NEW YORK STATE | Public Service Commission

ORDER ADDRESSING MULTIPLE UTILITY THERMAL ENERGY NETWORK (UTEN) PILOT PROJECTS

Case 22-M-0429 –
Proceeding on Motion of the Commission to Implement the Requirements of the Utility Thermal Energy Network and Jobs Act

October 15, 2026
Albany, NY

UTEN Pilot Project Budgets & Expenditures to Date

Utility Pilot Project		Final Total Forecasted Project Budget ($ Million)	Costs Incurred through August 2026 ($ Million)
Central Hudson	Poughkeepsie	130.99	1.56
Con Edison	Chelsea	95.53	7.58
Con Edison	Mount Vernon	191.73	6.59
Con Edison	Rockefeller Center	128.22	7.07
NFG	Buffalo	61.40	2.26
KEDNY	Brooklyn	125.49	5.37
NMPC	Syracuse	143.65	6.31
NMPC	Troy	90.93	1.99
NYSEG	Ithaca	52.48	3.37
O&R	Haverstraw East Loop	68.00	3.22
O&R	Haverstraw West Loop	50.10	
Total	Total	1,138.76	45.32

Pilot Project Characteristics

Utility	Location	Est. Capital Expense ($ M)	Est. 1-yr O&M Cost ($ M)	GSF x 1,000	# Bldgs	TEN Heating Capacity (MBH)	Sum of Annual Loads (MMBtu)	Existing/ New Const.	DAC	Building Types			Network Type	Thermal Resources						
										Single Family Resid-ential	Multi-Family Resid-ential	Comm-ercial		Closed Loop Bore-holes	Open Loop Ground-water	Air Source Heat Pump	Wastewater	Surface Water	Data Center	Other Waste Heat
Central Hudson	Poughkeepsie	86.5	5.11	145	17	5,988	9,471	Existing					Ambient 1-Pipe	Primary						
Con Edison	Chelsea	58.6	6.18	262	3	5,000	10,101	Existing					Ambient 2-Pipe						Primary	
Con Edison	Mount Vernon	139.6	9.66	432	42	7,477	23,437	Existing					Ambient 2-Pipe	Primary		Secondary				
Con Edison	Rockefeller Center	98.1	7.23	3,591	3	26,796	58,590	Existing					Ultra-low Temp HW							Primary
NFG	Buffalo	56.5	0.94	332	13	9,840	11,716	Existing					4-pipe HW & CHW	Secondary			Primary			
KEDNY	Brooklyn	112.5	4.23	316	8	5,092	16,840	Existing					Ambient 1-Pipe	Primary			Secondary			Primary
NMPC	Syracuse	168.9	7.24	1,801	14	25,000	45,653	New Const.					Ambient 2-Pipe				Primary			
NMPC	Troy	77.9	3.30	264	6	7,400	13,834	Existing					Ambient 1-Pipe	Primary		Secondary				
NYSEG	Ithaca	33.6	6.50	124	36	4,224	5,803	Existing					Ambient 1-Pipe		Primary					
O&R	Haverstraw East Loop	65.4	3.10	626	32	6,889	20,197	Existing & New					Ambient 1-Pipe	Primary			Secondary	Primary		
O&R	Haverstraw West Loop	42.1	1.69	191	19	4,934	9,007	Existing					Ambient 1-Pipe	Primary			Primary			
Total		939.8	55.2	8,084	193	108,640	224,647		10					7	1	2	5	1	1	2

Public Comment Process

- 5 Secretary's Notices issued to solicit stakeholder input
- Comment deadlines ranged from October 2025 to September 2026
- Approximately 650 unique public comments received in total.
- Broad range of commenters:
  - Local, State Government Entities
  - Elected Officials
  - Environmental Advocates
  - Labor Unions
  - Engineering and Technology Firms
  - Organizations involved with a given proposed pilot
  - Letter Writing Campaigns

Approach to Analysis

Quantitative and Qualitative Assessment Criteria

Life Cycle Economics

- CAPEX($/SF)
- CAPEX($/Heating MBH)
- OPEX($/MMBtu)
- Levelized Cost of Energy ($/MMBtu)
- Levelized Cost of Carbon Abatement ($/MTCO2e)
- NPV of UTEN/NPV of ASHP/NPV of GSHP

Ratepayer Impact

- Ratepayer Impact (Stages 1-4) (%)
- Ratepayer Annual OPEX Subsidy (%)
- Ratepayer Annual OPEX Subsidy ($/MMBtu)

Energy System Value

- Reduced winter peak load
- Ability to shift winter peak (thermal storage, etc.)

