VIA ONLINE SUBMISSION

October 6, 2025

State Energy Plan Comments
NYSERDA
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Re: Comments of the Building Decarbonization Coalition on the 2025 Draft New York State Energy Plan

We appreciate the opportunity to provide feedback on the Draft 2025 New York State Energy Plan ("Draft Plan"). New York has been a national leader on climate action, with continued progress toward ambitious climate law targets in the *Climate Leadership and Community Protection Act* ("CLCPA"), the *All-Electric Buildings Act* ("AEBA"), and the *Utility Thermal Energy Network and Jobs Act* ("UTENJA"), among others. The State Energy Plan ("Plan") is binding on New York State agencies and is critical to providing policy direction to guide energy-related decision-making in the state.

We recognize and appreciate the tremendous effort in drafting and compiling a new State Energy Plan, to set the tone for New York's decision-making and regulatory action on climate for the next 15 years. Given its significance for setting the course of state action on climate, it is critical that the Plan adequately meet the moment by delivering effective recommendations that pivot from the current building by building ("house by house") approach and strategy and lean-in to scale. Adopting a neighborhood-scale strategy over the next decade will be critical to ensure the state meets its climate, equity and affordability goals and will help the state build and expand the industry, supply chain and workforce by providing both the scale and long term certainty necessary. Key aspects of a neighborhood-scale approach and strategy include: reining in unnecessary gas infrastructure investments, rapidly advancing neighborhood-scale electrification, and utilizing thermal energy networks through key neighborhood-scale decarbonization strategies.

Below, we provide our comments and recommendations on the Draft Plan, including the need for an overall paradigm shift in how we plan and implement this work through scalable solutions (Section I), how thermal energy networks and new thermal energy policies can and should play a critical role in the work (Section II), and recommendations for managing the inevitable transition away from deep reliance on the gas system (Section III).

I. Neighborhood-Scale Solutions: ***Equitable, Affordable, Sustainable***
II. Thermal Energy Networks: ***An Effective Neighborhood-Scale Decarbonization Solution***
III. Gas System Transition: ***New York Cannot Meet its Legal Requirements Without a Meaningful Policy Shift***

I. Neighborhood-Scale Solutions: *Equitable, Affordable, Sustainable*

New York is legally committed to slashing greenhouse gas emissions 85% by 2050 under the CLCPA. To meet this target, the state must decarbonize millions of homes and buildings in just 25 years. A **house-by-house** approach is too slow, too expensive, and too inequitable to meet this moment. Instead, New York should increase investment in **neighborhood-scale building decarbonization solutions**, through effective downsizing of the gas system and effectively utilizing key tools like thermal energy networks. The Draft State Energy Plan makes very few references to the need for neighborhood scale solutions. As a forward looking Plan, that will set the tone and decision-making for New York agencies on climate action, we urge the Planning Board to better recognize the need for more holistic, sustainable, efficient and equitable approaches toward achieving our climate goals.

Background

Neighborhood scale decarbonization is an innovative and increasingly vital strategy that shifts the focus from a patchwork approach focusing on individual buildings ("house by house") to a more holistic and scalable approach encompassing street segments, developments, and even entire neighborhoods. The core objective is an equitable and managed transition for these localized areas away from fossil-fuel based energy sources, and toward cleaner, renewable alternatives.[1]

Beyond individual appliance electrification and energy efficiency and weatherization upgrades, neighborhood-scale decarbonization often integrates advanced energy management systems, including thermal energy networks (discussed in more detail below). These systems can optimize energy consumption, facilitate demand response programs, and even enable localized energy storage solutions, further enhancing grid stability and resilience. The ultimate goal, as correctly recognized by the Climate Action Council's Scoping Plan Integration Analysis, is to strategically manage the intricate process of decommissioning existing gas infrastructure while simultaneously building out robust, future-proof electric grids that enhance demand management and flexibility. This transition aims to reduce greenhouse gas emissions, improve air quality, and create more sustainable and resilient communities that are less susceptible to energy price volatility and supply chain disruptions.

[1] Building Decarbonization Coalition and Gridworks, *Neighborhood Scale: The Future of Building Decarbonization*(2023), https://buildingdecarb.org/wp-content/uploads/BDC_Neighborhood-Scale-Report_WEB.pdf.

Effectively Downsizing the Gas System

Compared to a neighborhood scale approach that coordinates electrification with gas decommissioning, a house by house approach is less efficient and often more costly. It fails to capture the benefits of economies of scale, bulk purchasing, and program coordination that can help ensure disadvantaged communities are prioritized, and it can streamline access to building upgrades for building owners. A house by house approach will also increase ratepayer burden, as two systems will need to be maintained and upgraded, risking expensive duplicative investments. With a neighborhood-scale approach, New York can avoid the need to maintain aging gas infrastructure, and instead focus investments in electrification, grid capacity and resilience. Neighborhood scale approaches can help unlock economies of scale and electrify whole streets or neighborhoods by decommissioning segments of the gas system at the same time. And importantly, neighborhood-scale projects redirect the avoided cost of gas infrastructure toward neighborhood solutions that do not depend on fossil fuels.

A careful, systems-level approach can ensure New Yorkers reap these benefits. In order to strategically downsize the gas system, it is best to begin downstream and work upwards given the needed through-flow of gas through upstream pipelines to downstream demand sources. A branch pruning approach that allows for decommissioning of downstream infrastructure in areas that can be decarbonized can protect safety and reliability while advancing decarbonization and protecting ratepayers from paying for unnecessary infrastructure. There are examples of this operating in practice in non-pipe alternative programs, such as Consolidated Edison's Electric Advantage Program[2] and in other states, like New Jersey, with PSEG's targeted electrification projects.

Amending the Obligation to Serve

One of the significant barriers to implementing neighborhood scale decarbonization projects is the legal requirement for utilities to provide gas service to customers who request it. The "obligation to serve," specifically New York's fuel-specific utility obligation to provide gas service creates a "pro-gas" mandate, which blocks utilities from providing customers with cleaner home energy services, including zero-emission heat pumps and thermal energy networks. While the State Energy Plan cannot make legislative changes, updates to the Public Service Law to enable neighborhood-scale alternatives and non-pipe alternatives that ensure the obligation to serve can be met without a gas-specific requirement, would allow utilities to implement neighborhood-scale building decarbonization. It would preserve customers' right to utility services, make progress towards our decarbonization goals, and avoid single customers obstructing scaled decarbonization projects by insisting on continued gas service, unlocking significant ratepayer savings.

[2] Con Edison NY, "Free High-Efficiency Appliances for Eligible Customers", YouTube Video, posted July 12, 2024. *See*: https://www.youtube.com/watch?v=NHu7_NuQWso&t=65s.

Thermal Energy Networks and Commitment to Advancing Pilots and Projects with Data Transparency

While efforts continue toward amending the utility obligation to provide gas service and addressing other barriers toward achieving our energy transition at scale, New York State should nonetheless continue to move ahead as feasible with neighborhood scale pilots and projects including the utility thermal energy network pilot projects being developed in the UTENJA docket and the Regional Residential Weatherization Program that has just been ordered by the Public Service Commission ("PSC") in May through the 2026-2030 EE/BE program portfolio, as well as other pilot projects in development by NYSERDA. These projects can help to inform and serve as useful blueprints toward advancing sustainable decarbonization solutions.

