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November 14, 2016

Hon. Kathleen H. Burgess
Secretary to the Commission
New York State Department of Public Service
Three Empire State Plaza
Albany, NY 12223

Re: Case 16-E-0060 - Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service.

Dear Secretary Burgess:

Consolidated Edison Company of New York, Inc. ("Con Edison") submits the attached *Reply Comments of the Supporting Parties Regarding Output-based EAM Collaborative Issues* on behalf of Con Edison, New York State Department of Public Service, Environmental Defense Fund, Association for Energy Affordability, Inc., Acadia Center, Pace Energy and Climate Center, and Natural Resources Defense Council.

Please contact me if you have any questions.

Thank you.

Very truly yours,

Attachment

**STATE OF NEW YORK
PUBLIC SERVICE COMMISSION**

- CASE 16-E-0060 – Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service.
- CASE 16-G-0061 – Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Gas Service.
- CASE 15-E-0050 – Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service.
- CASE 16-E-0196 – Tariff filing by Consolidated Edison Company of New York, Inc. to revise General Rule 20 Standby Service contained in its electric tariff schedules, P.S.C. Nos. 10 and 12.

**Reply Comments Regarding Outcome-based
EAM Collaborative Issues**

November 14, 2016

Consolidated Edison Company of New York, Inc., New York State Department of Public Service, Environmental Defense Fund, Association for Energy Affordability, Inc., Acadia Center, Pace Energy and Climate Center, and Natural Resources Defense Council

I. Introduction

Consolidated Edison Company of New York, Inc., New York State Department of Public Service, Environmental Defense Fund, Association for Energy Affordability, Inc., Acadia Center, Pace Energy and Climate Center, and Natural Resources Defense Council (“Supporting Parties”) proposed a resolution of outcome-based EAM issues (“Resolution” and filed their *Comments Supporting Resolution of Outcome-based EAM Issues* (“Comments Supporting Resolution”) on November 1, 2016, as required by the Joint Proposal filed in the above-referenced proceeding on September 20, 2016. Consumer Power Advocates (“CPA”) filed a letter opposing the Comments Supporting Resolution on November 4, 2016 and the City of New York (“City”) filed its comments in opposition on November 8, 2016.¹

The Supporting Parties submit these reply comments in response to CPA and the City in order to demonstrate that the Resolution is consistent with both the Joint Proposal and the REV Track Two Order.² These reply comments respond to several points raised by CPA and the City and explain why the approach put forth in the Comments Supporting Resolution is practical, workable and reasonable. Supporting Parties emphasize that the Comments Supporting Resolution proposes methodologies for Rate Year 1, which can be further improved and refined in Rate Years 2 and 3 as more data is made available, further analyses are conducted, and lessons from Rate Year 1 are gathered. In addition to these reply comments, Environmental Defense Fund, Association for Energy Affordability, Inc., Acadia Center, Pace Energy and Climate Center, and Natural Resources Defense Council (collectively, “Environmental Parties”) are

¹ The Joint Proposal requires that if the Collaborative members are unable to reach agreement on outcome-based metrics and are unable to agree on a consensus report, “the parties may file comments on the collaborative discussion and/or recommendations to the Commission regarding the RY 1 EAMs by November 1, 2016 and reply comments/recommendations by November 8, 2016.” The Collaborative members agreed to the City of New York’s request that the filing date for comments opposing the Comments Supporting Resolution be extended. CPA filed its comments on November 4th and the City filed on November 8th.

² Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*, Order Adopting a Ratemaking and Utility Revenue Model Policy Framework (“Track Two Order”) (issued May 19, 2016).

submitting additional comments that provide more context surrounding the development of the Comments Supporting Resolution and discuss issues that may be explored further in Rate Years 2 and 3.