Scalability

- UDS excess capacity
- Thermal resource excess capacity

Pilot Attributes

- TEN configuration and customer retrofits
- Number and type of thermal resources
- Type of customers and loads served
- Learning value

Implementation Considerations including the ability to obtain permits, alignment with construction timelines, anchor customer participation, among others and proposed mitigation strategies

Energy & GHG Savings – UTEN/ASHP/GSHP vs BAU

Utility	Location	Annual Energy Savings Compared to BAU (%)			GHG Savings Compared to BAU (%)		
		UTEN	Individual ASHP	Individual GSHP	UTEN	Individual ASHP	Individual GSHP
Central Hudson	Poughkeepsie	69%	59%	70%	66%	59%	70%
Con Edison	Chelsea	49%	74%	N/A	82%	91%	N/A
Con Edison	Mount Vernon	61%	71%	70%	91%	93%	91%
Con Edison	Rockefeller Center	62%	67%	N/A	87%	89%	N/A
NFG	Buffalo	65%	50%	N/A	88%	83%	N/A
KEDNY	Brooklyn	63%	51%	N/A	48%	42%	N/A
NMPC	Syracuse	44%	N/A	N/A	41%	N/A	N/A
NMPC	Troy	51%	30%	N/A	64%	59%	N/A
NYSEG	Ithaca	63%	60%	74%	86%	85%	90%
O&R	Haverstraw East Loop	48%	33%	53%	92%	90%	93%
O&R	Haverstraw West Loop	69%	55%	72%	96%	96%	97%

Levelized Cost of Carbon Abatement - UTEN/ASHP/GSHP vs BAU

Utility	Pilot Project	Levelized Cost of Carbon Abatement Compared to BAU ($/MTCO$_2$e)		
		UTEN	Individual ASHP	Individual GSHP
Central Hudson	Poughkeepsie	$10,602	$314	$711
Con Edison	Chelsea	$15,804	$2,285	N/A
Con Edison	Mount Vernon	$11,757	$807	$3,005
Con Edison	Rockefeller Center	$3,383	$1,244	N/A
NFG	Buffalo	$4,342	$1,263	N/A
KEDNY	Brooklyn	$7,480	$4,284	N/A
NMPC	Syracuse	$11,048	N/A	N/A
NMPC	Troy	$6,283	$200	N/A
NYSEG	Ithaca	$5,599	$1,518	$2,484
O&R	Haverstraw East Loop	$8,254	$380	$816
O&R	Haverstraw West Loop	$6,480	$1,156	$1,512

Capital Expenditures (CapEx)

Utility	Pilot Project	UTEN Pilot Project CapEx ($ Million)	UTEN Pilot Project CapEx per Floor Area of Buildings Served ($/GSF)
Central Hudson	Poughkeepsie	$86.5	$595
Con Edison	Chelsea	$58.6	$224
Con Edison	Mount Vernon	$139.6	$323
Con Edison	Rockefeller Center	$98.1	$27
NFG	Buffalo	$56.5	$170
KEDNY	Brooklyn	$112.5	$356
NMPC	Syracuse	$168.9	$94
NMPC	Troy	$77.9	$295
NYSEG	Ithaca	$33.6	$270
O&R	Haverstraw East Loop	$65.4	$105
O&R	Haverstraw West Loop	$42.1	$221

Capital Expenditures (CapEx) – UTEN vs ASHP/GSHP

Utility	Pilot Project	Ratio of UTEN CapEx to Individual HP CapEx	
		UTEN CapEx/ASHP CapEx	UTEN CapEx/GSHP CapEx
Central Hudson	Poughkeepsie	6.5	4.3
Con Edison	Chelsea	2.4	N/A
Con Edison	Mount Vernon	8.3	2.2
Con Edison	Rockefeller Center	1.4	N/A
NFG	Buffalo	2.9	N/A
KEDNY	Brooklyn	2.0	N/A
NMPC	Syracuse	3.2	N/A
NMPC	Troy	10.0	N/A
NYSEG	Ithaca	2.8	1.7
O&R	Haverstraw East Loop	5.6	2.9
O&R	Haverstraw West Loop	3.8	2.3

Operational Expenditures (OpEx)- UTEN vs ASHP/GSHP

Utility	Pilot Project	Ratio of UTEN OpEx to Individual HP OpEx	
		UTEN OpEx/ASHP OpEx	UTEN OpEx/ GSHP OpEx
Central Hudson	Poughkeepsie	18.0	22.7
Con Edison	Chelsea	17.6	N/A
Con Edison	Mount Vernon	13.9	14.1
Con Edison	Rockefeller Center	4.0	N/A
NFG	Buffalo	1.9	N/A
KEDNY	Brooklyn	2.1	N/A
NMPC	Syracuse	1.3	N/A
NMPC	Troy	3.8	N/A
NYSEG	Ithaca	33.7	47.5
O&R	Haverstraw East Loop	3.0	4.3
O&R	Haverstraw West Loop	3.9	7.2

