NEW YORK STATE
PUBLIC SERVICE COMMISSION

Proceeding on Motion of the Commission to Consider Demand Response Initiatives PSC Case No. 09-E-0115

REPLY TO COMMENTS ON NOTICE OF PROPOSED RULEMAKING

I. Introduction

On December 14, 2012 Consolidated Edison Company of New York, Inc. (“Con Edison or the “Company”) filed proposed tariffs requesting limited modifications to its demand response (“DR”) programs.1 Also on December 14, the Company filed its Petition of Consolidated Edison Company of New York for Approval of Changes to Demand Response Programs (“Petition”) supporting the proposed tariffs.2

On January 16, 2013, the New York State Public Service Commission (“Commission”) issued a notice of proposed rulemaking regarding the Petition (“NOPR”). SAPA No.: 09-E-0115SP10 (January 16, 2013). Comments on the NOPR were filed by the New York State

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1 Case 09-E-0115, Proceeding on Motion of the Commission to Consider Demand Response Initiatives, Letter from William A. Atzl, Jr. to Secretary Brilling, December 14, 2012 (“Filing Letter”).
2 Case 09-E-0115, Proceeding on Motion of the Commission to Consider Demand Response Initiatives, Petition of Consolidated Edison Company of New York for Approval of Changes to Demand Response Programs, December 14, 2012 (“Petition”).

Con Edison submits these reply comments to clarify certain issues raised in the constructive comments submitted by NYSERDA, ECS and Energy Spectrum. 6

II. The Company’s Proposal to Move the CBL from a NYISO Document to a Company Procedure Should Be Approved, with the Addition of a Notice and Publication Requirement

Both ECS and Energy Spectrum expressed concerns about the Company’s proposal to develop an operating procedure that will be available to the public on the Company’s website to provide guidance regarding the Company’s baseline calculations, instead of the current use of the New York Independent System Operator’s ("NYISO") Emergency Demand Response Program ("EDRP") manual and the Customer Base Line ("CBL") description contained therein as the reference document for the Company’s baseline calculation. ECS objects to the Company’s proposal “at least until ConEd has developed and proposed specific baseline language and presented to the Commission, ConEd’s customers and stakeholders for full review.” 7 ECS acknowledges “that the CBL baseline and the rules that the NYISO has imposed around it do not always reflect a resource’s performance,” agrees with the Company’s reasoning for no longer using the NYISO EDRP manual and CBL description and “does not oppose ConEd abandoning

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3 Case 09-E-0115, Proceeding on Motion of the Commission to Consider Demand Response Initiatives, Comments of The New York State Energy Research and Development Authority on Consolidated Edison Petition for Approval of Changes to Demand Response Program, March 4, 2013 ("NYSERDA Comments").
4 Case 09-E-0115, Proceeding on Motion of the Commission to Consider Demand Response Initiatives, Comments of Energy Curtailment Specialists, Inc., March 4, 2013 ("ECS Comments").
5 Case 09-E-0115, Proceeding on Motion of the Commission to Consider Demand Response Initiatives, Letter from David W. Neiburg, to Acting Secretary Cohen, March 1, 2013 ("Energy Spectrum Letter").
6 The Company appreciates ECS and Energy Spectrum’s support for its proposal to not initiate the Distribution Load Relief Program between 11:00 pm and 6:00 am (EC Comments at pp. 2-3 and Energy Spectrum at p.1) and does not comment further on the proposal.
7 ECS Comments, p. 6.
the EDRP manual as the baseline reference source in favor their own baseline rules.”\(^8\) ECS also states that it is confident that the Company will make no substantive changes to the operation of the CBL baseline, but believes that given the importance of the CBL when reviewing customer performance and for enrolling customers, the Commission should “direct ConEd to outline, and place the new proposed CBL method, which will be utilized to measure performance and payments, into both the Rider U and S tariffs.”\(^9\)

Similarly, Energy Spectrum is concerned about “the ambiguity introduced by the Company’s proposal to transform the CBL formulation from the “NYISO” model to their own as yet unspecified CBL formulation” and asks that the Company “clarify exactly how their CBL formulation will work.”\(^10\)

ECS and Energy Spectrum address the procedural mechanism by which the Company proposes to move from its use of the NYISO EDRP manual for the program applicable baseline to a Con Edison document, but neither object to the underlying rationale for the move. The move is reasonable, since the Company does not administer NYISO programs and NYISO does not administer the Company’s programs. As a consequence, the priorities by which NYISO designs elements such as its baseline protocol may not be an appropriate basis for the Company’s programs.

