Enver Acevedo
Associate Counsel
Law Department
Consolidated Edison Company of New York, Inc.
4 Irving Place, Room 1815-S, New York NY 10003
Tel.: 212-460-3762 Fax: 212-677-5850
Email: acevedoe@coned.com

August 3, 2020

Honorable Michelle Phillips
Secretary
State of New York Public Service Commission
Three Empire State Plaza
Albany, NY 12223-1350

Re: **Case 19-G-0066 - 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**

Dear Secretary Phillips:

On January 16, 2020, the Commission approved a Gas Rate Plan for Consolidated Edison Company of New York, Inc. ("Con Edison") in Case 19-G-0066.[1] The Gas Rate Plan requires Con Edison to (i) continuously monitor gas needs in Westchester and consider market solicitations or innovative mechanisms to procure additional resources that help address peak day gas needs in Westchester and (ii) seek Commission authorization to conduct such solicitations by July 1, 2020.[2]

Pursuant to the Commission approved Gas Rate Plan, the Company has completed market solicitations to procure additional resources that help address peak day gas needs in Westchester and submits the attached funding request for Commission authorization.

Please contact me with any questions.

Very truly yours,

/s/ Enver Acevedo

c: All Active Parties in Case 19-G-0066 (via electronic mail)

[1] Case No. 19-G-0066, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consol. Edison Co. of New York, Inc. for Gas Serv., et al.*, Order Adopting Terms of Joint Proposal and Establishing Electric and Gas Rate Plan, (issued January 16, 2020).
[2] By letter dated June 26, 2020, Your Honor granted an extension to August 3, 2020 to submit this filing.

BEFORE THE NEW YORK STATE
PUBLIC SERVICE COMMISSION

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 19-G-0066**

REQUEST FOR FUNDING APPROVAL TO PURSUE ADDITIONAL SOLUTIONS FOR LOAD RELIEF

CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.

By its Attorney

Enver Acevedo
Associate Counsel
4 Irving Place, 18th floor
New York, NY 10003
(p) 212-460-3762
(f) 212-677-5850
E-mail: acevedoe@coned.com

TABLE OF CONTENTS

BEFORE THE NEW YORK STATE
PUBLIC SERVICE COMMISSION

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 19-G-0066**

REQUEST FOR FUNDING APPROVAL TO PURSUE ADDITIONAL SOLUTIONS FOR LOAD RELIEF

1. Introduction

Consolidated Edison Company of New York, Inc. ("Con Edison" or the "Company") is pursuing alternatives to new pipeline capacity to meet customer heating needs on Peak Days.[1] The Company issued a request for proposal (the "Non-Pipeline RFP" or the "RFP") in December 2017 as part of its Natural Gas Smart Solutions Program. Since the RFP was issued, the Company has implemented eight demand-side solutions, along with increased incentives to its core energy efficiency programs to serve customers across the entire gas service territory, with a focus on Westchester County, to address supply constraints and lead the smart transition to a clean-energy future. Additionally, the Company is implementing heat pump programs pursuant to the Commission's New Efficiency New York ("NENY") order.[2]

Following the initial round of proposals, the Company issued a Request for Information ("RFI")[3] in January 2020 to pursue additional solutions for load relief. In accordance with the Company's Gas Rate Plan,[4] the RFI focused on "new and emerging demand reduction technologies that customers in Westchester are likely to adopt; and [renewable natural gas ("RNG")], including

[1] Peak Day: The coldest day to which Con Edison plans its gas system and supply portfolio to meet the full requirements of firm gas customers, which is currently any day where the average temperature is 0° F (Fahrenheit) or lower.

[2] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative.*, Order Authorizing Utility Energy Efficiency and Building Electrification Portfolios Through 2025. (issued January 16, 2020)

[3] https://www.coned.com/-/media/files/coned/documents/business-partners/business-opportunities/non-pipes/non-pipeline-solutions-to-provide-peak-period-natural-gas-system-relief-rfi.pdf?la=en

[4] Case 19-E-0066, *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*, Order Adopting Terms Of Joint Proposal And Establishing Electric And Gas Rate Plan, (issued January 16, 2020), Pp. 94-95.

projects that would add storage so that it can alleviate peak load needs on the coldest days."[5] The Company evaluated each RFI response for its ability to alleviate Peak Day needs and determined that some of the submitted projects were viable. The Company forecasts that the projects it proposes herein will reduce Peak Day demand by approximately 3,600 dekatherms. The benefits of these solutions include allowing participating customers to reduce use on Peak Days without additional investment or in-person interaction, deploying heating electrification without large initial capital investment, and bringing innovative new technology to the New York market.

