NEW YORK GEOTHERMAL ENERGY ORGANIZATION

Submitted to: New York State Public Service Commission
Subject: Comments on Utility Thermal Energy Network (UTEN) Stage 2 Filings 22-M-0429
Submitted by: New York Geothermal Energy Organization
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The New York Geothermal Energy Organization is submitting general comments on the seven (7) UTEN projects listed below, which have filed through Stage 2:

1. The Chelsea Pilot Project, filed by Consolidated Edison Company of New York, Inc. (Con Edison) on July 9, 2025, and supplemented on July 25, 2025.
2. The Mount Vernon Pilot Project, filed by Con Edison on July 10, 2025, and supplemented on July 25, 2025.
3. The Rockefeller Center Pilot Project, filed by Con Edison on July 9, 10, 11, and 15, 2025, and supplemented on July 25, 2025.
4. The Haverstraw Pilot Project, filed by Orange and Rockland Utilities, Inc. on July 9, 2025.
5. The Syracuse Pilot Project, filed by Niagara Mohawk Power Corporation d/b/a National Grid (Niagara Mohawk) on July 9, 2025.
6. The Brooklyn Pilot Project, filed by The Brooklyn Union Gas Company d/b/a National Grid NY on July 9 and 10, 2025.
7. The Ithaca Pilot Project, Customer Protection Plan section only, filed by New York State Electric & Gas Corporation (NYSEG) on July 9, 2025.

The review of the pilots was impacted by over 50% of the documents filed confidentially including design drawings, basis of design narratives, engineering calculations, construction costs, customer bill impacts, etc. Had the documents been redacted to remove PPI and critical infrastructure considerations useful information would still have been available within the documents to aid in these comments. Publicly filed documents would be helpful not only for these comments and project evaluations but for learnings for other utilities looking at UTENs.

Pilot Design

Technical Feasibility

The filings generally demonstrate technically feasible designs using geothermal loops, ambient temperature networks, and heat pumps. NY-GEO is encouraged by the diversity of project designs and access to a variety of thermal sources and sinks. While the most common way to access thermal energy was geothermal vertical closed loop boreholes, the Chelsea project and Rockefeller Center projects rely on a data center cooling and building condenser water loop as their thermal sources. The National Grid Syracuse project uses the effluent from a large water treatment plant and their downstate project (KEDNY) has a wastewater heat recovery component. The Haverstraw East Loop from O&R has boreholes, rivers source and wastewater which is certainly ambitious! The Haverstraw West Loop is a more realistic system to construct in the timeframe of the pilot.

However, some projects lack clarity on integration with existing infrastructure and long-term operability. While NY-GEO applauds the variety of thermal sources, some may present concerns in terms of permitting and execution timelines as they apply to the UTEN Pilots. Contingencies should be sought, where possible, to make the pilots viable without relying on these unique sources. Design drawings were not publicly filed for the projects which dampened the ability to comment on technical aspects of the design including thermal resources, building conversions, best engineering practices, mitigation of infrastructure in the flood plain, above ground vs underground vaults, hydraulic separation of the customer loops, etc. Costs cannot be commented on without knowing the designs and reasons for why design decisions were made. NY-GEO is unable to comment on if the designs meet best engineering practices employed by our members and industry.

Projects like Chelsea raise equity concerns due to delayed redevelopment and subpar building conditions. The residents of Fulton Houses voted to demolish and rebuild the apartments as part of the RAD/PACT program. The useless lift of the UTEN is questionable since the customer conversions, which typically account for a large majority of a project costs, would be stranded assets. Delaying the demolition and conversion of the buildings converted to heating, cooling, and domestic hot water would have the tenants of those buildings living in subpar conditions until the last phase of redevelopment since they participated in the UTEN pilot. However, development timeframes are not clear and if the pilot was approved the tenants would gain access to carbon free heating and cooling potentially decades before the other residents.

Credible Business Model

Business models are underdeveloped. Many filings omit key financial metrics (e.g., unredacted Life Cycle Cost Analysis), making it difficult to assess viability. Pilots should clarify cost assumptions, revenue models, and scalability. NY-GEO's support for energy sharing is promising but lacks sufficient detail.

By nature, utility pilots will not reflect the timing and cost efficiencies of a mature energy utility (e.g., electric & gas LDCs). It's more like a prototype to demonstrate/prove concepts leading to something more refined in subsequent iterations. These pilots are not generally demonstrating unique technologies, but rather the kernels of a business model(s) and the ability of investor-owned utilities to execute a related, but unique energy delivery system.

Many of the UTEN pilots have benefited from the National Grid Geothermal Pilot in Riverhead in 2016, and the recently commissioned UTEN-like Networked Geothermal system by Eversource in Framingham, MA. NY-GEO looks forward to the full execution of these projects and the lessons learned through the design, construction and operation of these systems.

II. Customer Protection Plan

Rights and Responsibilities

Some filings clearly define participant roles, while others are vague or contingent on future approvals. A standardized framework would improve consistency and transparency.

Best Practices

Effective examples include clear dispute resolution processes, opt-out clauses, and multilingual outreach. These should be replicated across pilots.

