By Email for Electronic Filing
Honorable Kathleen H. Burgess, Secretary
State of New York Public Service Commission
Three Empire State Plaza
Albany, New York 12223-1350

October 6, 2014

Re: 14-E-0302, Petition of Consolidated Edison Company of New York, Inc. for Approval of Brooklyn/Queens Demand Management Program

Dear Secretary Burgess:

On July 15, 2014, Con Edison submitted its Petition for Approval of the Brooklyn/Queens Demand Management ("BQDM"), and on August 21, 2014, Con Edison submitted its Brownsville Load Area Plan. The Environmental Defense Fund ("EDF") has been an active member of the Resiliency and Storm Hardening Collaborative that has contributed input for consideration in developing the BQDM proposal. We have actively participated in the collaborative meetings that Con Edison has convened to discuss the BQDM Program and have submitted a letter to Con Edison requesting pertinent information about the DM Program area, to which Con Edison responded.

Because the migration to distributed energy resources ("DER") may or may not have desirable environmental consequences, depending on the nature of the DER that are implemented and the nature of the central generation resources that would be in use at the relevant times, we have a strong interest in this petition. Some sets of measures may not only reduce costs to customers but also contribute to reducing carbon and toxic emissions associated with the electric system. However, other sets of measures may achieve cost reductions without environmental benefits, or could even yield negative externalities that exceed those that would have been associated with the avoided infrastructure and central generation (including negative local health or other impacts as well as greenhouse gas ("GHG") emissions). It is therefore essential that the benefit-cost framework used in selecting resources for the BQDM program consider all costs, including environmental externalities and community impacts, associated with the DER under consideration. As proposed in the Staff Straw Proposal in the REV proceeding, this framework should include full consideration of the harm associated with carbon, i.e., its

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social cost as identified by the Interagency Panel on Climate Change. Costs and avoided costs (including environmental as well as infrastructure costs) should not only inform the selection of measures, but should also inform the prices paid for various measures. With consideration given to the full value of avoiding or deferring infrastructure over an extended period of time as well as the full value of avoiding carbon and toxic emissions, the business case for demand management measures may be far stronger than it has ever been, allowing for an unprecedentedly ambitious deployment of efficiency and customer-side peak reduction measures.

We appreciate the enormous amount of work and innovative thinking that Con Edison has put into the development of both the BQDM Program, and overall support this important initiative. While Con Edison has pursued demand management in the past, this DM Program plan goes significantly beyond what it has done previously in terms of scope and systematic analysis, and we view this as an opportunity to explore some of the benefits envisioned in the REV proceeding. As Con Edison, third party providers, Collaborative participants and other interested parties gain experience with the cost and performance of non-traditional customer and utility side options, we anticipate that solutions may eventually be deployed to address a larger share of the 107 MW shortfall identified in Con Edison's August 21, 2014 Brownsville Load Area Plan, potentially deferring or eliminating the need for additional transformers at the Glendale and Newtown area substations. It is also possible that, if the time-sensitive rate pilot[1] is appropriately tailored to yield useful information about how time-sensitive price signals can modify load shape in a useful manner, that may reveal additional load reduction opportunities.

Different Peaks and Strategies for Smoothing Them

The BQDM Program is designed to test out strategies for shifting load and reducing peak demand. The peak conditions that are overtaxing the existing infrastructure occur for 40-48 hours per year (BQDM Petition at 3). The affected area has a "very long (12-hour) daily peak load, which occurs from noon to midnight" (BQDM Petition at 8). Although the Petition states that the BQDM Program "will address a 12-hour peak lasting from noon to midnight" (BQDM Petition at 6), we assume that, on most days of the year, this 12-hour peak (a total of more than a thousand hours over the course of the summer) is not problematic, but that the 40-48 hours that challenge the system occur during these 12-hour periods and may include stretches as long as 12 consecutive hours.

P. 3 of the July 15, 2014 BQDM Petition states that the "total resource need for the sub-transmission infrastructure serving Brownsville No. 1 and No. 2 will be 69 MW above the system's current capabilities to meet reliability requirements by 2018 with the expected extent of such overload per year extending approximately 40-48 hours per year." Figure 2 in the August 21 Load Area Plan describes the overload for 2014 to 2023 as increasing from 39 MW to 107

[1] Con Edison's initial proposal for a time-sensitive rate pilot was filed on August 21, 2014, in docket 13-E-0030, after minimal discussion in the Collaborative context. Notice of the proposal was filed in the New York State Register on August 24, 2014.

