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VIA ELECTRONIC MAIL

Honorable Kathleen H. Burgess, Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, New York 12223-1350

Re: Case 14-E-0423 – Proceeding on Motion of the Commission to Develop Dynamic Load Management Programs

<u>THE UTILITIES' COMMENTS</u>

Dear Secretary Burgess:

In response to the Notice of Stakeholder Meetings issued January 2, 2015 in the subject proceeding (the "Notice"),[1] Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid"), Central Hudson Gas and Electric Corporation ("Central Hudson"), Orange and Rockland Utilities, Inc. ("O&R"), New York State Electric & Gas Corporation ("NYSEG"), and Rochester Gas and Electric Corporation (collectively the "Utilities"), as the electric distribution utilities which do not currently offer distribution-level demand response programs, hereby submit comments to describe how proposed distribution-level demand response programs would be similar to or different from current Consolidated Edison Company of New York, Inc. ("Con Edison") distribution-level demand response programs.[2] [3]

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[1] Case 14-E-0423 – *Proceeding on Motion of the Commission to Develop Dynamic Load Management Programs,* Notice of Stakeholder Meetings (issued January 2, 2015) (the "Notice").
[2] The Secretary granted an extension to January 27, 2015 for filing such comments. *See* letter from Hon. Kathleen Burgess, Secretary, New York State Public Service Commission, to Janet Audunson, Senior Counsel, National Grid (January 16, 2015), The Secretary granted a further extension to January 30, 2015 for filing such comments. *See* letter from Hon. Kathleen Burgess, Secretary, New York State Public Service Commission, to Ruben Brown, President, The E Cubed Company, LLC (January 26, 2015).
[3] As Con Edison already offers distribution-level demand response programs in its service territory, it will be filing separate comments in response to the Notice.

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I. INTRODUCTION

The Public Service Commission ("Commission") is directing an expedited state-wide expansion of distribution-level demand response programs, with a target start date of Summer 2015, in order to deliver longer term benefits of such programs to all New Yorkers, including the avoidance or deferral of transmission and distribution system investments, promotion of system efficiency, and improved reliability and resiliency of electricity delivery systems, consistent with the objectives of the Commission's Reforming the Energy Vision ("REV") proceeding.[4] Proposed tariffs implementing these programs are to be filed with the Commission by March 16, 2015.[5] The Utilities support the Commission's REV objectives and will strive, where it makes sense to do so, to offer similar products across their respective service territories and to utilize a common approach in program offerings (*e.g.*, evaluation, measurement and verification ("EM&V") protocols). We recognize there are benefits to the aggregator community and those customers with facilities in multiple utility service territories if the Utilities' and Con Edison's distribution-level demand response programs are similar, if not standardized. The Utilities are committed to making a best effort to comply with the Commission's target date of Summer 2015. However, the Utilities note that there are significant challenges in delivering distribution-level demand response programs to their respective customers by Summer 2015 in a standardized and sufficiently thought-out manner that will allow not only for an objective assessment of the initial impacts of such programs but also provide a solid foundation for expansion and modification of these programs going forward.

[4] Case 14-M-0101 – *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*, Order Instituting Proceeding (issued and effective April 25, 2014) (the "REV proceeding").

[5] Notice, p. 2. The filing of draft tariffs by March 16, 2015 will be followed by a forty-five day public comment period pursuant to the State Administrative Procedures Act ("SAPA") once the draft tariff filings are noticed in the New York State Register. As such, Commission approval of the tariff filings may not occur until June 2015.

In these comments the Utilities address their ability to model and implement distribution-level demand response programs similar to those currently offered by Con Edison. The current Con Edison programs are summarized as follows:

- Distribution Load Relief Program ("DLRP") – DLRP is a contingency program[6] offering both reservation payment and voluntary participation options and is applicable to customers with interval meters throughout Con Edison's entire service territory. Aggregators must provide at least 100 kW of load relief and customers directly enrolled with Con Edison must provide a minimum of 50 kW of load relief. The reservation payment option provides a reservation payment of $6/kW per month in Tier 1 networks and $15/kW per month in Tier 2 networks.[7] Reservation option customers also receive a performance payment of $1/kWh for reduced energy consumption during each called event. Additionally, Con Edison currently offers a three-year incentive payment of $5/kW per month to participating customers at the end of the third year if all performance criteria were met for that period.[8] The incentive for voluntary customers is limited to a performance payment of $3/kWh for reduced energy consumption during each called event. Program terms allow events to be called from May through September.