Continuing to advance building decarbonization projects even as planning processes continue will ensure New Yorkers benefit from both the immediate impacts of the projects and the learnings that come from innovative solutions. In order to access the full benefit of each project, it is imperative that fundamental standards of data reporting and transparency be required and followed. For example, in the UTENJA proceeding, utilities should be required to upload data from each TENs project to a central repository that is open source to all market participants and stakeholders. This requirement would allow the ability to compare pilot project levels of efficiency, affordability, scalability, environmental and economic justice before, during, and after project implementation. The purpose of pilot projects is to develop and share information that can then inform State action.[3]

Similarly, greater transparency and data sharing, including system maps and analyses across electric and gas utilities and with the PSC as regulator and manager of integrated energy system planning processes will be essential for an efficient and equitable energy transition. Ensuring that energy transition planning across gas and electric systems can leverage opportunities to prune the gas system in correspondence with areas of headroom on the electric side, or to avoid high cost gas line replacements, requires sufficient information and understanding about how these systems overlap and interrelate.

A house-by-house strategy cannot meet the pace, scale, and level of coordination management that will be required to comply with the CLCPA. A well-managed transition, including identifying and decommissioning segments of the gas system, converting neighborhoods away from fossil fuel dependence and utilizing neighborhood scale decarbonization solutions, including thermal energy networks, will be faster, fairer, and more fiscally responsible. It is smart policy, climate strategy, and governance—and we believe it's the most cost effective way New York will meet its legally binding climate and equity goals on time.

[3] *For more on data transparency requirements, please see* https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={E0F14489-0000-CF17-BEE3-FFF31603F642.

II. Thermal Energy Networks:

An Effective Neighborhood Scale Decarbonization Solution

New York has successfully led the nation on TENs policy. In 2022, the State legislature passed and Governor Hochul signed the Utility Thermal Energy Network and Jobs Act (UTENJA), boldly advancing a neighborhood-scale solution that reduces grid costs, avoids gas infrastructure spending, supports good jobs, and delivers affordable, reliable clean energy. By implementing the recommendations below — including developing a regulatory framework guided by fair market principles for TENs as the precursor to creating thermal utilities, supporting municipalities in pursuing high-value TENs, and rapidly advancing waste heat recovery and thermal storage policies — the State can and will continue to lead on TENs implementation.

We urge the State to prioritize the necessary resources and agency staffing to implement these ambitious, yet achievable and essential, recommendations, and help deliver a clean, resilient, and reliable energy future to New Yorkers.

Background

Thermal energy networks (TENs) are hyper-efficient systems that heat and cool buildings and reduce demand on the electric grid by moving thermal energy to and from buildings and thermal energy sources and sinks. They have multiple design possibilities that allow for different types of sources and sinks of thermal energy including geothermal, bodies of water, waste heat from buildings and industrial processes, wastewater energy transfer and wastewater heat recovery. TENs can be designed entirely fossil fuel free and are a major tool in the toolkit to achieve building and neighborhood-scale decarbonization. There are significant benefits to utilizing TENs across New York State.

Demand reduction: TENs are capable of reducing the overall energy use of the building as well as peaking electric demand for heating and cooling, when compared to traditional air conditioners or air-source heat pumps.

Energy storage: By incorporating thermal energy storage, either utilizing standalone cooling/heating storage or just the thermal mass of an ambient TEN loop, utilizing a variety of thermal energy sinks and sources, TENs can deliver thermal energy to customer heat pumps to

optimize performance. This approach requires significantly less consideration of outdoor air temperatures than optimizing with air source heat pumps. Other building electrification approaches include systems where the energy performance of the thermal and electric grid degrades during times of peak energy use and under extreme outdoor conditions. On-site building electrification strategies can also utilize thermal storage, but typically have limited available space to fully leverage in retrofit applications. TENs offer an alternative approach to building electrification that efficiently mitigates the impact of end-use customer electric demand on the grid, particularly during the winter and summer seasons, and especially under extreme conditions. Many TENs include thermal energy storage systems located outside of the buildings boundaries that store heat or cold energy when electricity demand is low and release it when demand is high. This can function similarly to battery storage for electricity, shifting energy consumption away from peak periods. Since thermal energy storage can reduce the need for electric heating or cooling at times when the grid is most stressed, it can function as a dispatchable resource for electric capacity. By providing stored thermal energy at the right time, TENs can be considered part of the electric grid's capacity mix, thereby optimizing each of the generation, transmission and distribution functions.

Grid costs: A 2023 Department of Energy (USDOE) Oak Ridge National Laboratory report[4] and NYSERDA's own 2022 Carbon Neutral Buildings Roadmap[5] highlight the important role that ground source heat pumps (and by extension TENs) can play in decarbonizing buildings, reducing the need for new electricity generation and transmission infrastructure, and enabling energy savings for customers. According to the USDOE report, broad ground source heat pump adoption would result in cumulative savings to the U.S. economy of more than $1 trillion by 2050, eliminate the need for 24,500 miles of transmission lines, decrease required electricity generation by 13 percent, and reduce carbon dioxide emission by more than 7,300 million metric tons. USDOE continues its research into TENs and the infrastructure's ability to manage grid capacity, particularly through its 'Connected Communities' program in partnership with other national laboratories and various regulated utilities. The NYSERDA report foresees $90 billion of savings in generation and transmission expenditure in New York in a managed building electrification scenario with emphasis on ground-source heat pumps and shell improvements.

Demand management: TENs offer advanced peak demand management and therefore should be included in the analysis as one of the key demand response options for the electric grid. By using stored thermal energy for space conditioning, they can lower the burden on the grid during high-demand periods, helping to avoid blackouts, the need to activate costly peaker plants and

[4]Oak Ridge National Laboratory, *ORNL Study Projects Geothermal Heat Pumps' Impact on Carbon Emissions and Electrical Grid by 2050*, February 14, 2024. *See*: https://www.ornl.gov/news/ornl-study-projects-geothermal-heat-pumps-impact-carbon-emissions-and-electrical-grid-2050 (last accessed October 6, 2025).
[5]NYSERDA, *New York's Carbon Neutral Buildings Roadmap*, December 2022. *See*: https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/Carbon-Neutral-Buildings/carbon-neutral-buildings-roadmap.pdf.

the need to otherwise over-build the electric generation, transmission, and distribution network. Other technologies can lose their ability to provide demand management as temperatures reach points at which grid demand is peaking. Under peaking outdoor temperature conditions, load diversity diminishes, along with the ability to modulate loads and reduce total controlled peaks. However, TENs' ability to modulate loads of connected heat pumps is maintained even under grid peaking conditions. Electrification will exacerbate grid peaking conditions, and TENs can provide needed demand management capabilities in a way that other technologies cannot.

Avoided cost of gas infrastructure: The cost of repairing and replacing aging gas infrastructure is extremely high. Instead of investing in gas lines, which are in conflict with the emissions reduction targets and requirements of the CLCPA and which will eventually be stranded assets, utilities can repurpose funds toward more sustainable solutions, including TENs to decarbonize heating and cooling. These actions will better align New York with its climate goals, support grid resilience, and reduce long term energy costs, while supporting local job creation and boosting health benefits.

State Progress

Governor Hochul's Executive Order No. 22 of 2022 set the stage for State decarbonization progress by making a commitment to 'leading by example' with state-owned facilities.[6] Since this executive order, the State has made significant commitments to decarbonizing its multibuilding facilities through thermal energy networks. In the FY 2024 Enacted State Budget, the New York Power Authority (NYPA) was authorized and directed to develop decarbonization action plans for 15 of the highest emitting State facilities utilizing thermal energy networks.[7] Additionally, the budget provided $30 million for the University at Albany—SUNY to replace two fossil-fuel-fired chillers with a high efficiency electric chiller and a heat recovery/heat pump chiller.

In 2022, Governor Hochul signed the Utility Thermal Energy Networks and Jobs Act, which authorizes and mandates each of the seven major investor-owned utilities to pilot thermal energy networks in their territories. This law is currently being implemented by the Public Service Commission, as pilot projects are being reviewed for approval to construction.

