

## **Comments Regarding the Baseline Methodology in NYISO's Special Case Resource Program: APMD vs. CBL**

It is our respective position that the APMD must remain to be the baseline in New York. Some important points to consider and understand are noted below. First and foremost, the FERC sets forth criteria<sup>1</sup> that must be balanced in baseline development (in **bold** below). It is clear from an analysis of these criteria as applied to NYISO's SCR program that APMD is the preferred method. We agree that APMD ensures:

- **Predictability, the ability for customers to know the baseline before committing to a particular curtailment amount and event.** The APMD provides a firm commitment level that each resource knows that they must get down to or below during a called event. They can set their automated control systems at this kW threshold, industrials can plan ahead of time based on the production lines and equipment they would be running on the following day, etc. APMD is extremely predictable for a resource. APMD leads to a reliable resource. The CBL is less predictable for a resource than the APMD and, in turn, is less reliable.
- **Simplicity, including ease of use, ease of understanding, and low cost for participant, the NYISO and market participants to implement.** The CBL is complicated and not easy to explain. In order to be as reliable a resource as would be expected in a successful DR program, the APMD is preferred by Market participants as well as by most resources. A resource would have to incur expense ensuring that their systems and implementation plan is updated daily to match up with an ever-changing CBL baseline; many resources would not incur this expense. The APMD method on the other hand is very simple and minimal additional costs are typically required to utilize for most resources and market participants.
- **Accuracy, including lack of bias (i.e. no systematic tendency to over-or under-state reductions), appropriate handling of weather-sensitive accounts, and verifiability.** The undersigned participants believe that the APMD methodology is a very accurate predictor of the Capacity of Demand Response. It is very similar to the DMNC methodology utilized by the NYISO for generators. There is no evidence to suggest that the CBL is any more accurate than the APMD methodology. In fact, in many cases (significant A/C based loads for example), the CBL method is extremely inaccurate. One study<sup>2</sup> concluded that weather adjustments do not improve accuracy of the CBL whatsoever. NYISO significantly reduced the "inaccuracy" potential with the APMD approach when it included an APMD window of between 12 pm and 8 pm.

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<sup>1</sup> Demand Response in Wholesale Markets Technical Conference, April 23, 2007 Docket No. AD07-11-000

<sup>2</sup> "Settlement Computation in Demand Response Programs; Comparing Baseline Methods" Department of Electrical & Computer Engineering, University of Florida

- **Minimization of gaming by customers.** Again, when NYISO modified the APMD approach to include a specific window from 12 pm to 8 pm it significantly reduced any notion of gaming that would have previously existed. No longer can off peak loads take capacity credit for doing nothing.
- **Consistency with other ISO methods.** DR is considered capacity. Capacity is measured by utilizing prior year's information. The APMD is consistent with other evaluations of capacity in NYISO's markets.
- **Consistency with other NYS Curtailment Programs** should be noted. In a filing to NYS PSC concerning the Con Ed Rider U program dated July 31, 2007, most New York CSP's stated "...settlements under both programs (NYISO SCR and Con ED Rider U) are based upon customer baseline determinations of what customer demands would otherwise be without curtailment efforts. This is important because customer specific baseline determinations are intelligent estimates of what customer demand would be without curtailment efforts. **While the baseline determination is a carefully developed protocol designed to ensure accuracy and eliminate potential for gaming, it is an estimate of customer demand.**" Thus, as of just a few months ago most of the demand response providers agreed that the APMD was a carefully developed methodology. Similarly NYPA's and LIPA's Capacity determinations are based on the APMD methodology.
- **Repeatability and Understanding by Resources.** The CBL is complicated and not widely understood. The key component of a successful demand response program is to have resources that understand their baseline. In the CBL methodology a new baseline is created every single day. In the APMD approach there is a firm commitment level that the facility knows they have to get below when an event is called, whenever that event is called. This creates certainty in the minds of the participating facility because they know precisely what they have to get down to and what they have to shut off to get down to their firm commitment level. This is contrary to a CBL methodology which may change a facility's curtailment strategy each and every day, thus creating a reduced reliability of that resource. Thus, CBL leads to a less reliable resource.
- **Marketability of a DR Program.** A market utilizing a CBL methodology will find that the marketability of the program is significantly damaged. Resources that are in the program will opt out and prospects for the program will decide not to join because of the uncertainty associated with it. In our experience the APMD methodology is one of the single most important reasons for the success of the NYISO's DR programs. There is no evidence to suggest that in other markets CBL methodology has worked better. What other markets are more successful regarding Demand Response than NYISO, in terms of participating MW and reliability of those MW's? In Summer 2006 ~ 90% performance on an individual resource basis (likely > 100% on aggregate basis).