[6] Con Edison's demand response contingency programs are designed to respond to unexpected change in engineering conditions on the electric distribution system by calling on program participants (*i.e*., aggregators and direct participation customers) to respond quickly with load reductions, generally on a network-by-network basis, Contingency programs may be activated during system critical situations (*i.e*., when the next contingency (excluding a breaker failure) with either result in an outage to greater than 15,000 customers or will result in certain equipment being overloaded above emergency ratings) for events lasting four hours or more.

[7] "Tier 2 payments are applicable in Networks that the Company identifies to be of a higher priority than Tier 1 Networks." *See* Con Edison's Schedule for Electricity Service, P.S.C. No. 10 – Electricity, Rider U – Distribution Load Relief Program, Leaf 287.

[8] To improve program appeal to potential participants, Con Edison may seek approval to remove the three-year incentive payment while raising the reservation payment amount.

- Commercial System Relief Program ("CSRP") – CSRP is a peak shaving program, offered only in New York City to customers with interval meters, providing for a reservation payment to be paid to participating resources to shed load or displace load by use of on-site generation.[9] Aggregators must provide at least 100 kW of load relief and customers directly enrolled with Con Edison must provide a minimum of 50 kW of load relief. The incentive consists of a reservation payment of $10/kW per month when pledged and performed for months with fewer than five events and $15/kW per month during and after a month with more than five events.[10] Performance payments are $1/kWh for each kWh reduced during an event. Additionally, Con Edison currently offers a three-year incentive payment of $10/kW per month to participating customers at the end of the third year.[11] The incentive for voluntary customers is limited to a performance payment equal to $3/kWh for reduced energy consumption during a called event. Program terms allow events to be called from May through September.
- Direct Load Control ("DLC") – DLC is both a contingency program and peak shaving program[12] activated for specific events. The DLC program is available to customers throughout Con Edison's service territory, but excludes those customers who participate indirectly through a third party in any other Con Edison or NYISO demand response program. The DLC program is offered to residential, religious and

[9] Peak shaving programs are activated when the day-ahead forecast is equal to or greater than 96 percent of the annual summer system peak forecast.
[10] The $15/kWh performance payment applicable during and after a month with more than five events remains in effect for all succeeding months in the capability period.
[11] To improve program appeal to potential participants, Con Edison may seek approval to remove the three-year incentive payment while raising the reservation payment amount.
[12] In contrast to a contingency program, this type of forecasted event does not generally require as quick of a response from program participants.

small commercial customers with central air conditioning ("A/C"), and a demand less than 100 kW, for whom Con Edison can remotely adjust thermostat settings (subject to customer override). Enrolled customers have free programmable thermostat(s) installed and receive a one-time incentive payment of $25 for residential applications and $50 for commercial applications (per unique address). Customers that have purchased and installed a smart, demand response-capable thermostat from an approved service provider can also enroll in the DLC program under the Bring Your Own Thermostat ("BYOT") option. Enrolled customers in BYOT receive a one-time $85 incentive payment towards each thermostat enrolled and a $25 annual incentive payment for participation in no less than 50 percent of the aggregate number of event hours declared by Con Edison during the months of May through September.

- Residential Smart Appliance Program ("RSAP") – RSAP is a peak shaving program offered only to New York City customers. RSAP is a pilot program[13] that was created as a platform to capture emerging Smart Appliance technology and test concepts for incorporating that technology into the DLC program. RSAP currently controls room A/C units, for which Con Edison has the ability to remotely adjust thermostat settings (subject to customer override). With Smart Appliance and smart device technology beginning to emerge in retail markets, RSAP expanded its focus and is currently branded and marketed as the "coolNYC" program. Participants receive free Smart A/C kits that allow them to monitor and manage their energy usage. Participating customers receive an annual incentive payment of $25 per customer participation in demand response events called by Con Edison from May through September.

[13] RSAP is not a tariffed distribution-demand response program.

II. THE UTILITIES' PROPOSAL

The Utilities anticipate that variations of the current Con Edison distribution-level demand response programs described above may be proposed in draft tariffs as required by the Notice[14] with the goal of implementing them in a limited fashion by Summer 2015. At this time, the Utilities anticipate offering the following:

1. A hybrid of Con Edison's DLRP (a contingency program only) and CSRP (a peak shaving program only); and
2. a DLC program.

