



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

Ref: Case 22-M-0429

Comment in response to the Public Service Commission's directive in the Order on Developing Thermal Energy Networks Pursuant to the Utility Thermal Energy Network and Jobs Act (UTENJA), (issued September 15, 2022).

Submitted by

Jeanne Bergman, PhD, Senior Advisor for Energy Policy, Sane Energy Project
Kim Fraczek, Director, Sane Energy Project

This comment is specifically in response to the proposal submitted by Brooklyn Union Gas Company d/b/a National Grid NY. However, the fundamental issues in this comment—that the pilot project must fully utilize both the heating and cooling capacities of thermal energy networks, and that it must be designed at a scale large enough and with a sufficient number of diverse thermal energy sources and sinks—should apply to all of the utility pilot UTENJA proposals.

We have read with interest the proposals submitted to the Department of Public Service for thermal energy networks (TENs) in the territories of the Seven Utilities. Many of the projects appear to have been thoughtfully designed, especially given the tight time frame for submission, and some of the utilities seem to have incorporated into their designs a recognition of the tremendous potential of thermal energy networks to reduce greenhouse gas emissions and indoor pollution, lower heating and cooling costs, create healthier and more comfortable environments for residents and

businesses including especially Disadvantaged Communities (DACs), provide business opportunities for utilities to move off gas while utilizing their pipeline and delivery expertise, and create good union jobs for gas workers as New York transitions away from fossil fuels.

The proposal submitted by National Grid (Brooklyn Union Gas Company/KEDNY, D/B/A National Grid) for its Brooklyn territory suggests that KEDNY does not understand the benefits of TENs to residents, ratepayers, the climate, and the company itself, as TENs are a lifeline for gas utilities facing obsolescence. The Brooklyn pilot project gets short shrift within the full National Grid proposal compared with the corporation's plans for TENs in its Niagara Mohawk Power Corporation territory in Troy and Syracuse. The PSC should reject the proposal as written and either require modifications that would constitute a well-designed TEN that provides heating and cooling or select a more suitable site for the Company's first pilot.

KEDNY's proposed pilot project would be built at the 417,000 NYCHA complex at 17, 47, and 72 Vasalia Avenue in Brooklyn, adjacent to Starrett City. Sites like this, that have a single owner (NYCHA) and consistent building architecture and systems, are easier to design for thermal energy networks than widely diverse structures. But despite having selected the low-hanging fruit, KEDNY has not proposed a real TEN. Rather, it has simply described a large geothermal system which would capture thermal energy from boreholes. There is no suggestion of thermal energy capture and recirculation in the superficial schematic the company provided, and the text mentions only two stores in nearby strip malls as possible sources of heat capture. The fundamental balancing principle of thermal energy networks that involve diverse buildings and needs and a variety of heat sources and sinks are completely absent from the design. The proposal acknowledges the great value of TENs: "the networked system enables thermal energy sharing among buildings by leveraging the diversity of concurrent heating and cooling dominated loads" (11), but it does not incorporate that core element into the Brooklyn plan.

Equally egregious is the plan to provide only heating, not cooling. This would leave at least half of the potential of the heat pumps and the pipelines circulating fluid unused, a tremendous waste of the financial investment and the technology. Residents would have to rely on window air conditioning units to make their homes tolerable in our longer, hotter summers. External equipment like window ACs deteriorate rapidly from exposure compared to underground geothermal pipes and indoor heat pumps, adding

maintenance and replacement costs. And the cost of electricity for running those ACs, whether borne by the tenants or by NYCHA and the taxpayers, would be a significant added expense that would also decrease the thermal and economic value of the system.

The 2022 law to amend the Public Service Law to allow investor owned utilities to design, build, own, operate, and manage thermal energy networks. The law specifies that “thermal energy” means non-combustible fluids for transferring heat into and out of buildings...including but not limited to, comfort heating and cooling, domestic hot water, and refrigeration.” (N.Y. Legis. Senate Reg. Sess. 2021-22 (2022); <https://legislation.nysenate.gov/pdf/bills/2021/A10493>.) KEDNY ignores this clear expectation by rejecting the cooling function of the proposed geothermal system as too expensive (\$67.7 mill for both heating and cooling, \$38.7 million for heating only). The Company does not specify what accounts for the \$29 million difference: the proposal stated that “considerable upgrades required to add cooling to these specific buildings,” and that it wishes to avoid “disruption to residents,” but the costs of upgrades are not itemized and tenants would in any case endure disruption from the installation of heat pumps, removal of wall sleeves, etc from the heat-only project. Cost for heat pumps and cooling equipment could be partially recovered from federal IRA funding and other sources. The financial argument for a heat-only system is simply bogus.

The heat-only provision also violates a core principle guiding the PSC: resilience. By not using efficient thermal energy networks for cooling, the buildings’ tenants will, as noted above, rely on electric air conditioners during the summer. This will drive up electricity demand and increase the likelihood of blackouts. Designing and building a highly efficient system that provides cooling would sharply cut electricity use, increase reliability, and also store underground heat for the next winter. The proposal notes that using electricity for cooling also results in GHG emissions from electricity generation; that would be eliminated if a proper TEN were designed and built.

We also object to National Grid’s use of the 100-year time frame for measuring climate changing potential. Specifically, it states that the “CO₂e emission factor for natural gas was calculated using the emission factors for CO₂, CH₄, and N₂O for natural gas stationary combustion from 40 CFR Part 98 -- Mandatory Greenhouse Gas Reporting and the 100-year global warming potentials published in the Intergovernmental Panel on Climate Change (IPCC) AR6” (37). This, like the bill currently under consideration in

Albany, is an effort to hide the devastating 20-year climate impact of methane by burying it in the longer timeframe. This is unacceptable: the proposals should be accountable to the NYS CLCPA, not to the metric preferred by the fossil fuel industry.

National Grid stated that it has allocated half a million dollars for “pilot development, identify potential sites, develop and research sites for initial site criteria and refine site selection criteria, outreach to potential customers and community, marketing and education program, feasibility study,” as well as subsequent activities like permitting and field testing. But the proposal suggests that virtually no expert thought was given: someone came up with a NYCHA complex in a DAC and, even though the site seems inappropriate for a TEN pilot, the Company just cut out all the powerful efficiencies of TENS—cooling as well as heating, diverse thermal sinks and sources, a single technology providing multiple thermal services. The result is a very expensive geothermal system that does only a fraction of what a well-designed TEN could do. That this proposal is for a system in a DAC adds injury to insult: low income people of color would once again get an inferior system that does not address the real environmental and economic justice issues they face.

We cannot say if KEDNY’s shabby pilot proposal is the result of simple incompetence, of a desire to undermine the drive for electrification by creating such a poor project that TENS will lose support, or both. We urge the PSC to reject the KEDNY’s proposal as written, and demand that it be modified for another location such that the pilot would incorporate all of the benefits of thermal energy networks. The PSC should also require that KEDNY use a different and more competent consultant.

Thank you very much.

Jeanne Bergman, PhD
Kim Fraczek
Sane Energy Project