Operational Expenditures - Cost Categories

	OpEx Cost Categories as a Percentage of Total Pilot OpEx (%)				
Pilot Project	Energy and Maintenance	Staffing	Property Tax	Pilot-Imposed	Contingency and Other
Poughkeepsie	13%	11%	72%	0%	4%
Chelsea	17%	31%	19%	3%	31%
Mount Vernon	23%	22%	26%	6%	23%
Rockefeller Center	29%	23%	18%	6%	24%
Buffalo	40%	16%	25%	2%	17%
Brooklyn	41%	25%	34%	0%	0%
Syracuse	51%	15%	25%	0%	10%
Troy	20%	26%	38%	0%	15%
Ithaca	7%	73%	1%	20%	0%
Haverstraw East	18%	2%	24%	54%	2%
Haverstraw West	12%	3%	17%	65%	2%
Average	25%	22%	27%	14%	12%

Peak Electric Demand & Savings - UTEN vs ASHP/GSHP

Utility	Location	Winter Peak Demand (kW)				Winter Peak Demand Savings (%)	
		BAU	UTEN	Individual ASHP	Individual GSHP	UTEN vs ASHP	UTEN vs GSHP
Central Hudson	Poughkeepsie	24	366	500	354	27%	-3%
Con Edison	Chelsea	0	368	300	N/A	-23%	N/A
Con Edison	Mount Vernon	142	840	1,258	762	33%	-10%
Con Edison	Rockefeller Center	0	2,491	3,658	N/A	32%	N/A
NFG	Buffalo	0	1,217	1,464	N/A	17%	N/A
KEDNY	Brooklyn	701	1,308	3,810	N/A	66%	N/A
NMPC	Syracuse	7,082	4,200	7,082	N/A	41%	N/A
NMPC	Troy	754	1,142	1,748	N/A	35%	N/A
NYSEG	Ithaca	51	273	408	238	33%	-15%
O&R	Haverstraw East Loop	715	814	1,369	685	41%	-19%
O&R	Haverstraw West Loop	322	408	641	321	36%	-27%

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Pilot Project Determinations

Pilot Project Determinations

NFG Buffalo Pilot – Total Project Budget of $61.4M

- Multifamily and municipal customers
- Utilizes a fully centralized design approach
- Integrated with an existing district heating system
- Wastewater influent primary thermal resource, geothermal is secondary

O&R West Loop Pilot – Total Project Budget of $50.1M

- Mix of residential buildings, commercial properties, community and government facilities and an elementary school
- Utilizes a single-pipe ambient loop configuration
- Closed-loop boreholes across two distributed borefields primary thermal resource, wastewater influent is secondary

Decline to advance all other Pilot Projects

Cost Recovery

NFG ($61.4M) and O&R ($50.1M) – Totaling $111.5M

- ~$93 million to be provided by State's Sustainable Futures Program
- Balance of pilot project costs (~$18.5M) to be recovered from NFG and O&R ratepayers
- Recovery to occur through a surcharge mechanism
- Costs to be recovered through the surcharge include the deferred balances for costs through Stage 2 and the revenue requirement impact of the pilots during the 5-year pilot period
- Surcharge capped at 1% of annual gas (NFG) or electric (O&R) revenues

All Other Pilot Projects Not Advancing

- Incremental costs incurred through Stage 2, totaling ~$40.88 million to be deferred for future cost recovery in subsequent rate proceeding
- Report detailing these costs to be filed within 60 days

Next Steps - Buffalo Pilot and West Loop Pilot

Prior to Construction

- Pilot Specific Customer Protection Plan to be filed within 120 days
- Pilot Specific Customer Enrollment Requirements
- Execution of all necessary Permits, Approvals and Land Use Agreements

Other

- Refinement of Performance Metrics
- Alignment on data collection, categorization of costs and reporting protocols to improve transparency and enable project learnings
- Ongoing monthly financial and status reporting including labor and workforce development progress

Next Steps - Thermal Energy Network (TENs) Roadmap

- Required by 2025 New York State Energy Plan
- Funded through NYSERDA's Innovation & Research Portfolio
- Goals:
  - To identify the priority strategies to advance TENs
  - Development of siting criteria and viability factors
- Utilities directed to work with DPS Staff and NYSERDA to integrate knowledge gained to date

Next Steps - Regulatory Framework

- Initial Rules Order issued in 2024
- Technical Conference to be held within 180 days
  - Determine components of a regulatory framework that would be most advantageous to spur further development of TENS including from the private sector
    - Addressing customers' interests (participating and non-participating)
    - Ensuring reliable service
    - Providing regulatory certainty to TENS developers
  - Waste Heat Policy Approaches and Mechanisms