Each of the Utilities anticipates introducing these programs in a phased approach as appropriate to their respective needs, circumstances and capabilities. As such, the programs may be initially rolled out to distribution customers located in an identified area or areas of anticipated or actual electrical stress within each of the Utilities' respective service territories where load growth is likely the contributing factor to such stress on the distribution system. The Utilities believe that a limited scale, targeted roll out of the proposed programs will allow for development of the necessary delivery mechanisms and for thoughtful evaluation of program pricing, incentives and participation levels before deploying such programs on a larger scale. An appropriately staged learn-as-you go approach before expanding program offerings will also moderate the cost recovery impacts of such program offerings on distribution customers.

The Utilities believe that similar, if not standardized, program terms may help achieve penetration by making distribution-level demand response programs more attractive for participation by aggregators operating across the State as well as certain customers (*i.e.*, those with facilities in more than one utility service territory). Aspects of the programs that may be

[14] Notice, p. 2.

standardized could include the following:

- Enrollment process (including enrollment rules and deadlines)
- Capability period duration (*i.e.*, months when events can be called)
- Allowable time period during the day to call events (*e.g.*, DLRP events can occur from 6 a.m. to midnight)
- Types of events (*e.g.*, test events, contingency events and planned events)
- Metering requirements, where applicable
- Baseline load calculation methodologies
- Actual performance determination (*i.e.*, calculation of performance for the month to determine the reservation payment amount)
- Requirements for event notification
- Customer and/or aggregator reimbursement method
- Aggregator eligibility and performance requirements
- Distributed generator participation requirements
- Participation option (*e.g.*, voluntary vs. reservation options)
- EM&V practices

Although certain standardization of distribution-level demand response programs could be beneficial, decision-making around standardization must take into consideration specific utility needs, costs, willingness of utility customers to participate in such programs, and the impacts of standardization on customers and aggregators. At the detailed level, criteria for triggering individual demand response events may vary among each of the Utilities. Compensation for participating in specific utility programs and event duration periods will likely need to be different for each of the Utilities. Each of the Utilities will need to examine its respective distribution system needs and costs to determine the value of demand response and the optimal compensation and length of demand response events.

III. PROGRAM DETAILS

A. Distribution Contingency/Peak Shaving Load Relief Program

The Distribution Contingency/Peak Shaving Load Relief Program is anticipated to contain elements of Con Edison's DLRP as well as Con Edison's CSRP. Since only modest resources exist to implement these programs, the Utilities anticipate combining these Con Edison programs into one hybrid program to reduce peak load and enhance reliability and resiliency in stressed areas on the distribution system, while simplifying marketing and enrollment functions and streamlining customer engagement and recruitment efforts.[15]

Similar to the Con Edison payment terms, customers enrolling in the reservation payment component of this program will receive monthly reservation payments as well as performance payments for load reductions implemented during events. Customers enrolling in the voluntary component of this program will only receive performance payments for load reductions implemented during events. Payments may differ depending on whether the event is called on a day-ahead basis for peak shaving or whether the event is called on a much shorter notice period for a local distribution contingency event.

The Utilities anticipate that participants' performance payments in the Distribution Contingency/Peak Shaving Load Relief Program will be calculated by each of the Utilities using a similar methodology. The current Con Edison baseline calculation methodology is most likely appropriate for this purpose, particularly since it is similar to the methodology used by the New

[15] However, it is possible that a determination could be made to alternatively offer these as separate programs upon further consideration.

York Independent System Operator, Inc. ("NYISO") to calculate reductions in its Emergency Demand Response Program.

The Utilities do not anticipate proposing to offer participants the three-year incentive payment that is currently a component of Con Edison's DLRP and CSRP. We believe that the performance and reservation payment structure should be sufficient compensation to encourage participation. Moreover, an incentive payment made at the end of three years does not provide an appropriate real time incentive for customers to reduce load when events are occurring and may overly complicate the price structure of demand response programs.

B. Direct Load Control Program

Each of the Utilities anticipates offering a DLC program which will be comparable to Con Edison's contingency and peak shaving DLC program offerings. Each of the Utilities will need to have standardized tariffs that provide the flexibility necessary for individual programs to evolve based on changing needs, circumstances, opportunities and technologies, as well as lessons learned, as has been the case for Con Edison's programs. At a minimum, participating customers may receive or alternatively, utilities may incentivize the customers' purchase of demand response-ready, two-way communicating programmable thermostats. Customers must participate in some to-be-determined percentage of called events in order to be eligible for an annual incentive.