The Company is proposing the Commission approve a $7 million budget to support the implementation of the following Non-Pipeline Solutions ("NPS") projects over 3 years:

- Behavioral Demand Response ("DR");
- Heat as a service financing ("HaaS"); and
- Solar photovoltaic ("PV") heat recovery.

The Company proposes to recover these costs over ten years at the rate of return as established in its then current rate plan to align cost recovery with the expected benefit period and to maintain consistency with the treatment of other energy efficiency and demand management initiatives.

2. Overview

Under the current Gas Rate Plan, the Company agreed to the following:

> Con Edison will continuously monitor gas needs in Westchester and consider market solicitations or innovative mechanisms to procure additional resources that help address peak day gas needs in Westchester. The Company will seek Commission authorization to conduct such solicitations by July 1, 2020. The solicitations will consider (i) new and emerging technologies that customers in Westchester are likely to adopt; and (ii) RNG, including projects that would add storage so that it can alleviate peak load needs on the coldest days.[6]

The Company issued an RFI on January 31, 2020 to explore additional ways to provide potential relief within Con Edison's natural gas service territory. Con Edison designed the RFI to be consistent with current environmental policy, applicable laws and regulations, and reliable operation of its gas system. Through the RFI, the Company sought solutions to:

- Decrease Peak Day gas demand;
- Provide an electric alternative for gas heating use; or
- Increase Peak Day gas supply.

In addition to providing potential Peak Day relief within the Company's service territory, the proposed solutions should also support system reliability and be cost effective for Con Edison's customers. The Company intends to incorporate solutions to enhance the magnitude and

[5] *Id.*
[6] *Id.*

reliability of Peak Day load relief. Although Con Edison's goal is to increase Peak Day relief system-wide, a proposed NPS's value to the Company will vary based on the location of the NPS; the highest value projects target the Westchester moratorium area.

Con Edison's preparation for the RFI took place throughout January and started with stakeholder engagement meetings with the New York City Mayor's Office of Sustainability, Westchester County Executive's Office and the Department of Public Service. The Company issued the RFI at the end of January, along with a press release. To encourage a robust market response, the Company marketed the RFI to potential respondents via an email campaign and worked with geothermal installers and DR professional trade associations to distribute details of the RFI to their members. Outreach also included a pair of webinars that hosted approximately 190 participants. The Company replied to two rounds of question and answer sessions between February and March. Final RFI responses were due on April 3, 2020.

3. Proposals received

The Company received 31 responses to the RFI from various solution providers. Of the responses received, 18 target demand-side solutions and 13 target supply-side solutions.

The proposed demand-side solutions included energy efficiency, thermal storage, solar PV heat recovery, district geothermal, electrification with demand response, third-party electrification financing and behavioral demand response. The responses for additional supply-side solutions represented a diverse set of peaking services including projects to produce, store and/or deliver compressed natural gas ("CNG") and liquefied natural gas ("LNG") in the Company's service territory. The Company also received sustainable supply solutions for RNG and hydrogen-blending plants. Overall, the responses can be grouped into several major categories that indicate where the market believes Peak Day solutions can be delivered.

4. Evaluation Process

The Company convened a team of subject matter experts to evaluate the RFI responses (the "Review Team").

The Company's review included initial screening for adherence to RFI requirements and a more in-depth evaluation of each solution based on characteristics that included:

- Relief provided, including duration of relief available on consecutive days[7] and project scalability;
- Geographic relief zone / coverage;
- Project cost, based on the unit cost of the Response ($/Peak Day Dekatherm of Relief);
- Project risk and expected implementation challenges (*e.g.*, ability to secure financing, obtain required permits, construction complexity and implementation timeline);

[7] Since cold weather days are often consecutive, both demand-side and local alternative supply measures (or a proposed portfolio of measures) must be available at their promised level of relief for at least 3 consecutive days.