II. The Energy Intensity EAM for Rate Year 1 Sets Minimum Achievement Above and Beyond the Programmatic Achievement

The City objects to the Energy Intensity EAM because it believes that the EAM is duplicative of Con Edison's programmatic efforts in energy efficiency and because it has a "fundamental disagreement" with the approach of awarding incentives to achieve outcomes and programmatic targets. As explained in detail below, the City's assertions do not hold merit and, moreover, are not consistent with the objectives articulated in the REV Track Two Order.³ The Energy Intensity EAM in the Resolution includes minimum, target, and maximum thresholds that require achievement far above the proposed incremental Energy Efficiency programs. The Supporting Parties believe the proposed Energy Intensity incentives are fair, equitable, and well aligned with the objectives of the Joint Proposal and the REV Track Two Order. The Joint Proposal, signed by the City and CPA, includes a combination of program-based and outcome-based energy efficiency EAMs, which serve as balanced and complementary incentives to drive specific programmatic achievements as well as broader outcomes. Further, the Joint Proposal specifies that the relative share of the program-based EAM incentives declines over the three-year rate period while the share of the outcome-based EAM incentives increases during the three-year rate period. The outcome-based EAMs ramp up from 30 percent of the total EAMs in Rate Year 1 to 60 percent by Rate Year 3.

The City states its concern that the Energy Efficiency EAM is duplicative of the energy efficiency programs for which the Company already receives shareholder incentives. Analysis

³ See *id.*

of the Resolution demonstrates that the City’s concern is unwarranted. The Collaborative developed the EAM achievement thresholds by extending the already-decreasing energy intensity trend lines to the end of Rate Year 1, and requiring an additional reduction in energy intensity to reach the minimum threshold at which the Company would begin to earn an EAM. The trend lines represent a “business as usual” scenario based on current trends in energy intensity, inclusive of existing energy efficiency measures such as those in Con Edison’s Energy Efficiency Transition Implementation Plan (“ETIP”), New York State Energy Research and Development Authority (“NYSERDA”), and New York Power Authority (“NYPA”) programs. While the new energy efficiency and system peak reduction programs included in the Joint Proposal will result in sales reductions captured in the energy intensity metric versus the business as usual scenario, the energy intensity EAM targets require energy efficiency outcomes that are an order of magnitude greater than the Rate Year 1 program achievement alone, as further outlined below.

In order to earn the minimum energy intensity EAM in Rate Year 1, Service Classification (“SC”) 1, 2 & 9 sales would need to decrease by 395 gigawatt-hours (“GWh”) (1 percent of sales) in one year, *beyond the trend*. Earning the target energy intensity EAM would necessitate SC 1, 2, & 9 sales reductions in one year of 1,579 GWh (4 percent of sales) *beyond the trend*. Earning the maximum EAM would necessitate SC 1, 2, & 9 sales reductions in one year of 3,948 GWh (9 percent of sales) *beyond the trend*. In comparison, the Rate Year 1 program-based energy efficiency target, beyond the amount already included in the Company’s ETIP, is 20 GWh. Achieving the minimum EAM would require energy savings that are 20 times the incremental programmatic target.

The City mistakenly claims the outcome-based EAMs will increase customer costs \$12 million more than contemplated in the Joint Proposal. In fact, the actual incentive levels associated with the outcome-based EAMs are specified in the Joint Proposal and are only applicable for achieving outcomes that have broad societal benefits well in excess of the incentives. The Joint Proposal explicitly ensures that this will be case through the requirement of a net-positive benefit cost analysis (“BCA”) test of the combined rate case energy efficiency and system peak reduction programs. The BCA test is net-positive at program targets and will be recalculated at the end of each rate year based on achievement. The net-positive BCA considered the cost of all EAMs, but only the benefits of the incremental Energy Efficiency Program and System Peak Reduction Program. The Supporting Parties believe there is significant potential for the achievement of additional energy savings not included in the BCA, which may result in further net benefits not specifically captured in the BCA analysis.

III. The Historical Trend for the Energy Intensity EAM Already Accounts for Public and Private Employment Overlap

The proposed Commercial Energy Intensity metric is calculated as commercial sales per private employee. The City asserts that the Commercial Energy Intensity EAM can possibly lead to inaccurate results because it excludes public building energy use, and does not consider private employees that may utilize public building spaces. The City is also concerned with using only private employment because there are instances where public employees rent space from private building owners. However, the City fails to recognize that the Commercial Energy Intensity EAM, calculated as commercial sales per private employee, was developed based on a trend line that already includes energy usage from public employees in private spaces. Any meaningful departure from the trend that could have a material impact on the energy intensity

metric would require a very significant and unanticipated shift in the ratio of public to private employees working in private building spaces over the next rate year.