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[6]N.Y. State Exec. Order No. 22, "*Leading by Example: Directing State Agencies to Adopt a Sustainability and Decarbonization Program,*" (September 20, 2022). *See*: https://www.governor.ny.gov/executive-order/no-22-leading-example-directing-state-agencies-adopt-sustainability-and.

[7]N.Y. State, "*Governor Hochul Announces Decarbonization Leadership Program*," press release, October 10, 2023. *See*: https://www.governor.ny.gov/news/governor-hochul-announces-decarbonization-leadership-program-reduce-carbon-emissions-state.

In the FY 2026 Enacted State Budget, the state prioritized investment in building decarbonization by including $200 million for modern, zero-emission TENs. This critical investment will jumpstart several shovel-ready projects at SUNY and CUNY campuses and support the decarbonization and expansion of municipal energy systems, like Jamestown's aging district steam system.

New York has already made nation-leading progress on supporting the development of thermal energy networks, but to realize the true potential of TENs as part of the State's decarbonization solution, they should be incorporated throughout the State Energy Plan.

Federal Support

Federal budget reconciliation legislation enacted this year made major changes to incentives for a wide range of clean energy technologies. While the Residential Clean Energy Credit for single family homeowners (Section 25D) is being eliminated at the end of this year, Congress left the commercial Investment Tax Credit for Geothermal Heat Pump Properties (Section 48) untouched. TENs are eligible for a 30% tax credit for project costs with additional bonus credits of 10% for domestic content and 10% for systems located in energy communities. Direct payments of the credit are available for non-taxable entities including state and municipal government entities. These credits are available at their current levels until 2033 when they begin stepping down before phasing out completely in 2035.

In addition to preserving the commercial geothermal heat pump incentives of the Inflation Reduction Act, Congress added new statutory language designed to spur geothermal heat pump deployment. The first provision grants geothermal systems an exemption from a longstanding IRS leasing policy known as "limited use property doctrine." Prior to this provision, commercial entities were prohibited from leasing geothermal systems to building owners. Third-party ownership lease models rapidly accelerated adoption of solar systems and now the same approach can be leveraged to advance geothermal.

The second new provision instated by Congress was an expansion of eligible technologies for ownership under master limited partnerships. MLPs are a common ownership structure in the oil and gas industry and provide significant tax advantages by allowing pass-through of profits directly to shareholders. A MLP-owned TEN could take advantage of ITC incentives and enjoy additional tax benefits due to the business structure. The continued federal support for TENs is a testament to the bipartisan desire to see the technology proliferate and deliver benefits to Americans and the nation's electric grid.

State Energy Plan Proposals

The 2025 New York State Energy Plan Draft incorporates several proposals that would support the development of thermal energy networks. Below are our comments on the proposed initiatives.

Roadmap

"NYSERDA, DPS, and other relevant State actors should develop a Thermal Energy Network Roadmap for New York State that lays out the market barriers currently facing TENs development in NYS, while identifying a set of holistic solutions in the near and mid-term to address these barriers. This Roadmap should be informed by experiences in Europe, Canada, and jurisdictions in the United States."[8]

This is a critical step for the State to take. To ensure that the roadmap is as effective as possible, it is important to include a wide range of stakeholders and a wide range of business models in its development for both upstate and downstate regions. Stakeholders, including organized labor, consumer protection advocates, environmental advocates, environmental justice advocates, the buildings and real estate development industry, thermal energy networks experts, economic development experts, infrastructure development and finance industry members, potential waste heat providers such as municipal wastewater authorities, transportation systems, data center owners, and manufacturers, and other energy experts should be regularly and consistently consulted in this work. We propose including an official TENs Working Group to consult relevant state agencies and advise on content of the Roadmap. This work is truly innovative and would benefit from a wide range of stakeholder input and diverse perspectives. We highly recommend that this work be done transparently and in coalition with interested organizations.

The roadmap should incorporate several considerations: the use of thermal storage; access to public spaces and coordination with agencies (e.g. wastewater treatment authorities, MTA); supply chain issues; public-private partnerships; cost sharing; and low-cost financing. Neighborhood-scale geothermal systems, like non-networked geothermal heating and cooling at scale, offer a complementary solution for decarbonizing new residential construction that can mitigate grid costs and support achievement of New York's climate goals and should be considered alongside TENs in the roadmap. Individualized systems are viable and desirable under various site-specific conditions, particularly for communities and neighborhoods at lower density and insufficient load diversity.

[8] NYSERDA, "Draft New York State Energy Plan, Chapter 8: Buildings," July 25, 2025, https://energyplan.ny.gov/Plans/Draft-2025-Energy-Plan.

Analysis of TENs and Grid Benefits

"*NYSERDA, in coordination with DPS, should advance analysis of TENs. Topics for study should include geospatial analysis to identify areas of the state that may be most viable for thermal energy networks (based on proximity of thermal demand and available thermal resources) and improve public access to thermal resource data…Analysis should further and also help to understand the impacts, benefits, and tradeoffs for the energy system of investing in TENs versus standalone building decarbonization strategies.*"

"*DOS, NYSERDA, and other State actors should continue to develop standards for flexible load capabilities for other equipment and building types."*

"*The PSC/DPS and NYISO should consider opportunities to expand utility demand response programs, adapting them to enable mass-market participation and support load flexibility at scale.*"

TENs can have considerable positive impacts on the electric grid. It is crucial to properly evaluate the impacts, benefits and tradeoffs of investing in NPAs, including TENs and other neighborhood scale decarbonization, as well as standalone building decarbonization.[9]

TENs, particularly when integrated with thermal storage and demand response systems, can indeed provide direct electric capacity resources by contributing to grid stability, reducing demand during peak periods, and serving as dispatchable resources. The key is to understand that capacity is not just about generating electricity but about ensuring the grid can meet demand, whether through generation or demand reduction. This broader definition of capacity aligns well with state planning processes, such as the Grid of the Future proceeding, and the role that TENs can play in the modern energy ecosystem.[10]

Additionally, there are many considerations when determining which neighborhood scale approach is most beneficial to a particular project or area. Buro Happold has built an excel-based cost modeling tool to assist in understanding where TENs would be most beneficial when comparing TENs to air-source heat pump (ASHP) strategies in the United States. Buro Happold's Optimal Scenarios for TENs Study found several key benefits of TENs in supporting New York's electrification goals, including reducing strain on the electric grid, which can reduce

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[9] Buro Happold, *Grids of the Future Harness Thermal Energy to Work Across the Meter and Effectively Manage Demand*. December 2024. *See filing in* Case 24-E-0165, *Proceeding on Motion of the Commission Regarding the Grid of the Future*, N.Y. Public Service Commission, March 26, 2025: https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={4086D395-0000-C010-9C55-DBB2B5B6D41B}.

[10] Building Decarbonization Coalition, *et. al.*, Filing, Filed in Case 24-E-0165, N.Y. Public Service Commission, November 11, 2024. *See*: https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={F0551398-0000-CA4D-BA1B-188FC2DBDDDC}.

utility costs and emissions, particularly in colder and more humid climates; offering a more equitable and scalable approach to electrification; and a unique strategic opportunity to support a just transition for workers into high-quality jobs in pipefitting, geothermal drilling, and clean energy infrastructure, in addition to offering benefits to ratepayers by providing a viable alternative for utilities to increasingly risky and expensive investments in aging gas systems.[11]

Resource Efficient Decarbonization

Use Resource Efficient Decarbonization (RED) strategies including strategic thermal energy network, wastewater energy transfer and thermal energy storage deployment to avoid peak demand growth.