MW. On the assumption that this gradually increasing overload is projected to occur during the "approximately 40-48 hours per year" of critical peak demand throughout the year, a key question is what combination of demand management strategies – including measures that operate every hour of the year, measures targeted at the 12-hour periods all summer or all year long, and measures targeted solely at the 40-48 hours of critical peak conditions – would be most effective at addressing the critical peak demand problem in this service area.

Energy efficiency and conservation measures help bring down the baseline loads throughout the year; a time-of-use ("TOU") program in conjunction with a range of technology tools helps to flatten the load more generally, leading to decreased aggregate peak demand; and demand response programs will help to target the most critical peak hours. By clearly identifying which periods are driving system investment needs and the full range of costs that customers might avoid depending on measures selected, Con Ed can choose the most appropriate portfolio of distributed resources with which to respond, and evaluate their relative cost-effectiveness.

For example, if the 40-48 hour peak is the most pressing issue and the other 12-hour "peaks" are inexpensive to serve, then conventional TOU programs may do little to address the true peak problem while requiring significant change in customer behavior every single day of the year. On the other hand, if many of the 12-hour "peaks" occurring outside the 40-48 hours are also expensive to serve (perhaps due to high wholesale prices during such periods), such a program, if properly designed, might contribute to addressing the localized critical peak while also delivering other benefits over more hours of the year. Alternatively, critical peak price or critical peak rebate programs which have large impacts specifically on peak days could be implemented with large benefits; however, the costs associated with implementing these types of price signals is larger given that AMI or wireless time-of-use measurement technologies are required. These relative costs and benefits of the different programs required to target different system problems need to be compared in order to have the best and most cost-effective outcome possible.

Use of Incentives in the BQDM Program

The BQDM Program Petition proposes the use of "incentives" to promote and encourage the use of various demand management programs. "Incentives" could include rebates, financial arrangements to reduce the cost of the purchase of technology tools, and market signals to customers that would reflect the value of the many avoided costs enabled by moderating peak demand, including infrastructure costs, energy costs, and environmental externalities associated with peak generation.

The Petition at p. 8 describes demand management initiatives, such as integrated building management controls, automated and non-automated demand response, and suggests that "Premium incentives, perhaps including an hourly peak event premium, may encourage use of batteries or participation in demand response programs,…" At p. 9 the Petition describes plans

that the Company has undertaken, using TDSM, "to carefully layer additional incentives onto existing programs to engage customers to undertake both cutting-edge demand management building projects as well as other more routine and well-understood projects…" At p. 10, the Petition describes "Standard offerings" applicable to NYCHA and other NYC agency-based programs "to incentivize upgrades to building envelope, central and room air conditioning…" and "Advanced offerings to encourage greater use of controls, storage, DG, and microgrid solutions."

Con Edison has noted in its responses to interrogatories that it is looking to firms responding to the RFI to discuss ideas for specific incentives. The Petition recognizes the utility of "incentives", "offerings" and similar kinds of pricing to produce desired load management objectives; hence, Con Edison should inform firms responding to the RFI that it is willing to test out time- and locationally-specific price signals in conjunction with different kinds of tools and other kinds of incentives that could help to engage customers. These price signals can incentivize customers to reduce demand and shift load to accomplish both local and, if applicable, system-wide efficiencies. It is important to identify what kinds of demand response rebates, pricing, technology offerings and other incentives would attract a rising number of customers so that a substantial portion of the escalating overload over the next 10 to 15 years could be mitigated through systematic demand response programs that engage thousands of mass market customers in the program area.

Given the focus on premium incentives and the importance of maximizing customer adoption of demand response programs, Con Edison should consider whether participation by mass market customers in utility demand response programs (such as the modlet program) will increase if customers are compensated with a larger rebate. As another incentive option, a critical peak price structure could provide an extra incentive for consumers who adopt it in the form of lower off-peak or (non-critical) peak energy prices. Thus, while the household must conserve during a few days of the year, they would benefit from lower prices for the remainder of the year. Since such a price signal would relate to wholesale energy prices and not necessarily to the same 40-48 hours when the grid in Brownsville is strained, additional measures may be necessary to address any portions of the 40-48 hours that are not also critical peak times for wholesale energy. In conjunction with such critical peak pricing/rebate programs, devices to help shift demand from appliances other than air conditioners, such as dishwashers, refrigerators and freezers, to early morning hours could magnify participation in the programs and yield larger benefits; subsidies for the purchase of such devices (or providing them for free) could be an additional incentive to moderate load. In addition, Con Edison should maximize adoption of demand response in a manner that considers its implications for customers, particularly low income customers and other vulnerable populations.

