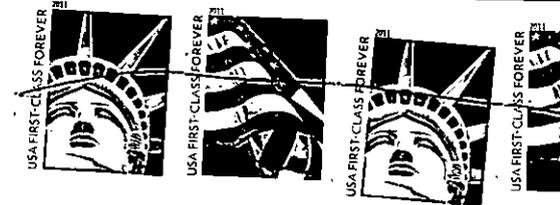
Respectfully submitted,

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