The Company recognizes the concerns expressed by ECS and Energy Spectrum as to the potential for uncertainty and the procedure by which the Company moves from reliance on the NYISO document to its own CBL mechanism as part of an operating procedure. To address those concerns, the Company proposes that language be added to both Rider S and Rider U

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\(^8\) Id., p. 7.
\(^9\) Id., pp. 7-8.
requiring that the Company: 1) publish the operating procedure on its website; 2) advise aggregators and DPS staff of any potential changes no less than 60 days prior to their applicability date; and 3) not make any changes during the applicable program summer period.\textsuperscript{11}

The Company urges the Commission to reject the ECS proposal that the full baseline be part of the tariff, since that would require Commission approval of any change and would necessarily require a lengthy rulemaking process which is inconsistent with the Company and the aggregator’s interest in a demand response program which can quickly respond to market needs. The publication process proposed by the Company above will adequately protect the interest of aggregators in full notice of any proposed changes and will give them the opportunity to provide any necessary comments. If the aggregators, or any stakeholder, disagree with any change made by the Company to its operating procedure, the aggregator or other stakeholder will be able to bring the issue to the attention of the Commission and its Staff.

Initially the Company does not intend to make significant changes to the baseline methodology used in the NYISO EDRP manual. The only issue which should be addressed in the short term is that the NYISO EDRP weather adjustment does not allow for unusual weather patterns which may make the baseline calculation and the associated variation ranges overly restrictive in crediting the full performance of customers. The Company allows for an “atypical” day in its tariff, but this is not clearly defined where it should be, in the baseline calculation document. The baseline document should be complete and appropriate for the distribution system focused demand response programs run by the Company.

\textsuperscript{11} The Gas Transportation Operating Procedures (“GTOPs”) used by the State’s gas utilities offer a similar type of flexibility. See Case 97-G-1380, In the Matter of Issues Associated with the Future of the Natural Gas Industry and the Role of Local Gas Distribution Companies, \textit{Order Concerning Reliability}, issued and Effective December 21, 1999, pp. 3-5.
III. The ECS Proposal for a Two-Tiered Call Hour Structure Merits Further Study

ECS proposes a two-tiered call hour structure for the Distribution Load Relief Program (“DLRP”). The Company believes this suggestion has merit and is a potential next step following the Company’s proposal in the Petition that it not initiate DLRP between 11:00 pm and 6:00 am. However, the Company believes it is prudent to analyze the impact of the initial step before moving to a two-tiered call hour structure or any other alternative tiered design. The Company is not in a position at this time to correctly allocate benefits to different time periods. The Company intends to conduct a study during 2013 of the evaluation methodology for all of its demand response programs. Upon completion of this study, the Company hopes to be able to provide for consideration alternative pricing options to garner additional growth in program participation.

IV. The Commission Should Approve the Company’s Proposal to Discontinue Central Air-Conditioning Customer Participation in the NYISO SCR Program

NYSERDA states that the Company “does not explain the level or extent of savings expected by its proposal to discontinue enrolling central air-conditioning customers in the NYISO SCR.” As a preliminary matter, NYSERDA does not contest the Company’s statement in its Petition that “participation in the SCR Program has the counterproductive impact of increasing demand during the time when residential networks generally already experience peak demand.” Nor does NYSERDA contest the Company’s statement that enrolling the customers

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12 ECS Comments, pp. 4-6.
13 NYSERDA Comments, p. 2.
14 Petition, p. 6.
in the SCR program results in the need for customers to respond more often and for longer time periods, which results in increased customer fatigue.”

The financial benefit of Direct Load Control (“DLC”) customer participation in the NYISO Special Case Resources (“SCR”) program is not as it may appear. Due to the nuances of the settlement of the NYISO Installed Capacity (“ICAP”) market settlement process, Con Edison’s customers do not benefit financially from DLC participation. While customers do receive a revenue benefit from the payments associated with participation in the NYISO SCR program, the load reduction which takes place during SCR events is added back when calculating the Company’s ICAP capacity tag. If the Company did not enroll the resources in the SCR program but still reduced load during the Company’s coincident system peak, the Company, and customers, would receive the comparable benefit of a reduced ICAP capacity tag.