Each of the Utilities may elect to engage vendors for program implementation and some degree of program administration. Additionally, vendors may be instrumental in providing customer response data that will aid the Utilities in program administration. Target customers for initial participation in the DLC program may vary by utility and the targeted end uses may or may not be central A/C systems. Future DLC programs may target pool pumps, room A/C units, electric water heating, or other large load appliances that impact peak loads. As smart plug and other technologies evolve through complementary pilot programs to be developed by each of the Utilities (similar to that of Con Edison's RSAP), additional technologies could be employed in the DLC programs.

IV. <u>PROGRAM COSTS</u>

As noted earlier, to determine the incentive rates of the proposed distribution-level demand response programs, program costs and benefits will need to be evaluated on a utility-specific basis. Elements of valuation that could be relevant include, but are not limited to: (i) the value of the contingency demand response event; (ii) the avoided energy procurement cost payments (during program events); and (iii) the value of capital expenditure deferral. An initial assessment will be made based on the stressed locations on the electric distribution systems of each of the Utilities that will be targeted for distribution-level demand response programs in Summer 2015. As programs are expanded to other areas, this initial assessment may need to be revisited and re-evaluated for continued relevance.

The Utilities anticipate that the benefits of these proposed distribution-level demand response programs may be significantly less than those realized with the Con Edison programs, principally due to reduced transmission and distribution constraints and the fact that the Utilities' distribution systems are much different than those of Con Edison in design and operation. For example, the electric distribution systems of National Grid and NYSEG are mainly overhead and serve many remote areas (*i.e.*, more miles with fewer customers) with limited communication capabilities.[16] These significant differences will make demand response much more difficult to target for meaningful impact to distribution-level problems.

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[16] National Grid's customer base is spread over 2,000 radial circuits with relatively low capacities (typically less than 10 MW each) rather than dozens of large ($\geq$ 100 MW) secondary networks.

V. PROGRAM COST RECOVERY

The costs of distribution-level demand response programs can be broken down into two broad categories: (i) the cost to develop, administer, manage and determine the effectiveness of programs; and (ii) the cost of initial and future incentive payments to program participants. Cost recovery, and in particular those costs to develop and launch such programs, as well as any other costs that will be incurred by each of the Utilities, will need to be addressed expeditiously if these programs are to be implemented in Summer 2015. Con Edison currently recovers the costs of its distribution-level demand response programs through a non-bypassable surcharge. The Utilities similarly propose that their respective program costs be recovered, at least initially, through a surcharge applied to bills of the appropriate customer base.

VI. PROGRAM IMPLEMENTATION CHALLENGES

The Utilities are supportive of the Commission's overall REV objectives and the implementation of cost-effective "no regrets" programs that need not wait for the full REV proceeding to conclude. The Utilities do not disagree that there are likely benefits to making distribution-level demand response programs available on a statewide basis in the near-term. However, the Commission has established an extremely aggressive timeline for the implementation of distribution-level demand response programs by the Utilities. Con Edison has had years to design and refine its programs, including the development of essential supporting proprietary models and the establishment of significant back office resources to support program administration. At best, the Utilities' proposed distribution-level demand response programs will be initially limited in their scope of offering to a specific area or actual or anticipated electrical stress resulting from loading issues (*e.g.*, overloaded feeders, overloaded substations).[17] This

[17] However, O&R will endeavor to launch its DLC program across its entire service territory to BYOT customers with central A/C and enroll such customers through a third-party vendor to be selected by O&R.

staged approach will still require the identification of such stressed areas best suited to test distribution-level demand response programs, consideration of loading and customer characteristics, and an assessment of the potential benefits of offering demand response programs in such locations.[18] The lack of robust communications networks and prolific implementation of interval meters across each of the Utilities' service territories presents a further significant constraint on initial program designs. The ability of the Utilities to engage third parties, implement billing and establish EM&V processes in time for a Summer 2015 roll out of programs present significant concerns as well.

VII. CONCLUSION

In consideration of all that must be accomplished by each of the Utilities to offer even a limited suite of distribution-level demand response programs by Summer 2015, and the further importance of coordination of program elements across each of the Utilities (as well as with those currently offered by Con Edison), inclusive of a certain degree of program similarity, if not standardization, the Utilities will continue to examine the feasibility of meeting the aggressive timeline for implementation as set out by the Commission. The Utilities will provide the results of that review on or before February 20, 2015.

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[18] Central Hudson has proposed a limited Distribution Level Target Demand Management Demonstration Program for initiation in 2015 in its current rate proceeding before the Commission. This proposed demonstration program would help: (i) establish the value of capital deferral; (ii) test market penetration and technologies; and (iii) develop other aspects of a distribution-level demand response program such as billing, EM&V and third party engagement.

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