Further, although the City appears to be concerned that there is the potential for the metric to award higher shareholder incentives because the private employment in the denominator of the metric is overstated, the City does not explicitly recognize that the incentive could also award lower shareholder incentives because the omission of public employees utilizing private building space understates the denominator of the metric.

The Supporting Parties believe it is reasonable to use commercial sales per private employee for Rate Year 1 because the vast majority of public employees, namely State and City employees, are likely to work in spaces that are served by NYPA, whose energy sales are not included in the Commercial Energy Intensity metric. The Supporting Parties determined the proposed EAM metric is an appropriate starting point which, as explained above, roughly reflects the impact of both private and public employment in private building spaces. Additional curve fitting analysis to determine the extent to which the metric could be improved via the inclusion public employment in private building spaces and/or the exclusion of private employment in public building spaces should be performed for purposes of refining the metric for the following rate year. Finally, the City's proposal to modify the metric to include total employment instead of private employment is something that should be similarly studied for purposes of making refinements to the metric for Rate Year 2.

IV. The DER Utilization EAM is an Appropriate Measure of New-Entry DERs

In its initial implementation, the DER Utilization EAM serves as a measure of new entry of DER in the Con Edison service territory. To account for the differential operational patterns of various DERs, (*e.g.*, new electric vehicles, new solar PV) the Collaborative agreed to compare

annualized megawatt-hour (“MWh”) produced or consumed by incremental new DERs. In the future, this metric could evolve to encompass both DER Utilization targets and performance measurement through better access to performance data. For Rate Year 1, it measures only DER penetration weighted among technologies based on expected MWh energy contributions.

To calculate the annualized MWh produced or consumed, the Supporting Parties reached consensus on using fixed, ex-ante assumptions to convert various DER units to the annual MWh each unit is expected to produce or consume. Those same assumptions were used to set the EAM thresholds. Therefore, changing the ex-ante assumptions would change the target calculation comparably and would have no effect on overall achievement. In other words, modifying the assumptions related to converting DER capacities to MWhs would only change the relative weighting of DERs within the metric.

The City objects to using industry-standard capacity factors and instead recommends using actual MWh produced for the purposes of determining performance after the fact. However, most DERs are not currently directly measured by the Company. The City, in its comments, cites the NY-SUN Commercial Program Manual and suggests using NYSERDA metering data. However, while commercial Solar PV installations 200 kilowatts (“kW”) or greater seeking NY-SUN incentives do install production meters, systems below 200 kW, which comprise the vast majority of Solar PV in Con Edison’s service territory, instead receive upfront per-kW incentives from NY-SUN.

While the approach put forth in the Comments Supporting Resolution is the most practical method for Rate Year 1, the Supporting Parties emphasize the opportunity to refine this approach to better account for utilization in the service territory in future years. For example, the Supporting Parties advocate directly measuring a sample of DERs in Rate Year 1 to inform

appropriate adjustments to targets and EAMs in future rate years. Further, the Supporting Parties believe that applying the energy production or consumption of a small sample of DERs to the entire population of new entry is not appropriate for all DERs, especially for technologies whose production is transient and highly dependent upon local exogenous conditions. For example, the primary driver of a given year's Solar PV capacity factor is significantly weather dependent (solar irradiance), and thus any single-year data may not provide for an adequate representation of the appropriate relative weight of solar PV compared to other DERs.

CPA asserts that the Solar PV capacity factor used is likely overstated, but fails to provide an alternate Capacity Factor or explain the extent to which it believes the Solar PV capacity factor is overstated. The use of a statewide capacity factor is reasonable for Rate Year 1 as the statewide capacity factor is available from a verified public data source, and will be modified as appropriate when a Company-specific capacity factor is calculated based on Rate Year 1 data. As stated previously, changing the Solar PV capacity factor would also require a recalculation of the EAM target, with little or no actual impact on the incentive calculation. Additionally, the Collaborative sought the most granular locational industry-standard capacity factor available for each DER technology. For some, such as Combined Heat and Power and Fuel Cells, capacity factors for New York City were available.