The following table illustrates examples of three possible scenarios: 1) No DR participation through DLC; 2) DLC participates in NYISO SCR; and 3) DLC does not participate in NYISO SCR.

<table>
<thead>
<tr>
<th>Customer Condition</th>
<th># of Customers</th>
<th># of Customers in Program</th>
<th>Capacity / ICAP Tag [MW]</th>
<th>Capacity Price [MW]</th>
<th>Capacity Payment</th>
<th>SCR Capacity Revenue</th>
<th>Final Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>No DR Participation</td>
<td>200</td>
<td>0</td>
<td>400</td>
<td>$50,000</td>
<td>$20,000,000</td>
<td>$0</td>
<td>$20,000,000</td>
</tr>
<tr>
<td>SCR Program</td>
<td>200</td>
<td>50</td>
<td>400</td>
<td>$50,000</td>
<td>$20,000,000</td>
<td>$1,000,000</td>
<td>$19,000,000</td>
</tr>
<tr>
<td>Con Ed System Peak Only</td>
<td>200</td>
<td>50</td>
<td>380</td>
<td>$50,000</td>
<td>$19,000,000</td>
<td>$0</td>
<td>$19,000,000</td>
</tr>
</tbody>
</table>

15 *Id.*
Where:
- 25% of available customers participate in either Con Edison DR program or SCR program
- Participation level is 20% of each participating customer’s capacity (20 MW)
- Capacity Payment = Customers * Capacity MW * Capacity Price
- SCR Program Customers do not get Capacity MW reduction due to add back, but do get SCR Capacity Revenue
- Con Ed System Peak Only Customers get Capacity MW reduction, but do not get SCR Capacity Revenue

If, as the Company proposes, the DLC program customers are not registered in the SCR program, but load reduction still occurs during the NYISO peak (not necessarily during an SCR event) coincident with Con Edison system peak, then the Company’s load forecast and purchase obligation from the capacity market are reduced. This reduction results in a net decrease in customer capacity payments. The above table demonstrates that DLC participation in the NYISO SCR program creates no net benefit to ratepayers, because the value of SCR revenue is comparable to what could be achieved through ICAP capacity tag reductions (i.e., cost savings).

The primary value of the Company’s proposal to remove DLC customers from the NYISO SCR program is the ability to more tightly control when customers must reduce demand to reduce Con Edison’s system peak and to alleviate customers’ discomfort when they are called upon to do so. Currently, DLC customers are called to perform when the day ahead system forecast is 96% or higher of the forecasted system peak; customers in day-time peaking networks respond from 12 to 5pm and customers in night-time peaking networks respond from 5 to 10pm. Under the SCR Program those customers in night-time peaking networks also have to perform for the full duration of the SCR event, generally five hours during the day. Under the model the Company suggests, by contrast, customers in night-time peaking networks would no longer be called upon to perform for the full SCR program duration, and would instead only have to perform in the relatively smaller Con Edison coincident system peak window (approx. two hours
in duration). For example, Con Edison will call customers during the NYISO coincident system peak from 3 to 5 pm and, if required by Con Edison, call the nighttime peaking customers from 5 to 10 pm. DLC customers would be called for a maximum of seven hours, as opposed to ten hours if the Company continued to enroll in the SCR program. If there is no nighttime event, customers would only be cycled for two hours.

Reducing customer discomfort is critically important in order to encourage continued participation and future growth in the DLC program. In a normal event, the period of participation is generally five hours. For customers located in a nighttime peaking network that also have to participate in a daytime SCR event, the potential period of participation increases to ten hours. As shown in the analysis in the Appendix to these comments, during demand response events customers begin to override the call by the third or fourth hour of the event. Additionally, and not surprisingly, the analysis also shows that customers who are subjected to ten hours of load curtailment experience greater discomfort and increased override rates.

Increased customer overrides result in a decrease in program performance.

In order to maximize the demand response benefits of the DLC program, the Company requests that the Commission authorize it to discontinue enrolling central air-conditioning customers in the NYISO SCR program.

