December 21, 2023

Hon. Michelle L. Phillips, Secretary, New York
State Public Service Commission, Three Empire State Plaza,
Albany, New York, 12223-1350

Dear Hon. Michelle L Phillips,

This letter is in reference to Case 22-M-0429 – Proceeding to Implement the Utility Thermal Energy Network and Jobs Act (UTENJA).

These comments are filed by the Building Decarbonization Coalition; New York State AFL-CIO; New York State Building and Construction Trades Council; United Association of Plumbers, Pipefitters and Sprinkler Fitters in NY; New York League of Conservation Voters; Sierra Club, Atlantic Chapter; Alliance for a Green Economy (AGREE); and WE ACT for Environmental Justice.

On September 14, the New York Public Service Commission ("the Commission") issued an order in the Proceeding to Implement the Requirements of the Utility Thermal Energy Network and Jobs Act ("the Order"). In the Order, the Commission stated the criteria for utility demonstration projects to move from Stage 1 to Stage 2. The Commission requires details about the objectives of the pilot project, including the novel or unique technical or business model approaches it will explore and anticipated findings; preliminary cost estimates and timeline associated with the stages and other key milestones potential barriers and risks associated with the proposed pilot project and steps to address them; benefits to disadvantaged communities, if applicable; and preliminary customer protection plans. We recognize each of the pilot projects are at various levels of development and we continue to urge DPS to approve project advancement on an individual basis as they meet project approval milestones. DPS and the utilities must ensure that, consistent with the intent of the UTENJA, all of the infrastructure and construction work for each pilot is completed using project labor agreements, which include

apprenticeship and pre-apprenticeship programs. Labor peace should be achieved with unionized utility workers, while facilitating workforce transition planning. Lastly, we urge the utilities to Buy American when constructing these projects.

The proposed pilot projects provide a variety of approaches to designing and deploying Utility Thermal Energy Networks ("UTENs") in a variety of built environments. The merits of these projects include the ability to test multiple business models and design approaches, the inclusion of Disadvantaged Communities ("DACs") for the majority of projects, and complex project phasing with significant future opportunities for UTEN expansion in host neighborhoods. The learning opportunities from these pilot projects will significantly advance the development of the TENs industry and support New York Department of Public Service Staff ("Staff") development of a regulatory framework to govern UTENs. Below are comments on the individual pilot projects. We recommend advancing all but two projects to stage 2. The recent filings from National Fuel Gas and National Grid KEDLI/LIPA require more detail and refinement before advancing toward engineering.

Con Edison has submitted three projects.

- The Con Edison Chelsea project is unique in that it is collecting thermal energy between multiple multifamily buildings and from a nearby commercial building and managing this through a central energy plant. Utilizing waste heat and incorporating multiple thermal energy resources is an important aspect of thermal energy networks. The project is not expected to incorporate boreholes, which is also another key differentiator from other UTEN pilot projects. Another major learning opportunity is the prospect of expanding the UTEN in the future to incorporate additional sources of waste heat or thermal energy resources, and to serve additional customers as the public housing and other sites nearby undergo major redevelopment. Such an opportunity will provide insights into how flexible TENs are with regard to integration of other thermal energy systems, and expansion to include additional customers.
- The Con Edison Rockefeller Center project is a major opportunity to create a UTEN anchor project in the heart of midtown Manhattan. By their nature, all UTEN pilot projects could serve as anchors for neighborhood expansion, but almost no other neighborhoods are as dense as this part of Manhattan. As such, the Rockefeller Center project offers a highly unique opportunity to explore the development of UTENs in a hyper-urban location. Sharing heat between office buildings is a sound means of advancing decarbonization in the built environment. The Rockefeller Center project is needed in order to provide insights to the utility, the industry, Staff and the Commission. We encourage Con Edison to plan future system expansion around customer acquisition oriented toward customers with thermal energy demand profiles which are complementary to the pilot project's waste heat production profile. Incorporating large domestic hot water users such as hotels and incorporating thermal energy storage technologies would improve waste heat recovery going forward.

- The Con Edison Mount Vernon project is a compelling UTEN pilot project proposal. Serving a DAC in an urban/suburban location, the proposal is highly significant in that it includes the retirement of gas infrastructure and the full elimination of gas use for the customers served in the project area. These aspects make this pilot project critically important to the development of UTENs and regulatory frameworks governing them.

Orange and Rockland submitted one pilot project.

- The Orange and Rockland Haverstraw project is unique because it consists of two UTENs having the potential to interconnect at a later date given their proximity. One UTEN will serve new construction on the waterfront and the other will serve a cluster of existing municipal and school district buildings. We support the advancement of the Haverstraw pilot project given the merits we have expressed in previous filings, and we expect Orange and Rockland to further develop the projects to a level sufficient to advance to additional approval stages and receive funding for construction.

Central Hudson proposed one pilot project.

- The Central Hudson Poughkeepsie project meets the objectives of UTENJA and will provide valuable insights to the Company and DPS. This project will serve a community center, townhomes and a multifamily property in the center of the City of Poughkeepsie, and demonstrate a UTEN on municipally owned property.

RG&E proposed one pilot project

- The RG&E Rochester project includes geothermal borehole drilling in a public alleyway, which is a unique opportunity to gather insights into such an effort. This project characteristic is similar to the Eversource Framingham, MA pilot project currently underway.