Regulatory Framework

"*The PSC should continue to develop the regulatory framework for TENs in a manner that provides increased market understanding and certainty as to what regulations will be required and for which types of systems. This is especially integral for multi-user (non-campus) TENs.*"

On July 5, 2022, Governor Hochul signed the Utility Thermal Energy Network and Jobs Act (UTENJA) into law. UTENJA requires the Commission to "create fair market access rules for utility-owned thermal energy networks to accept thermal energy that aligns with the climate justice and greenhouse gas emissions reductions requirements of the Climate Leadership and Community Protection Act (CLCPA) and that does not increase greenhouse gas emissions or co-pollutants" (PSL §66-t(1)(a)).

The TENs regulatory framework will be necessary to provide market certainty and to ultimately scale these systems. It is critically important to establish a basic regulatory framework that will ultimately define how, in the future, a diverse set of parties will interact with the thermal energy network, its operators, its suppliers and its customers and how each of these parties will assume their role. The iterative nature of developing the framework is worth noting. The framework can and should be continually updated and refined as best practices are identified and lessons are learned from the pilot projects.

The principles and functionality of an efficient thermal energy market should drive the development of the regulatory framework and deliver value propositions. A market design framework is necessary to inform the regulatory proceeding. Defining roles and functions for market actors is needed to best contemplate the rules necessary to govern the thermal marketplace. The State needs to immediately advance the UTENJA pilots and in parallel begin a

[11] Buro Happold, *Optimal Scenarios for Thermal Energy Networks*, September 12, 2025. Filed in Case 22-M-0429, N.Y. Public Service Commission, September 22, 2025. *See*: https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={F0C47199-0000-C12C-883E-291B53BD19AC}.

rigorous process to align stakeholders around core market principles, market design and a regulatory framework. Once learnings come in and efforts are made to engage a diverse set of stakeholders and work toward alignment, then a robust discussion on system design and specific technologies can be had in a more productive way.

A regulatory and functional system framework is necessary to unlock a thermal sector marketplace in New York so that appropriate technologies are applied in the appropriate context. Several attributes of market design, regulatory frameworks, market actors and physical functionality should be integrated into a regulatory framework. It is unnecessary for all of these attributes to be present, but important to note they are all interconnectable and interoperable in order to provide least cost and fully-optimized thermal energy infrastructure. Core regulatory principles must at least include:

- Regulatory classification and rules for IOU and non-IOU TENs owners and operators.
- Transparent accounting, cost, engineering data and design.
- Non-discriminatory connections for customers and Thermal Energy Resource providers.
- Many different Thermal Energy Resources.
- System interconnectability, interoperability, quality and reliability.
- Optimization and efficiency.
- Standardized pricing.
- Market competition.
- Franchise opportunities.
- Public-private partnerships.
- Shared financing between multiple ownership entities.

We will continue working with and aligning key stakeholders and market actors to further refine and define regulatory principles and frameworks to support the development of a New York State thermal energy marketplace.

Support for Municipal and Community TENs

"NYSERDA, DPS, and other State actors should explore the role of area-based thermal energy planning and resources that support municipalities and communities to identify locations with high potential and local support for TENs."

Supporting municipalities and communities in identifying high-value TENs projects is worthwhile. The State should evaluate how likely the projects are to move forward and focus on supporting projects that are likely to move past the feasibility study phase. We recommend that the State outline a strategy to finance these projects in order to get them beyond the feasibility phase. The state should consider a diversity of ownership models. For example, a municipality project could partner with utilities, or include public/private financing models, or incorporate

new TENs related activities into existing municipal utility or local economic development practices.

Additionally, we would discourage introducing a new term or phrase "area-based thermal energy planning" to describe this work. Rather, it would be more helpful to describe how this fits into existing municipal and economic development planning procedures. The urban planning industry should be engaged to identify knowledge gaps and define best practices relating to this work.

Additional Proposals

Below are proposals that have not yet been included in the State Energy Plan, but that would be helpful in scaling thermal energy networks and we recommend including them in the final Plan.

Waste Heat Recovery

Heat that would otherwise be emitted from buildings can be a valuable resource. TENs can help ensure that the excess heat created from data centers (and other 24/7 cooling systems), wastewater treatment plants, and industrial processes is not wasted and instead redistributed in the form of usable thermal energy for buildings.

TENs are designed to use the heat resources of a location, and waste heat from a data center is a valuable resource: it is recoverable and, because data centers function 24/7, it is constant. Integrating a data center into a TEN thus transforms data centers from isolated energy consumers into active contributors to a community's energy ecosystem. Community resources like wastewater treatment plants are not likely to be removed, and therefore a good entity to rely on for continued heat in a TEN. Other industrial processes should be considered carefully before being utilized, ensuring that connecting to a TEN isn't keeping an outdated process that is otherwise high-polluting in operation.

Using waste heat resources can reduce the total cost of the thermal energy network by reducing the number of boreholes necessary to balance the system. It can also reduce emissions and save water by reducing the number of cooling towers that would otherwise be necessary to reject heat. Additionally, for energy-intensive operations like data centers, using the waste heat makes it much more beneficial for the community it is placed in by reducing noise, saving water, and reducing strain on the electric grid.[12]

[12] Ashley Besic, *Can Data Centers Heat Our Buildings? Using Thermal Energy Networks to Reuse Data Center Waste Heat* (Building Decarbonization Coalition, July 2025). *See:* https://buildingdecarb.org/resource/tens-data-centers.

The State should determine near-term waste heat policy pathways through incentives and requirements for "thermal readiness" for new waste resources and/or by determining ways to regulate waste heat emissions by mandating that when possible, heat that would otherwise be wasted should be used in a TEN.

One such pathway could promote proactive market transformation policies that require "thermal readiness" for new waste heat resources by identifying and implementing policy incentives to encourage existing waste heat resources to either participate or serve as anchor thermal sources for future TENs.

The New York State Department of Environmental Conservation (DEC) could consider regulating new waste heat resources of significant size, similar to the *German Energy Efficiency Act*. A fee for large waste heat emitters would be required and the fee would then be waived if waste heat is captured and used in TENs or in a single building. This would allow for heat recovery at the facilities that would otherwise reject the most heat (data centers, wastewater treatment plants, industrial processes). This can save money for industries that generate significant waste heat, provide lower cost heat for adjacent heat users, and provide a path to large-scale decarbonization if waste heat feeds thermal energy networks.

Thermal Energy Storage

New York State has a nation-leading battery storage goal of six gigawatts of energy storage by 2030, which represents at least 20 percent of the peak electricity load of New York State.[13] The State estimates that this goal will support a buildout of storage deployments estimated to reduce projected future statewide electric system costs by nearly $2 billion, in addition to further benefits in the form of improved public health because of reduced exposure to harmful fossil fuel pollutants.

The progress that has been made with battery storage should be expanded to thermal storage. Thermal energy storage systems store intermittent heat through underground geologic reservoirs via boreholes or above-ground storage tanks and distribute that stored energy when needed in the system. By having the ability to recall and redistribute stored thermal mass through the network, TENs can temporally disaggregate the need for thermal energy with otherwise high periods of electrical demand.

The State's battery storage goal should be at least doubled to twelve gigawatts, with a requirement that half of this goal be met through investment in thermal energy storage.

[13]NYSERDA, "*Approval of New York's Nation-Leading Six Gigawatt Energy Storage Roadmap Announced*," June 20, 2024. *See*: https://www.nyserda.ny.gov/About/Newsroom/2024-Announcements/2024_06_20-Governor-Hochul-Announces-Approval-Of-New-Yorks-Nation-Leading.

Alternatively, given the immense potential, the State could set an ambitious 20 gigawatt thermal energy storage goal to be achieved by 2030. This will help use lower cost and increase energy storage capacity, at potentially longer durations, to improve grid utilization. It will also increase the avoided costs of electric system buildouts from the battery storage goal and further improve public health.

Conclusion

We applaud the State's leadership as a TENs innovator, and the proposals in the State Energy Plan reflect that. With consideration for our recommendations, including the current and additional proposals, New York can continue its leadership in building and scaling thermal energy networks and thermal storage as an effective decarbonization tool that promotes long-term energy affordability, sustainable jobs, and effective demand management.