V. The Company and NYSERDA Agree that Customers Should Be Offered an Expanded Range of Eligible Technical Options

NYSERDA applauds the Company’s intent to expand the range of eligible technical options included in its DR programs and suggests “further diversifying the range of options to
communicate and deliver customer-sited or demand-side resources to also include additional
technical solutions that integrate energy efficiency (EE) and DR."16 NYSERDA notes that:

Expanding the range of options will serve to expand and deepen the technology market
and encourage further opportunities for the innovation of new technologies with
advanced communication capabilities – resulting in a more robust and successful effort
for Consolidated Edison and its ratepayers.17

Con Edison agrees with NYSERDA and anticipates further diversification of the options
available to its customers. The Company has already redesigned its DLC program to allow for
multiple programmable thermostats to be enrolled. The Company envisions a flexible program
that would not only allow customer choice of thermostats that are readily available in the market
place, but would also be flexible enough to control other products that are “smart grid capable.”
The Company welcomes NYSERDA’s input and that of other stakeholders on other options that
could be made available to customers.

VI.  The Company and NYSERDA Agree on the Need to Investigate Replacement of
the Pager-Based Technology Used for the DLC Program, But Further Pilot Scale
Development Is Not Necessary

The Company and NYSERDA agree on the need for a broad investigation of the pager-
based technology currently used by the DLC program:

NYSERDA also commends Consolidated Edison’s investigation of a replacement for its
pager-based central air conditioning system, the use of the Internet as a means to
transport curtailment notifications, and adjustments to DLC appropriate for room air
conditions prevalent in New York City homes and business. NYSERDA believes,
however, that certain technical barriers (i.e. home area networking) and programmatic
risks (consumer uptake) warrant further pilot scale development in these areas.18

Con Edison’s envisions a diverse and technologically agnostic replacement for the pager-
based technology currently used by the DLC program, with customers able to purchase their

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16 NYSERDA Comments, p. 2.
17 Id.
18 Id.
preferred thermostats and take advantage of various technologies to easily enroll in Con Edison DR programs. The current plan for DLC in 2013 is to permit the use in the program of several popular and user friendly thermostats that are commercially available at retail stores, rather than select one new thermostat technology. The Company anticipates being able to gradually fold new thermostats and communications technologies into its existing DLC program, without the need for pilot scale development that could delay obtaining the benefits of an expanded DLC program.

VII. Conclusion

For the reasons stated above and in its Petition, Con Edison requests that the Commission approve the changes to the Company’s DR programs as set forth in its December 14, 2012 Filing Letter and Petition.

Dated: New York, NY
March 12, 2013

Respectfully submitted,

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APPENDIX

Residential Customers in the Ossining West Network (Westchester)
Same Day NYISO and Con Edison DR Events

Event Details:
• July 22, 2011 NYISO curtailment period: 1-6pm
• July 22, 2011 Con Edison curtailment period: 6-11pm
• Combination of NYISO & Con Edison curtailment period resulted in residential DLC customers in the Ossining West Network being asked to curtail load from 1-11pm - 10 hr event

Results:
• Customers usually override DLC control by the third or fourth hour, shown in graph below.
• Con Edison can “refresh” the event every few hours to receive greatest load reduction during the intersection of the residential and business peak, and customers rarely felt discomfort in such a short period of time.
• However, in the evening event the override rate increases and to mitigate customer discomfort Con Edison does not refresh. This is shown in Figure 1 below, with cumulative override rate rising to as high as 17.68% by the end of the event.

Figure 1: Residential Curtailment Event July 22 – Ossining West

(50% Cycle – 6:00 PM to 11:00 PM)

<table>
<thead>
<tr>
<th>Residential Component</th>
<th>Hour ending 7:00p.m.</th>
<th>Hour ending 8:00p.m.</th>
<th>Hour ending 9:00p.m.</th>
<th>Hour ending 10:00p.m.</th>
<th>Hour ending 11:00p.m.</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participating Thermostats</td>
<td>505</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net per unit kW load reductions</td>
<td>1.15</td>
<td>1.04</td>
<td>0.97</td>
<td>0.88</td>
<td>0.75</td>
<td>0.96</td>
</tr>
<tr>
<td>Net total kW load reductions with overrides</td>
<td>578</td>
<td>526</td>
<td>491</td>
<td>446</td>
<td>379</td>
<td>484</td>
</tr>
<tr>
<td>Cumulative overrides</td>
<td>3.99%</td>
<td>10.27%</td>
<td>13.59%</td>
<td>15.68%</td>
<td>17.68%</td>
<td>12.24%</td>
</tr>
</tbody>
</table>

Graph displayed on next page...
Conclusion:

- A long curtailment period results in increasing override rates during times when Con Edison called for network curtailment.