Customer project plans need to balance customers not paying more for connecting to the UTEN but also prioritize modeling the usage of a project full scale deployment. Customers should not be incentivized to have "free" heating and cooling without curtailment which would lead to significantly greater usages and thermal loads then at scale. Since the goal of these pilots is to use them as a model for larger scale adoption, thermal loads that are replicable are necessary.

While not a direct goal of the project, the customer projection plans should think through the cost shift that sometimes occurs when tenants start to pay for heating and cooling instead of just cooling due to a centralized system.

Engagement Strategy

The Stage-Gate process put forth by DPS is designed to protect gas ratepayer money and inform future regulation for this expanding thermal energy source and delivery system. The potential downside of such a stage-gate approach is the uncertainty the utilities participating in the pilot have with Community Engagement. If funding for subsequent stages of construction and operation is contingent, utilities have been unsure, or hesitant to make commitments to potential pilot participants. This is somewhat in contrast to what we have seen in Massachusetts, where the Networked Geothermal pilots were approved, funded through construction and operation, in DPU approved rate cases. NY-GEO feels the stage-gate process unwittingly undermines trust and delays community buy-in.

III. Rate Structure

Assessment of Proposed Rates

Flat rates dominate filings but fail to reflect system performance or incentivize conservation. Post-pilot pricing remains unclear.

Strengths and Weaknesses

Strength: Simplicity and predictability.

Weakness: Lack of responsiveness to usage patterns and peak demand.

Alternatives

We recommend usage-based and time-of-use rate structures to incentivize conservation and reflect system dynamics. Utilities must provide detailed post-pilot pricing projections.

IV. Cost Recovery Approach

Assessment

Cost recovery mechanisms are inconsistent and often exceed initial budgets. Lack of standardized methodology presently complicates evaluation. Utilities have not filed costs after federal incentives and if they are able to capture any benefits from Section 48. Designs should be evaluated for cost effectiveness and for maximizing available federal incentives and consider changes, if necessary, to the designs in order to qualify to limit rate payer impact.

Preferred Approach

A performance-based recovery model tied to emissions reductions and customer satisfaction may offer better accountability. NY-GEO believes that all the monetizable benefits of these UTEN systems should be reflected in the cost recovery, beyond simply modifications of gas and electric rate-based structures.

Alternatives

The UTEN pilots are a thermal utility but many/most of the benefits, if well executed, lead to benefits to the local electric utility, and even gas utilities in constrained areas. Consider pooled cost recovery across utilities with PSC oversight to ensure fairness and comparability.

V. Data Collection, Metrics & Reporting

Sufficiency

Most filings propose robust data collection frameworks, but few commit to interim reporting. Incremental data release is critical for adaptive learning. Data along with changes to assumptions around projected loads versus actual loads, estimated versus actual efficiency of the systems, savings to the customers, an impact on future rates should be published regularly - perhaps quarterly for the pilot period.

Similar to how NYSERDA has a section on their website that you can see the real time performance of systems (geothermal, solar, co-gen, etc.), reported typically daily, a portal should be required with the data available so the market can make their own assessments of the systems and could be utilized in engaging private industry as well.

Balance of Burden and Value

Some pilots risk overburdening administrators with excessive metrics. A tiered approach—core metrics plus optional deep dives—could optimize value.

VI. Equitable Electrification

LCCA and Viability

Due to the redacted LCCA data limits NY-GEO evaluation. Where available, results suggest UTENs may offer cost-effective alternatives to individual electrification, especially in dense urban settings.

Additional Considerations

The Commission should assess affordability for disadvantaged communities, tenant protections, and long-term rate stability. Pilots must demonstrate how they advance equitable access to clean energy.

VII. Labor and Workforce Development

Assessment

Filings vary in labor commitments. Stronger proposals include union partnerships and training programs aligned with UTENJA goals. Others lack specificity and should be revised to include workforce development plans.

The UTENJA law does reference the use of prevailing wage and apprenticeship programs, even pre-apprenticeship programs that are not supported by the NYS DOL. NY-GEO feels organized labor may be sensible for scaling this new thermal utility for trades and in areas of NYS that have a ready-made labor force to build and operate the pilots. Two areas of concern are geothermal drilling and behind the meter building conversions for smaller buildings. DPS in their UTEN Rules (reference) stated the best way to manage construction costs was through competitive bidding. NY-GEO recommends that assets not expected to be classified as "utility assets" in a more developed model—specifically, behind-the-meter heat pump installations—not be subjected to the same regulations within the UTEN Pilots as traditional utility distribution assets.

VIII. Pilot Project Impacts

Comparative Impact

- Unique Learnings: Projects like Rockefeller Center offer insights into retrofitting dense urban sites.

- Diversity: Designs range from geothermal loops to ambient networks.

- Scalability: Most pilots are replicable, but cost and permitting challenges may hinder expansion.

- GHG Reductions: All pilots aim for reductions, but quantification varies and should be standardized.

IX. Risks and Uncertainties

Significance

Risks include permitting delays, cost overruns, and customer resistance. These are significant but manageable.

Mitigation Plans

Some filings offer detailed risk management strategies (e.g., phased construction, contingency budgets). Others are vague and should be revised to include clear mitigation frameworks.

X. Additional Comments

- Pilots must be evaluated collectively to identify best practices and avoid duplication.

- PSC should require transparent data sharing and standardized reporting formats.

- Stakeholders need clearer guidance on post-pilot transition plans and long-term governance.