We look forward to working with the State on the Thermal Energy Network roadmap and to identify and address barriers to scale the thermal energy marketplace, help build a regulatory framework and fair market principles to scale Thermal Energy Networks and advance thermal storage and waste heat recovery policies.

III. Gas System Transition:

New York Cannot Meet the Legal Requirements of the CLCPA Without a Meaningful Policy Shift

New York cannot meet the Climate Leadership and Community Protection Act's ("CLCPA") greenhouse gas ("GHG") reduction requirements without steep emissions cuts from existing buildings, and in particular, a sharp reduction in the dependence on methane gas for heating and other uses. Due to utilities' near-monopoly on residential and commercial gas supply and their incentive to continue making capital investments in the gas distribution system, clear emissions reduction targets and a timeline for system downsizing and transition are critical to ensuring equitable and lowest-cost reductions in emissions consistent with the CLCPA targets.

Utilities Continue to Double Down on Gas

New York's gas utilities are continuing their heavy investment in their distribution networks. "Their collective balance of undepreciated distribution assets has more than doubled over the past 10 years, and they have spent an additional $5 billion to maintain and expand their gas

networks since the CLCPA was enacted in 2019."[14] They are on pace to incur an additional $28 billion or possibly more in capital expenditures between now and 2043,[15] including the Northeast Supply Enhancement gas pipeline project which the New York Public Service Commission ("PSC") just endorsed as part of National Grid's long-term gas system plan.[16] Gas mains are very costly to install and to replace. For New York's gas utilities, the average installation cost per mile of a gas distribution main is over $3 million, with a total cost to ratepayers that is closer to $6 million after additional expenses are taken into account. In New York, a mile of gas main serves, on average, 100 ratepayers. Thus **the avoidable cost of installing new gas distribution main averages over $60,000 per ratepayer**.[17]

The consumption of fossil methane gas delivered through distribution pipeline networks to residential and commercial buildings accounts for a large percentage of New York's economy-wide emissions. As a result, utilities will need to reduce and eventually eliminate their deliveries of fossil methane gas in order to comply with the CLCPA.

As the Draft Plan recognizes, growing competition from non-gas alternatives will make gas more expensive: (i) the market for energy use in buildings is becoming more competitive, undermining the existing gas utility business model that has historically kept rates affordable: namely, ongoing network expansion and the spreading of costs over many decades under the assumption that the network will continue to expand and be in use; (ii) consumer energy preferences are changing. A desire for comfort and convenience, recognition of potential cost savings from more efficient and flexible devices, and concerns about the negative health and environmental impacts of gas and other fossil fuels are increasing the demand for electrification. The performance of electric technologies has vastly improved, reducing the competitive advantage of gas for space and water heating, cooking, and other applications. Since at least 2022, heat pump installations have been outpacing gas furnace installations.[18]

As competition and climate policies put downward pressure on gas consumption and gas customer counts, the costs of safely maintaining gas networks will fall to the shrinking pool of gas customers who remain on the system, further incentivizing customers who have the means to exit the system. Lower-income gas ratepayers are especially at risk. Low- and moderate- income ("LMI") ratepayers are least able to make the investments needed to exit the gas system, and so

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[14] Michael J. Walsh and Michael E. Bloomberg, *The Future of Gas in New York State* (Building Decarbonization Coalition, March 2023), p. 4. *See*: https://buildingdecarb.org/wp-content/uploads/BDC-The-Future-of-Gas-in-NYS.pdf.
[15] *Ibid*.
[16] New York State Public Service Commission, "PSC Accepts Plan to Advance Gas System Reliability of Largest Natural Gas Delivery System in New York State," September 18, 2025, https://dps.ny.gov/news/psc-accepts-plan-advance-gas-system-reliability-largest-natural-gas-delivery-system-new-york.
[17] Walsh and Bloomberg, *Future of Gas in New York State*, 4.
[18] NYSERDA, "Heat Pumps Outsell Gas Furnaces Again," (last accessed October 6, 2025). *See*: https://www.nyserda.ny.gov/Featured-Stories/Heat-Pumps-Outsell-Gas-Furnaces-Again.

they are at risk of being trapped and made to shoulder a disproportionate share of the burden of higher energy costs as gas rates spiral upward. Remaining on gas is also not a palatable option for LMI households, given gas use is associated with worse health outcomes and higher asthma rates,[19] especially among children and other vulnerable populations, not to mention the continuing march of negative climate effects resulting from fossil fuel use.

Gas utilities' current business model also cannot sustain the self-reinforcing feedback loop of ratepayer exits and increasing rates. Without significant policy shifts and government action to ensure prudent gas system planning, New York will eventually face an additional crisis over the widening gap between the costs of maintaining infrastructure that fewer and fewer people will use and waning available revenues to safely manage it.

Government Action is Needed to Avert Energy Affordability and Environmental Crises

New York must take a managed, phased approach to gas system transition. A well-planned strategic downsizing of gas distribution networks that minimizes stranded assets and stranded customers through state and local-level planning and implementation efforts is necessary to help individuals and communities end their reliance on gas without compromising access to safe, affordable, and reliable energy services.

The legislature must also act to make a managed, phased transition possible. New York law currently impedes proper implementation of a managed, phased transition. First, it imposes an "obligation to serve"[20] on utilities, defines that obligation as being fuel-specific, and does not provide for exceptions to that obligation. Second, the law provides for a cross-subsidy that defrays the cost of extending mains and service lines to new ratepayers, further incentivizing fossil fuel dependence. The current obligation on utilities to serve gas must thus be modified to allow for alternative methods of meeting customer energy needs through non-pipeline alternatives, and the final State Energy Plan should incorporate this critical affordability recommendation.

The State Energy Plan Should Direct the PSC and DEC to Set and Enforce Declining Emissions Targets for Gas Utilities

In addition to legislative action, there are currently regulatory actions that can and should be taken by the Public Service Commission and the Department of Environmental Conservation ("DEC") to address GHG emissions from buildings. The CLCPA requires DEC to promulgate regulations that, among other things: (i) include legally enforceable emissions limits, performance standards, or measures or other requirements to control emissions from greenhouse

[19] Gruenwald, Talor, Brady A. Seals, Luke D. Knibbs, and H. Dean Hosgood, III. 2023. "Population Attributable Fraction of Gas Stoves and Childhood Asthma in the United States" *International Journal of Environmental Research and Public Health* 20, no. 1: 75. https://doi.org/10.3390/ijerph20010075.

[20] Public Service Law, §65(1).

gas emission sources; (ii) reflect substantially the findings of the Climate Action Council's Scoping Plan; (iii) include measures to reduce emissions from sources that have a cumulatively significant impact on statewide greenhouse gas emissions, including specifically, boilers or furnaces that burn oil or natural gas.[21] Given that the buildings sector is the largest source of greenhouse gas emissions in the State,[22] and that the CLCPA specifically includes, "boilers or furnaces that burn oil or natural gas," it therefore follows that DEC must address buildings sector-specific emissions targets. The recommendations in the State Energy Plan should reflect this legal requirement.

Gas utilities and the PSC have cited the lack of explicit and specific buildings sector or utility gas sector-specific emissions limits in the CLCPA when pressed to set or enforce specific emissions reduction targets for gas utilities. In recent proceedings before the PSC, gas utilities have continued to put forward, and the PSC has declined to disapprove, plans that maintain business-as-usual gas infrastructure investments, demonstrating the need for clear regulation to rein in the spending and guide their long-term gas planning efforts. The gas utilities have cited the lack of sector emission limits in the CLCPA to avoid being held to a specific degree of emissions reduction or gas sales reduction, and the PSC has declined to reject these plans, citing the lack of prescribed emission reductions allocated to the buildings sector.