- Vendor qualifications (*i.e.*, financial, technical and other resources currently available along with experience and success in providing similar solutions in the New York metropolitan area);
- Community impacts (*e.g.*, noise, pollution, support for low-income housing); and
- Greenhouse Gas Emissions impacts of the Response, relative to alternatives, and the potential benefit or cost of the NPS proposed in meeting state and local policy objectives.

5. Additional Evaluation Considerations

While not part of the formal evaluation, the Company also considered the overarching need to incorporate a variety of projects that increase both the diversity and benefits of its portfolio for customers and accordingly focused on proposed solutions that are not currently served or offered by our existing programs. The Review Team also considered how well the proposed solutions contributed to state policy objectives.

6. Evaluation Results

The Company decided not to pursue: (1) traditional energy efficiency proposals that were collections of measures under a single vendor or partnership that could participate in the Company's existing programs; and (2) DR Responses for thermal storage battery installations or curtailment of Combined Heat and Power that are eligible to participate in the Company's existing Gas DR pilot, which is technology agnostic. The Company also received one response which proposed a district geothermal system. District geothermal holds potential for enabling full electrification of a localized area necessary for offsetting specific infrastructure, but the Company is already exploring this technology, as provided for in the Company's Gas Rate Plan. As a result, the Company determined that it was premature to proceed with the district geothermal response.

In some cases, solutions related to beneficial electrification need to be considered in the context of overarching statewide policy embodied in programs such as NYS Clean Heat,[8] which was still in development during the RFI solicitation period. The Company is not proceeding with responses that proposed electrification not suitable for winter peak demand relief or were not aligned with NYS Clean Heat program's long-term objective towards full heating load electrification.

The responses for supply-side solutions included a diverse collection of technologies ranging from CNG and LNG storage to RNG, including hydrogen production and blending plants. Although Con Edison does not intend to proceed with any of the CNG or LNG projects at this time, the Company continues to evaluate the RNG proposals. Accordingly, the Company is not currently requesting funding for any of the RFI's supply-side responses.

[8] https://saveenergyny.ny.gov/NYScleanheat/

7. Funding Request

The Company has identified three demand-side solutions that merit further consideration for implementation: behavioral DR, HaaS, and solar PV heat recovery, which are described in more detail below. The Company estimates that the three solutions proposed in this funding request would provide a total gas peak demand savings of 3,593 Dt and a total annual gas energy saving of 86,323 Dt over three years.[9] The Company is requesting $4.2 million to fund these three efforts in 2021 and an additional $1.4 million per year in each of 2022 and 2023. In total, the Company requests $7 million to fund these additions to the NPS effort. These costs are based on preliminary responses and subject to additional negotiation prior to implementation.

8. Proposed Project Details

A. Behavioral DR

Customers have expressed interest in exercising more control over their energy usage. Increased direct customer investment in systems enabling remote control is not the only solution for utilities to implement DR with their customers. As proposed by the vendor that would implement this program, Behavioral DR would consist of communications, based on behavioral science, to small customers immediately prior to peak winter days to encourage a reduction in energy use to manage their monthly bill by making manual adjustments such as lowering their thermostat setpoints. An initial communication would be sent to the customer outlining the program benefits and notifying of potential event communications for participation. After DR events, additional communication using data visualizations would be delivered to reinforce the behavior or encourage the customer to attempt to save more on future peak days. Unlike Con Edison's existing demand response pilot, customers that cannot afford or prefer not to install a smart thermostat will be able to participate in behavioral demand response. It is also a scalable solution for the utility, as it requires no in-person customer interaction to implement.

Behavioral techniques are well-suited to reducing short-term peak day consumption. These techniques have been widely adopted in electric peak load reduction, and Southern California Gas has been able to successfully apply this method for peak day gas reductions. Con Edison is requesting to fund a potential supplemental effort to existing behavioral efforts by contracting with an implementation vendor for one year. This program is estimated to save 930 peak day dekatherms through outreach to up to 120,000 residential gas customers. This project can launch quickly after funding approval and, if early insights prove successful, may be incorporated in a future iteration of the gas demand response pilot.