- In accordance with NYISO rules, because DR curtailment is considered Capacity, one must look to the capacity rules in determining and measuring the amount of capacity. In New York it is based on the prior year's peaks and this is simply how capacity is calculated. Capacity cannot be calculated on the "if come" on a daily basis. The NYISO has repeatedly stated this fact. The use of APMD in NYISO's markets prevents under/over selling as the ICAP calculation is based on actual peak usage. Again, it is easy to calculate and not error prone due to lack of understanding or bad calculations.
- An all-inclusive CBL methodology for determining ICAP will have an adverse affect of minimizing the overall DR portfolio in that certain types of load will be shunned in CSP marketing efforts (A/C loads) which is contrary to the program efforts
- **Advantageous to NYS goals** Neither the CBL nor APMD methodology is perfect for every type of resource. The CBL baseline is perfect for sites having on-site generation that can pick up air-conditioning load in excess of other non-a/c load. If there is no generator to offset a facility's load, the CBL has the effect of discriminating against a facility with a large a/c load that would participate in an event by shutting down that a/c load. To illustrate, in California on July 5<sup>th</sup>, PG&E called an event. That event was called after several moderate weather days and occurred on a day when the weather exceeded 100 degrees. Looking at the past 10 days was showing a baseline in some cases more than 50% lower than the demands at the facility during the event call. Sites that did not have on-site generation had to curtail a significant amount of power just to get down to their baseline level. The end result is that DR providers will specifically avoid air conditioning loads, which is contrary to the entire concept of demand response as that is precisely the type of load that would be suitable for curtailing during an event call. CBL calculations favor those who are using on-site generation as a primary means for curtailment, and hinder pure curtailers/load shedders (green customers)!
- **Robustness.** A KEMA panelist reported to the FERC that no one baseline method works well for all types of accounts<sup>3</sup>. Relatively simple methods can work reasonably well for many, if not most kinds of accounts. The Regulatory Assistance Project<sup>4</sup> also noted that highly successful DR programs like GPC and Duke's are using a modified APMD methodology when calculating load reductions. In a presentation given by the NYISO on SCR and EDRP performance<sup>5</sup>, APMD and CBL performance calculation discrepancies were attributed to reporting differences where subsets of SCR customer energy

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<sup>3</sup> "Measurement and Evaluation of Demand Response Resources, Part 3" Miriam Goldberg, KEMA, Inc. to the FERC in response to Demand Response in Wholesale Markets, Docket No. AD07-11-000

<sup>4</sup> "Framing Paper #3: Metering and Retail Pricing", New England Demand Response Initiative, 1 May 2002, F. Weston, J. Lazar, The Regulatory Assistance Project

<sup>5</sup> "EDRP/SCR Performance during the July 27, 2005 Event" given at the PRLWG, Dec 12, 2005  
[http://www.nyiso.com/public/webdocs/committees/bic\\_prlwg/meeting\\_materials/2005-12-12/2005\\_EDRP-SCR\\_event\\_analysis\\_\(V4\).pdf](http://www.nyiso.com/public/webdocs/committees/bic_prlwg/meeting_materials/2005-12-12/2005_EDRP-SCR_event_analysis_(V4).pdf)

reduction was reported, or was due to discrepancies in metered load data reported for each program, and **not flawed methodology**.

- **Continuing the Momentum of DR in New York.** NYISO’s program has been based upon the APMD since its commencement. Thousands of facilities now participate and have come to understand the particular methodology used in this program. They have established their curtailment protocols, their event response modes, etc., based upon the APMD methodology. If a change is made to a CBL methodology, NYISO would experience a significant loss of demand response resources and those resources that do remain would not be as reliable as has been the case thus far. The NYISO is considered to be one of the premiere leaders in DR markets, and the consistency the FERC is looking in respect to balancing baseline development should begin with markets that are high-functioning such as the NYISO’s.
- The argument that the APMD approach is “inherently flawed [because it] rewards RIPS for doing nothing” is simply not correct and shows a lack of understanding of NYISO’s program and the rationale behind the APMD approach. NYISO went through the process of enhancing the accuracy of the APMD methodology when it changed the APMD window to a specific 8 hour window. In reality, the APMD in a large number of cases provides the resource and the RIP with *less* capacity than they should get credited for, not more. Virtually all summer events are called in July or August. The APMD method averages the months of June and September in its calculation, which has the effect of reducing that baseline as compared to a straight July / August average. When demands are at their highest in July and August, resources are called upon to perform, many times against a baseline which is lower (NOT higher) than the demands they are experiencing at the time of the event call. The point is that there are instances on both sides that demonstrate that it’s not 100% accurate, but to suggest that the APMD allows free riders, etc demonstrates a lack of understanding of the markets. The CBL on the other hand is simply not accurate, especially relative to summer loads (A/C, etc).
- The presentation before the PRLWG/ICAPWG states that “no other market or utility uses this flawed approach” in an effort to demonstrate that the APMD is not an industry standard. This is yet another misstatement of the facts. Quick research shows that many markets and utilities are selecting this approach while many others are going *away* from the CBL they once utilized. The trend is the use of an APMD because utilities now understand the flaws associated with the CBL approach. They are not interested in exclusively on-site generation based resources. Just a few examples of APMD (or retreat from CBL) being used currently:
  - Kansas City Power & Light’s MPower Program
  - PG&E’s BEC Program

- Georgia Power Corp. (no ICAP - uses a modified two-point APMD in its energy calculation)
- Duke Energy – (no ICAP - retreated from CBL methodology and uses monthly averages in its energy calculation)
- Southern California Edison’s IBEC Program

Additionally, representatives for some IOU’s in California recently expressed concern with the accuracy of the CBL for their CBP programs. The CBL significantly understated the curtailment of a large number of their participants during the summer 2007 event calls.

Therefore, we confirm our position that the existing APMD methodology should remain the standard for the NYISO and any change would be a significant detriment to the Special Case Resource program in New York.

**THE FOLLOWING NYISO MARKET PARTICIPANTS JOINTLY  
SUBMIT THE ABOVE COMMENTS:**

Energy Curtailment Specialists, Inc.

ConsumerPowerline

Integrus Energy Services of NY

Innoventive Power, LLC

Energy Analytics

Energy Spectrum

Energy Enterprises, Inc.