Incentives for demand response efforts in the BQDM area should also be set in a manner that maximizes economic potential. For example, demand response in areas that have more congestion or at times when demand response is harder to procure is of course more valuable than in other times and places, both because it is more needed by the system and because it is harder to obtain. Therefore, those who moderate their demand under such conditions should be paid a higher incentive than the same demand response in other areas or other days. This is crucial because at the most critical times, when demand reductions are needed most, the impact on the customer is likely to be larger than at other times. For example, an extremely hot day, three days into a heat wave, will require a larger behavioral change from a customer participating in demand response; if the customer is not compensated more than on other days, then the rates of attrition and non-compliance will be higher. Because such days play an outsize role in driving system costs, the system will benefit from having greater compliance, which can be most easily achieved by higher compensation rates/incentives.

Increasing participation in demand management programs in the BQDM area is also important because increased participation could help achieve reductions in critical peak demand beyond the 41 MW that Con Edison has preliminarily estimated for 2018 and could help to sustain and expand demand response programs after 2018 so that customer demand management programs could continue to grow. Similarly, experience gained through this Program and potentially the time-sensitive rate pilot could be useful for Con Edison and third party providers to better design future programs to increase participation in programs that decrease peak demand. Therefore, before decision is made to proceed with the traditional 80 MW transformer and new feeder line infrastructure improvements, a reassessment would be appropriate. In other words, the Commission's mandate for Con Edison to investigate non-traditional solutions to infrastructure capacity expansion should be a continuing one rather than constrained to a short time period as described in the proposal. Information from these programs can help guide future policy and system planning so as to help avoid costly infrastructure investment altogether or, at minimum, to further delay the infrastructure expansion past 2018.

NYCHA Intiatives

The Brownsville substations 1 and 2 service area includes a substantial amount of NYCHA housing with units that are not sub-metered. Building envelope improvements, installation of the most energy efficient air-conditions and demand response incentives designed to reduce power consumption during critical peak periods (40 to 48 hours per year) could contribute significantly to resolving the overload problem. Demand response rebates and pricing incentives, tailored to address NYCHA's unique regulatory and financial constraints, may incentivize NYCHA and its tenants to reduce consumption and achieve substantial reductions in base load, summer peak demand and critical peak demand. The potential is substantial; the challenges are also huge.

One approach would be for Con Edison, NYCHA, HUD, the City of New York, and other parties to carry out a NYCHA pilot that would start in one building that could be a candidate for building envelope improvements, and that has a modest number of tenants who would be willing to participate in a program designed to increase the efficiency of their air conditioners, and encourage the use of tools to control thermostat settings during critical peak demand problems. A greater benefit could also be achieved by joining the efficiency improvements with critical peak demand tools (such as modlets); for example, by providing new air conditioners with built-in modlets that are non-separable and provide generous opportunities to be paid to curtail. Whether Con Edison or a third party would make this investment is a decision that the Commission could make by comparing the benefits of the program with the costs of handing out new air conditioners.

The New York Times has recently reported that the Mayor's office is contemplating an "air conditioner exchange program" for occupants of public housing;[2] the City's interest in lowering energy costs for low-income residents of New York City through such programs may, if targeted within the program area, present a novel avenue for accomplishing significant consumer engagement within the program area in the near future. This is especially true if the energy efficiency program is implemented jointly with a demand response program – for example, if the air conditioners distributed in such a program are not only more efficient than what they replace, but included technology to enable demand response, as described above.

Responses to RFI

The BQDM Petition describes a framework of tools and incentives to increase efficiency and reduce critical peak demand. Con Edison has issued an RFI to solicit proposals from third party providers. These initial responses will play a major role in determining a successful outcome for the Program in terms of achieving a minimum of 41 MW of critical peak demand reduction. The Commission therefore needs to design a process that assures effective review by staff and other Collaborative parties of what Con Edison proposes to do with the RFI responses. Those responses may provide a basis for much more detail about demand management programs, costs and customer engagement than the plan or petition does.