NYSEG proposed two pilot projects.

- The NYSEG Ithaca project is among the most compelling UTEN pilot projects proposed. Because Ithaca is deeply supportive of city-wide decarbonization efforts, the project may serve as a major anchor for further thermal energy network expansion.

- Unlike the other proposed pilot projects, the NYSEG Norwich project is located in a semi-rural downtown location and may provide insights which are relevant to a large number of communities throughout New York State. The project is adjacent to an active downtown business district and can serve as a strong anchor for a larger UTEN in the

future. The incorporation of waste heat recovery at the grocery store is also a key attribute making the project unique.

National Grid submitted four pilot projects.

- The National Grid KEDNY Brooklyn project is much improved from initial filings. However, National Grid chooses to discard the existing hydronic distribution system within the Vandalia Avenue buildings in favor of a water source variable refrigerant flow (VRF) system. While water source VRF systems are proposed at other UTEN pilot projects, the Vandalia Avenue properties are not well suited for the technology given their height and the existing hydronic distribution system. National Grid should instead explore a heating fan coil with an on-board water-cooled air conditioner compressor. Heat would be provided through the Energy Center and centralized water source heat pumps to the existing hydronic distribution system and terminal unit fan coils. Cooling would be provided through the same terminal units but utilizing an on-board water-cooled air conditioner compressor. Rejected heat would be sent back to the Energy Center to assist with domestic hot water production; any excess heat would be rejected to the geothermal borefield. We urge the engineering consultants on the pilot project to rethink their approach in order to contain cost and avoid other potential issues associated with VRF technology in tall buildings. Other than this particular design specification, we support the project and urge the DPS to advance the project to the formal design phase. National Grid mentioned several thermal resources that they were exploring utilizing in the Pilot, including wastewater and dewatering systems. We encourage National Grid to design this system with the ability to expand to additional thermal resources.

- The National Grid NMPC Syracuse project makes use of a municipal wastewater treatment plant thermal energy resource. The project is positioned to support further economic development of the Inner Harbor neighborhood and to avoid new gas infrastructure.

- As mentioned in our previous filings, we support the National Grid NMPC Troy project for its innovative collaboration with the City of Troy, demonstrating third-party, municipal-owned thermal energy resources. Upgrade NY believes it is imperative to test various UTEN project ownership models, and this project presents a unique opportunity to investigate the nuances of municipal-owned geothermal borefields and regulated utility-owned thermal energy conveyance to customers. The project must advance to the next stage in order to provide these unique insights to the ongoing regulatory process.

- The National Grid KEDLI/LIPA project was recently submitted for the first time, as the previously filed pilot project from National Grid KEDLI/LIPA had been withdrawn. We request DPS pause approval of the project, request additional information and ask the Company to refine its proposal to better meet the objectives of UTENJA. We have

concerns over the Company's design approach, which includes a hybridization with gas-fired boilers to achieve high temperatures for existing building infrastructure at the Suffolk Credit Union Arena. The Company mentions high-temperature heat pumps as a possible solution, but it seems they have not properly explored building retrofits that might reduce the need for high temperature heat. Additionally, we request not an outright dismissal of high temperature heat pumps, but rather deeper exploration of the landscape of manufacturers that might serve this market given the implications that may bear on other UTEN pilot project proposals and DPS support for these projects. We urge the Company to also consider additional thermal energy resources, which might support the project objectives, including but not limited to thermal energy storage of various typologies and PV thermal technology, which seems to be an opportunity at this particular project site and may reduce the proposed borehole count, while providing peaking capacity for the system.

National Fuel Gas submitted one pilot project.

- The National Fuel Gas Buffalo project is an improvement from previous filings. This is the first filing detailing this project, as the previously filed pilot project from National Fuel Gas had been withdrawn. We request DPS pause approval of the project, request additional information and ask the Company to refine its proposal to better meet the objectives of UTENJA. There are several project details which raise technical concerns. The project excludes domestic hot water service. In addition, the project includes the repurposing of an existing district energy system with the intent to produce what is likely high temperature water to serve existing buildings. While industrial heat pumps are capable of reaching hydronic temperatures typically achieved through fossil fuel combustion, it is not clear whether or not the Company intends to use this technology. Instead, it seems the Company plans to use heat pumps to lift supply temperatures up to a point where gas-fired boilers are used to achieve higher temperatures. The Company should clarify and state what portion of annual load and peaking load can be supplied by non-fossil fuel thermal energy resources. Additionally, the Company states that wastewater heat recovery will be a supplemental thermal energy resource to geothermal boreholes. If the Company followed best practice, wastewater heat recovery would serve as the primary thermal energy resource with supplemental geothermal capacity to meet loads. We request DPS explore the project concept as proposed and require the Company to provide more information. We applaud the Company's effort toward repositioning and decarbonizing an existing district energy system through incorporating innovative thermal energy resources, but we believe more work is needed to further refine the Company's proposal.

We call on the Commission to move 11 of these projects to Stage 2 as soon as possible. Each of the projects represent distinct opportunities and learning potential. We recommend that the Commission work with National Fuel Gas and National Grid KEDLI/LIPA on their recently

submitted pilot projects before they advance. There are critical outstanding questions that must be answered before those projects advance.

We look forward to the next Stage of development of these projects to show the industry and its stakeholders how this technology can be utilized for an equitably decarbonized New York State.

Sincerely,

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