Currently, gas utilities have a business incentive to continue to make capital investments that entrench reliance on the gas system because they can recoup a significant rate of return from customers for their shareholders for expenditures on capital investments in new or replacement gas pipelines. Conversely, gas utilities have less incentive to spend money on programs for building weatherization and electrification, which do not provide a codified return on investment like capital expenditures, even if these programs would produce lower-cost emission reductions.

Although the PSC has recognized that gas utilities will need to reduce emissions from combustion of the methane gas they distribute to buildings across the state, and CLCPA Section 7(2) requires the PSC to evaluate the consistency of gas utilities' plans with the CLCPA's emissions mandates, the PSC has cited the lack of a mandate or emissions cap expressly for the gas distribution system to avoid requiring gas utilities to implement any specific emission reductions or emission reduction measures in recent rate cases.

Gas utilities have brushed off the direct recommendations of the Climate Action Council's Scoping Plan, asserting that the Plan "is not a legally binding document."[23] For example,

[21] Environmental Conservation Law, § 75-0109(2)(b),(c),(d).
[22] N.Y. Dept. of Envtl. Conservation, 2023 Statewide GHG Emissions Report (Dec. 2023), at vi, Tbl. ES.3 (reporting 2021 New York State GHG emissions by economic sector).
[23] Reply Comments of National Fuel Gas Distribution Corp. at 6, NY PSC Case No. 22-G-0610 (Apr. 18, 2023); *see also* Reply Comments of New York State Electric & Gas Corp. and Rochester Gas & Electric Corp. at 2–3, NY PSC Case No. 23-G-0437 (Jan. 19, 2024), (Scoping Plan recommendations "are not legally binding").

National Fuel Gas defended its long-term plan's anemic emissions cuts by asserting that "the GHG emissions reduction targets in the CLCPA are statewide targets and the CLCPA does not mandate specific emissions reduction targets for natural gas utilities,"[24] and the PSC implemented the plan with only minor modifications and without requiring specific GHG reductions. New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation have followed suit with their long-term gas plan in the same docket.[25]

If the PSC continues to authorize long-term gas plans that result in minimal emissions reductions from the buildings sector, achieving New York's statewide GHG reduction mandates will require much steeper cuts on a quicker timeline from other sectors than would otherwise be needed. This outcome, which contravenes Section 7(2) of the CLCPA, is likely to be far costlier and more inequitable to everyday New Yorkers than a managed downsizing of the gas system and gradual emissions reductions from buildings that ultimately align the sector's GHGs with the CLCPA targets.

It is therefore critical that the State Energy Plan recommend that the PSC establish emissions limits for gas delivered to buildings and include direction to gas utilities to review their system maps and identify strategic areas of the system (such as areas with leak prone pipes requiring repair or replacement) for phased and timely decommissioning.

Comments on Specific Policy Recommendations in the Draft Plan

4.1 Reducing Natural Gas Use

We agree that the PSC and supporting agencies should continue to reform the regulations that govern gas planning, gas system investment, and ratemaking to facilitate a safe, reliable and affordable transition away from our current heavy reliance on the gas system.

However, we urge the Planning Board to give direction to the PSC and supporting agencies to hold utilities responsible for specific minimum carbon emissions reduction requirements for the buildings sector and require better long term planning that complies with the requirements and intent of the CLCPA, as well as better integration between electric and gas system planning. This is also relevant to the recommendation contained in 4.9 of the Gas chapter in the Draft Plan (discussed in more detail below), regarding setting utility-specific targets, as that approach risks utilities pleading unique circumstances necessitating retention of their entire gas system, indefinitely.

[24] Reply Comments of National Fuel Gas Distribution Corporation at 10, NY PSC Case No. 22-G-0610 (Apr. 18, 2023).
[25] *See* Reply Comments of New York State Electric & Gas Corp. and Rochester Gas & Electric Corp. at 5–6, NY PSC Case No. 23-G-0437 (Jan. 19, 2024).

We also agree that the PSC should explore alternative cost recovery mechanisms and rate design that helps incentivize consumer electrification by making electric rates more affordable.

4.2 Planning for Safety, Reliability, and Resiliency

While we agree with the need for greater resiliency and reliability planning for New York's energy sectors, including the existing gas infrastructure, we noticed there was no discussion in this section about modern heat pump technologies, including cold climate air source heat pumps and geothermal technologies which are available as better alternatives to gas. Recent studies and data show that cold climate air source heat pumps can provide efficient, reliable heating on days as cold as -15℉.[26]

We strongly disagree that so-called "renewable natural gas" ("RNG") is needed for "supplemental heating" in New York. Advanced cold-climate heat pumps have been shown to operate efficiently even at the lowest temperatures regularly experienced in New York, as demonstrated by the DOE Cold Climate Heat Pump Challenge.[27] Furthermore, even in the event of a need for supplementary heating, maintaining the gas system at its current scale solely to address residual heating loads during extremely rare occurrences would be an impractical approach (see below for more discussion on why RNG is not appropriate as a supplemental heating source).

Additionally, geothermal heat pumps and thermal energy networks ("TENs") and storage offer added grid support and reliability and should be advanced as solutions in areas where there is concern that cold-climate heat pumps might lose efficiency in the coldest climates. Geothermal technology and TENs should be adequately considered in this planning. TENs have multiple design possibilities that allow for different types of sources and sinks of thermal energy including geothermal, bodies of water, waste heat from buildings and industrial processes, wastewater energy transfer and wastewater heat recovery. TENs can be designed entirely fossil fuel free and are a major tool in the toolkit to achieve building and neighborhood-scale decarbonization. There are significant benefits to utilizing TENs across New York. They can also help with demand reduction and management, grid costs, and energy storage.[28]

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[26] NYSERDA, *Do Heat Pumps Really Work in Cold Climates?*, (last accessed October 6, 2025). https://cleanheat.ny.gov/heat-pumps-cold-climates-do-they-work/?

[27] Vrushali Mendon et al., *Performance Results from DOE Cold Climate Heat Pump Challenge Field Validation*, PNNL-37127 (Richland, WA: Pacific Northwest National Laboratory, January 2025), https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-37127.pdf.

[28] *See, for example,* Buro Happold, *Grids of the Future Harness Thermal Energy to Work Across the Meter and Effectively Manage Demand*. December 2024. *See filing in* Case 24-E-0165, *Proceeding on Motion of the Commission Regarding the Grid of the Future*, N.Y. Public Service Commission, March 26, 2025: https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={4086D395-0000-C010-9C55-DBB2B5B6D41B}.

4.3 Planning for Efficient Investment

In order to meaningfully reduce GHG emissions from our environment, carbon emissions from buildings (primarily driven by gas use for space heating and hot water) must decline precipitously between now and 2040. In order to achieve this, energy uses inevitably need to shift away from fossil fuels, reducing gas demand in New York. The recent adoption by the State Fire Prevention and Building Code Council of the requirements in the *All Electric Buildings Act* and the growth of heat pump sales set the stage for shifting customer demand.

It is important to plan for declining gas system demand in order to avoid twin affordability and environmental crises (discussed in detail above) for the customers left on the gas system who will shoulder a greater share of subsidizing infrastructure and delivery costs, while also bearing the negative health effects. This planning must begin by reducing gas system investments in line with declining demand. The Draft Plan does consider the cost-savings for utilities to pursue lower-cost measures for maintaining gas infrastructure where decommissioning is not yet possible, including pipe relining and repair as alternatives to full pipe replacement.

Notably, however, the Draft Plan ***does not*** consider how the ***avoided cost of gas infrastructure investment*** (to the tune of billions of dollars) can be re-deployed toward helping customers electrify and transition to healthier and lower carbon energy options (e.g. non-pipe or non-wire alternatives) and, as mentioned previously, the Draft Plan does not discuss the need to reform the existing "obligation to serve" gas to customers in New York.