[9] Savings estimates were provided by the Respondents and will be verified by the Company prior to implementation.

B. Heat as a Service Financing

The NYS Clean Heat program has begun to address the large upfront cost barrier to the transition to beneficial electrification of heating through the use of robust incentives. The adoption of clean heating technologies can be further accelerated by providing customers access to the remaining capital necessary to proceed with their conversion. Low- or no-interest loans have become available, but these traditional financing techniques may not serve all customer segments. For example, commercial and multifamily customers are cautious in committing scarce budget dollars to projects outside of their core business. Such projects reduce their ability to draw on credit for emergency repairs or core business operations and require these customers to spend significant time away from the day-to-day operations to secure traditional debt to fund these projects. However, the high efficiencies and low maintenance of clean heating technology provide an opportunity for cash flow improvements that can be used to cover financing for the system if the burdens of traditional loans were removed. This opportunity has been recognized and multiple market participants have responded with these solutions in both the RFP and RFI seeking to advance clean heating technologies by leveraging their capital.

Under the proposed HaaS model, technology vendors would invest the upfront capital to own clean heating systems or components such as variable refrigerant flow units or geothermal ground loops at a customer site and charge that customer a monthly fee to provide the site heating and cooling from the equipment. This service contract would also include maintenance to keep the system operating as expected for the duration of its expected useful life. These financing offers would be similar to the service fee business model for solar projects. This business model should reduce the high upfront cost barriers to adoption of clean heating technologies. It has been successful in this regard in the solar industry. Con Edison would consider marketing third-party financing offers to customers and/or contractors for high-efficiency electric heating technologies. The Company requests funding for marketing and implementation activities. This solution could result in the increased adoption of these technologies for an estimated 2,654 peak day dekatherm reduction and support statewide goals to use private capital to achieve carbon reductions.

C. Solar PV Heat Recovery

Technologies to provide electrification of large domestic hot water ("DHW") load are currently limited in the New York market. This end-use electrification proves challenging even for those that readily accept clean energy technologies. Solar thermal is highly intermittent and takes up the limited roof space that can more cost effectively be used for solar PV. A new solar PV heat recovery technology is commercially available that can be retrofitted on existing arrays to transfer waste heat energy through direct exchange to pre-heat storage tanks with the potential to offset peak DHW loads. The remaining load can be covered by a water-to-water heat pump that allows completely high efficiency electric DHW production. The customer economics to install this technology are improved by an increase in the solar PV electricity generation by keeping the panels cooler. To date, limited existing solar installations and lack of awareness about this new technology for future solar PV projects present challenges to adoption at scale.

Familiarity with existing and planned solar customers uniquely positions Con Edison to advance this technology at the lowest cost and provide a reliable electric alternative for DHW loads. Con Edison is seeking funding to test this technology in the New York market through outreach to customers with large DHW loads, such as hotels and universities. The Company expects to achieve a reduction of nine peak day dekatherms. Although initial reductions are limited, if proven successful, the technologies may be considered for inclusion in future programs.

9. Cost Recovery and Accounting Treatment

The Company proposes to recover these costs over ten years at the rate of return in its then current rate plan to align cost recovery with the expected benefit period and to maintain consistency with the treatment of other energy efficiency and demand management initiatives.

10. Program Labor Costs

The Company anticipates it can administer the proposed efforts using existing resources. Therefore, the Company is not requesting incremental labor costs associated with program administration.

11. Conclusion

In accordance with the Company's Gas Rate Plan, the Company is submitting this implementation plan and funding request to procure additional resources from the NPS RFI solicitation that help address Peak Day gas needs, especially in Westchester County. For the reasons discussed in this filing, Con Edison requests that the Commission approve the NPS RFI funding request and the proposed cost recovery mechanisms.

Dated: New York, New York
August 3, 2020

Respectfully submitted,

CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.

By its Attorney

/s/ Enver Acevedo
Enver Acevedo
Associate Counsel
4 Irving Place, 18th floor
New York, NY 10003
(p) 212-460-3762
(f) 212-677-5850
E-mail: acevedoe@coned.com