Regarding battery energy storage penetration, the City asserts that the utilization assumption is generous. To the best of the Supporting Parties' knowledge, there is no known standard on battery utilization in Con Edison's service territory, and further, actual dispatch data is not yet available from this nascent technology. For that reason, the Supporting Parties adopted an industry-standard daily discharge assumption, used by battery cell manufacturers and in research papers by Sandia National Laboratories. The daily discharge assumption is based on

the expectation that battery operators will arbitrage the difference in day-time and night-time energy prices, which vary on a daily basis. No Collaborative party, including the City, has provided an alternative assumption. The Company intends to use a sample of directly metered battery energy storage installations to inform possible metric and target revisions for Rate Year 2.

V. DER Utilization Targets Proposed by the Supporting Parties for Rate Year 1 Are Appropriate

The range of DER Utilization targets, based on Con Edison's Distributed System Implementation Plan ("DSIP") forecasts, proposed by the Supporting Parties for the purposes of developing an EAM for Rate Year 1, is appropriate as the targets are set at levels that: (i) will require significantly expanded efforts in order to achieve the outcomes; (ii) are, at minimum, nearly three times the amount the Company expects could be delivered through its active non-wires alternatives ("NWAs") project; and (iii) represent a significant growth in overall incremental, new DERs relative to previous years.

In evaluating the appropriateness of the targets, the Company provided information to the Collaborative during the development of the proposal indicating that the minimum target for the DER Utilization metric of 150,000 MWh is significantly above the approximately 52,000 MWh the Company could expect from its active NWA project being pursued through the Brooklyn-Queens Demand Management Program ("BQDM"). Further, in setting the target level, the proposal assumed new CHP development, a key driver of the target, of over 21 MW, equivalent to approximately 140,000 MWh. The target level for CHP in 2017 is significantly above the 3.1 MW of new CHP entry in 2015 and the 3.1 MW of new CHP entry year-to-date in 2016. For setting the same target level, the proposal assumed 47 MW of new Solar PV, another important driver of the target, equivalent to just over 55,000 MWh despite anticipated slowing of the

growth due to a federal tax extension, which is significantly above the 34.3 MW of new Solar PV entry in 2015 and the 32.8 MW of new PV entry year-to-date in 2016.

The City refers to the Con Edison interconnection queue to support its position that the targets proposed by the Supporting Parties would not be considered a stretch goal. However, the City fails to recognize that the interconnection queue includes: (i) projects that have been in the queue for several years with no expectation of becoming operational in the near-term; and (ii) projects that are in the queue and which may be installed well after Rate Year 1. The Supporting Parties believe that new, incremental DERs that have, in fact, become operational in the past two years provides a significantly more representative source to inform the setting development of the DER Utilization targets.

Contrary to the City's inaccurate assertion that DER Utilization targets are based on "business-as-usual" efforts that do not require additional efforts on the part of the Company, the targets are appropriate and are indeed based on ambitious goals for territory-wide outcomes.

VI. The DER Utilization EAM should include Demand Response

Whether administered through Con Edison's retail programs, or NYISO's wholesale programs, demand response ("DR") is an important category of DER that helps reduce demand on Con Edison's distribution system, as well as ensures reliable electric service for the benefit of all customers. The Supporting Parties believe that it is appropriate to include DR in the DER Utilization EAM target. While DR may produce relatively fewer MWh than other DER technologies, it does provide significant system and reliability benefits. Furthermore, it is inappropriate to isolate a particular DER for exclusion without strong justification.

DR is important to include in a broad measure of DER because it cost-effectively helps ensure reliable electric service, bolsters system reliability during operational contingencies and,

either on its own or when combined with other DERs, can also help defer capital investments (e.g., identified NWA cases).

Including DR in the DER Utilization EAM would incent the Company to explore new ways to increase DR enrollment, performance, and participation in its own DR programs. These efforts include, but are not limited to, new event trigger methodologies to increase utilization, and creative marketing and educational campaigns. Including DR in the DER Utilization EAM would also encourage the Company to coordinate with NYISO to better facilitate participation by DR resources in both Company and NYISO programs.

VII. Conclusion

For the reasons set forth above, the Supporting Parties respectfully request that the Commission approve the Resolution.

November 14, 2016

Respectfully submitted,

**CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.**

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