4.3.1 Long Term Planning

While well-intentioned and forward-looking, the gas utility long-term planning process at the Public Service Commission has not necessarily fulfilled its own objectives of ensuring consistency with the CLCPA, incorporating the Scoping Plan recommendations, or "requiring LDCs to develop plans to limit infrastructure build." *See* Case 20-G-0131, *Proceeding on Motion of the Commission in Regard to Gas Planning Procedures*, Order Instituting Proceeding at 3 (Mar. 19, 2020); *id.*, Order Adopting Gas System Planning Process at 4, 19. The stakeholder comments, independent consultants, and proposed utility plans have teed up fundamental questions for the Public Service Commission around the magnitude of emission reductions that gas utilities should be targeting, the appropriate role for alternative fuels in the gas system, the role of repair and relining versus replacement to address aging pipe, the reasonableness of utility load and design day forecasts and methodology, the appropriate role for hybrid gas-electric systems, the role for delivered fuels to address peak demand, and other important and challenging issues which still need to be resolved.

The Draft Plan recognizes that the current utility long term gas planning process can and should be improved.[29] This process should include requiring utilities to better consider how to minimize lifetime investment costs and avoid additional infrastructure investment where possible, as well as better identifying portions of the gas system which can be safely and strategically retired. Additionally, clear emissions reduction targets should be set and enforced by the PSC (and DEC as appropriate) so that gas utilities can better know what they should be planning toward. Further, the recommendation to initiate a new strategic planning process as discussed below (4.9) lacks clarity on how such a process would interact with the existing planning process in the PSC's Long Term Gas Planning Dockets. Additional concerns with the existing planning process (and also any future one) include the fact that the PSC has hired independent consultants (at a cost to ratepayers) but then declined to meaningfully heed their findings and recommendations, as well as delaying determinations about the long-term vision for the gas system, thus allowing gas utilities to continue to pursue business-as-usual spending in the near term.[30] Independent consultants have played an important role in the long-term gas planning proceeding to date, which should continue, but the PSC should better value their findings where appropriate.

Current economy-wide emissions reduction targets do not provide sufficient direction to the PSC or to gas utilities for efficient long-term planning. As evidenced by their long-term plans, this lack of direction is resulting in gas utilities continuing to invest ratepayer money in and expand the gas system infrastructure while prolonging dependence on gas end-uses and foreclosing the best opportunities for downsizing the system in an equitable, managed, and affordable manner.

4.3.2. Integrated Energy System Planning

We agree that more integrated energy system planning is essential for an efficient and equitable energy transition and that it will require reforming utility practices and tools to incorporate relevant information from the gas and electric systems with customer-level insights. This will require greater transparency and data sharing (including system maps and analyses) across electric and gas utilities and with the PSC as regulator and manager of the integrated planning process.

One of the takeaways from the New York State Electric and Gas Corporation ("NYSEG") "tabletop" gas system decommissioning exercise from earlier this year, was that NYSEG does not have the ability to overlay its gas and electric systems and assess whether locations where there are opportunities to prune its gas pipes correspond to places with headroom on the electric

[29] NYSERDA, "Draft New York State Energy Plan, Chapter 3: Natural Gas," July 25, 2025, at p. 27, https://energyplan.ny.gov/Plans/Draft-2025-Energy-Plan.

[30] The PSC, in its most recent National Grid order failed to respond to comments pointing out that National Grid's corporate Clean Energy Vision's heavy reliance on hydrogen blending is flatly incompatible with the Draft State Energy Plan (and the Scoping Plan).

grid.[31] In order to efficiently plan both systems, it is very important to understand how they interrelate.

This is particularly disappointing, given utilities are best positioned to provide information on which parts of the electric grid are ready to accommodate increased electric load. In fact, in its July 2023 Order in the New Efficiency: New York proceeding (Case 18-M-0084), which has now been rebranded as the Energy Efficiency and Building Electrification (EE/BE) proceeding, the PSC ordered the electric utilities to file "Electrification Load Serving Capacity Maps." Such maps can be useful to integrated planning and identifying areas with additional load headroom suitable for targeted electrification measures.

4.3.3 Non-Pipe Alternatives ("NPA")

We agree that more NPA implementation is needed to support a safe and strategic reduction in gas system investments and that utility planning practices need to evolve to better support NPA deployment. Better tools and effort are needed for identifying potential NPA projects and implementing them.

NPAs are a strategic alternative to avoid pipeline expansion and replacement. As recognized in the Draft Plan, "pipe replacement constitutes a large share of gas utilities' capital expenditures", representing 40 percent of annual investment through 2028. The majority of this investment (79 percent) is to replace leak-prone pipe (LPP)...and fully replacing LPP is expected to cost tens of billions of dollars, underscoring the value of NPAs that avoid the need for pipe replacement."(p. 32-33).

Instead of investing in gas lines, which are in conflict with the emissions reduction targets and requirements of the CLCPA and which will eventually be stranded assets, utilities can repurpose funds toward more sustainable solutions, including thermal energy networks (TENs) to decarbonize heating and cooling.

We agree with the recommendation to identify LPP segments that may be best suited for NPAs, including segments on the edge of the gas network, with fewer customers and where the electric system has sufficient capacity. These actions will better align New York with its climate goals, support grid resilience, and reduce long term energy costs, while supporting local job creation and boosting health benefits.

[31] Coordination on multiple proceedings is needed, such as the NYSEG Long Term Gas Plan and rate case (25-G-0378) and the Proactive Planning Proceeding (Case 24-E-0364). For example, NYSEG has recently requested $467.9M for urgent upgrade projects for 2025-2031, and it would be helpful to better understand if such urgent upgrades correspond with either a capacity constrained area or a segment of the pipe that has been identified as a potential for NPAs.

As recognized in the Draft Plan, capital investments in the gas system create long-term obligations to recover the costs of those investments, and utilities must avoid such investments as much as possible by utilizing interim measures to maintain pipeline where it is not yet feasible to decommission it, through less costly methods such as pipe relining and repair.

In addition to identifying pipe segments on the edges of the gas network and utilizing lower-cost interim solutions such as pipe repair and relining, it is critical that the current utility "obligation to serve" gas is amended to allow flexibility to utilities to meet customers' energy needs through reliable and effective alternatives.

4.3.4 Planning Standards

We agree that gas utilities should transparently evaluate whether their planning and investment standards properly balance the need for reliability with the need to avoid imposing unnecessary costs on ratepayers, and that gas utilities' methodologies, including forecasting for design day demand, should be transparent.

In addition to considering potential impact on reliability and resilience regarding proposed gas supply assets, state policy decisions should also include considerations around the psycho-social impacts for customers, and especially for disadvantaged communities and LMI households, while leveraging the requirements in the Public Service Law Section 65(1), including providing service that is "in all respects, just and reasonable."[32]

4.4. Evaluate Approaches to Manage Gas System Affordability and Support NPA Viability

We agree that the PSC should continue to evaluate and develop new approaches to strategically manage gas system affordability including costs borne by ratepayers resulting from system expansion or incomplete customer participation in NPAs. The PSC should hold utilities accountable when they fail to propose adequate NPAs or policies that do not comply with the letter and intent of the CLCPA in their long term gas planning dockets and in the rate cases.

4.5 Cost Recovery Mechanisms

We are disappointed to see that the scenarios discussed under Cost Recovery Mechanisms fail to consider how the avoided cost of unnecessary investment in gas infrastructure could be repurposed toward investment in electricity generation and distribution capacity.