Con Edison is playing a number of different roles as program planner, RFI initiator, reviewer of RFI responses and selection of third party firms and chief implementer. This whole process should be as transparent as possible. We look forward to seeing what these responses are and whether it would be possible to increase customer demand management peak demand reductions beyond the projected 41 MW through better customer information, well-designed incentives and provision of tools that customers may use to manage their load. In addition, another question is how responders view the durability of their reductions. Con Edison seems to

[2] Matt Flegenheimer, *De Blasio Orders a Greener City, Setting Goals for Energy Efficiency of Buildings*, N.Y. TIMES (September 20, 2014).

assume that much of the 41 MW of demand reduction will disappear, dropping to 18 MW after 2018 as reflected in its Brooklyn Deficiencies and Comprehensive Proposed Plan spreadsheet provided in discovery. It is unclear why demand response, combined heat and power, and other such demand management projects should not be sustainable past 2018 with effective incentives and customer engagement and education. It should be possible for Con Edison to fine tune its BQDM Program with input that the RFI responders will have provided.

Utility Incentives

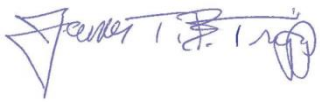
Con Edison recognizes the power of rates and incentives in motivating action and enhancing the effectiveness of the program. It proposes a 1% adder to the rate of return for an effective BQDM Program and a 50-50% sharing of the "savings". Con Edison's interrogatory answers provide some specific estimates as to what the dollar levels for each incentive would be (e.g., 9/3/14 Response to DPS Interrogatories – Set DPS-1 Question No.:04). The "savings" estimate of $15.4 million per year with Con Edison's share estimated to be $7.7 million is rather small perhaps due to the fact that more than half of the DM capacity apparently does not continuing after 2018. We therefore anticipate that with a robust DM program the "savings" could be substantially greater than this amount if demand response programs continue to grow after 2018.

While we are prepared to support incentives that would benefit Con Edison in a transition period, we would want to have a clear understanding of the range of the costs of these incentives that presumably all ratepayers in the Con Edison system would pay for, and their justification. It may be appropriate for the magnitude of any such incentives to be dependent on the outcomes of the Program in the form of performance-based ratemaking.

In addition, in developing incentives to the utility, the Commission must be mindful of the precedent-setting nature of this undertaking. The BQDM effort has been described in the Staff Report as "an example where location-specific values may support DER activities at the small customer level in the near term, though not yet in the mode of full-fledged [DSP] functionality as described here". Con Edison, in its petition, has embraced this idea, repeatedly noting the usefulness of this effort to informing the REV proceeding. Compensation to the utility for trying something new in Brownsville, however, should not necessarily resemble the compensation available to a future DSP for performing its function. For example, a 50/50 sharing of "savings" may merit consideration in this context, where choosing to pursue those savings means a major departure of business as usual and entails pursuing solutions with which it is less familiar and which would traditionally be less profitable choices for the utility than infrastructure upgrades; however, as this new approach to looking at infrastructure choices becomes the norm, the DSP should ultimately be expected to choose the most efficient level of infrastructure as a first course of action, and not be viewed as having done something especially laudable when it does not overbuild the system.

Although the BQDM Program includes 41 MW of customer DM initiatives in 2018 and 11 MW of utility-side energy storage and other worthwhile investments, the amount of customer DM drops to 18 MW in 2019 and thereafter. In part as a consequence, the Brownsville Load Area Plan Program also calls for 80 MW of traditional infrastructure expansion with the proposed "installation of a fifth transformer at the Glendale area substation and a fourth transformer at the Newtown area substation and associated sub transmission feeder to increase the capacity of those substations and of their common sub-transmission supply feeders". These capacity additions would allow for deferral of the "New Substation/Gowanus Package" in-service date from 2019 to at least 2024. Since we do not consider an on-going customer DM program of 18 MW to be robust, it is unclear whether the proposed incentive package is appropriate. It is particularly difficult to evaluate the proposed incentives without information about the possibilities that the RFI process may have identified and the process by which particular solutions are selected. With greater stakeholder education and engagement and use of market incentives, the level of customer DM could potentially increase significantly beyond 41 MW, allowing for a lengthier deferral and thus greater savings that might justify more generous compensation.

Sincerely,



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