Instead, there is consideration for an "Electric benefit payments" scenario in the Draft Plan which would reward customers who retain gas service to meet their peak heating needs and describes such behavior as "providing a benefit to electric ratepayers" by reducing the electric system's peak demand and helping to "avoid the need for incremental investment in electricity generation and distribution capacity that would have been needed to meet a higher peak demand

[32] Public Service Law, §65(1).

had those customers fully electrified." "Providing compensation to gas ratepayers for a share of this net [benefit] would reduce cost burdens on remaining gas ratepayers and [improve] the financial viability of a low-throughput gas system." Additionally, there is no consideration of the possibility of reducing a gas utility's revenue requirements.

This proposal is very concerning and inappropriate in the context of New York's CLCPA requirements. It will lead to perverse incentives for ratepayers staying on the gas system, with all of the associated costs of maintaining aging gas infrastructure which can add up to billions in costs over the years.

4.6 Alternative Fuels

We strongly urge against the direction in the Draft Plan to utilities and the PSC to "consider the use of alternative fuels" in any residential context. Hydrogen is not appropriate for the existing infrastructure and RNG is not a sustainable solution in this space as discussed below.

4.6.2 Hydrogen

We agree with the Draft Plan, that due to cost, safety, climate, and efficiency limitations (use of green hydrogen as a substitute for gas requires nearly five times as much renewable generation as directly using the electricity in our buildings[33]), New York should continue to not blend hydrogen into the gas distribution system. Limited state resources should not be expended on further researching hydrogen pilot projects for commercial or residential buildings.

4.6.1 Renewable Natural Gas ("RNG")

We disagree with the proposed use and role of RNG as discussed in the Pathways Analysis, especially RNG fulfilling "all end uses where gas is still used in 2050."[34] RNG is not a sustainable alternative to be used beyond truly difficult-to-electrify end uses and is not an appropriate source for "supplemental heat."

RNG is still composed of methane gas which is prone to leaks and burns just like fracked gas. Additionally, it is too scarce and costly to serve as a meaningful heating solution for residential buildings, with national supply covering at most a fraction of current demand. RNG's inadequacy of supply has been recognized previously by NYSERDA.[35] Directing RNG into the buildings sector would lock in expensive-to-maintain gas infrastructure and divert a limited resource away from hard-to-decarbonize sectors where no other alternatives exist. Using RNG

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[33] https://rmi.org/low-carbon-fuels-have-a-limited-role-to-play-in-new-yorks-buildings/; *see also* M. Shron et al., *Blending Hydrogen and Natural Gas: A Road to Nowhere for New Yorkers*, Switchbox (Sept. 2024), https://library.edf.org/AssetLink/s8f1821gt5082xc120811663012uib7c.pdf.

[34] NYSERDA, "Draft New York State Energy Plan, Chapter 3: Natural Gas," July 25, 2025, at p. 39, https://energyplan.ny.gov/Plans/Draft-2025-Energy-Plan.

[35] For example, an ICF analysis for NYSERDA found that New York has the potential for 47 to 147 trillion Btu per year (tBtu/yr.) of RNG. By comparison, the state's total natural gas consumption was over 1,400 tBtu in 2023.

for space heating where efficient heat pumps and alternatives already exist is a low-value, inefficient use of limited fuel supply.

4.6.3 "Certified" or "Differentiated" Gas

We agree with the recommendation that "certified" and other types of differentiated natural gas products should not be differentiated in the State's annual GHG inventory nor should the State currently accept claims that these types of gas reduce upstream methane emissions in other GHG reporting contexts.

If New York State considers use of measurement-informed differentiation as a tool to quantify and drive upstream GHG emissions reductions for fuels burned in-state, it is critical that such a program (1) be developed with opportunities for public input and (2) require robust, uniform standards for transparency, monitoring, measurement, reporting, and verification.[36]

4.7 Strategically Managing the Gas Transition for Gas Sector Workers and Businesses

We agree that gas sector workers should be supported through the expected energy transition away from gas infrastructure and agree that state agencies and regional economic development councils should work closely with utilities and labor organizations to leverage gas sector employees' existing skills to maximize economic opportunity for current gas sector workers and the development of just transition policies.

The 2022 *Utility Thermal Energy Network and Jobs Act* is an example of advancing neighborhood scale decarbonization solutions while providing good jobs. Additionally, the upcoming Regional Residential Weatherization programs authorized by the May 15, 2025 PSC Order on the EE/BE portfolio of incentive programs for 2026 - 2030 can serve as another opportunity for advancing decarbonization at scale and providing sustainable jobs.

4.8 Strategically Managing the Gas Transition for Disadvantaged Communities

We agree that an unmanaged gas system transition poses significant **health**, **affordability**, and **equity** risks to DACs.

The Draft Plan recognizes that combusting methane gas within homes (e.g. for cooking or heating) can increase the concentration of carbon monoxide (CO), methane (CH_4), formaldehyde (CH_2O), benzene (C_6H_6), nitrous oxide (N_2O), and nitrogen dioxide (NO_2), which can pose hazards to human health particularly when there is insufficient ventilation, leading to disproportionate health burdens from indoor air pollution.

[36] Maureen Lackner & Kristina Mohlin, *Certification of Natural Gas with Low Methane Emissions: Criteria for Credible Certification Programs*, EDF (2022), https://tinyurl.com/GasCertification.

As mentioned previously and also recognized in the Draft Plan, the continued expected departure of customers from the gas system, with increasing costs for maintaining such systems falling on fewer customers (who are more likely to be LMI and/or residents living in DACs), will lead to rising energy bills, unless managed through careful planning.

Additionally, there is a significant concern that residents living in DACs and LMI households do not have equitable access to clean energy building upgrades like weatherization, energy efficiency, and heat pumps/electrification or to economic or employment opportunities associated with the clean energy transition. These are issues many of our organizations, along with a broad coalition of groups, raised to the PSC through the EE/BE proceeding (among other venues). DACs and LMI households make up more than 40% of New York's population but will receive less than that in ratepayer funded incentives to access energy efficiency, weatherization, and heat pump incentives authorized by the PSC in May of this year, with almost 70% of funds being allocated across market-rate or non-LMI-specific programing for 2026 - 2030.[37] We urge the Planning Board to recommend that more funding be specifically allocated for LMI households and residents living in DACs.

4.9 Gas System Transition Plan

We appreciate the recommendation for an overall gas system transition plan, especially one that is led by agency staff and informed by key stakeholders through a collaborative process.

However, we strongly urge that such a plan be published sooner than the next State Energy Plan update and apply statewide, as time is of the essence here. Such a system transition plan must be launched immediately in order to provide needed direction to the utilities. It is important to ensure this process resolves key questions that so far have not been resolved through the Long Term Gas Planning process. Examples of issues that have not been adequately resolved through the existing planning process include clarifying any role for RNG, clarifying the role for repair or relining of leak prone pipe versus full pipe replacement, and clarifying the role, if any or at all, for hybrid systems and delivered fuels.[38]

With utilities already engaged in their individual Long Term Gas Planning dockets, which are currently proceeding at the PSC, locking in potentially problematic and inefficient investment decisions and long-term systems planning, clear targets and an overall vision for gas system transition that fully complies with the legal requirements of the CLCPA is needed before any more Long Term Gas Plans are approved by the PSC.

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[37] WE ACT, et. al., "Advocates Say PSC Order Makes Important Improvements But Fails to Direct Sufficient Resources to Meet Energy Affordability Crisis", May 16, 2025. *See*: https://weact.org/updates/psc-unlocks-5b-for-energy-saving-programs-but-leaves-struggling-new-yorkers-with-less-funding-than-they-need/.

[38] *This is meant to be an illustrative list and not necessarily indicative of support for any hybrid systems or delivered fuels, etc.*

Gas utilities are already required to engage in long-term planning that is consistent with the CLCPA, but as discussed above, their plans to date, and the PSC's review of those plans, have fallen short of what is required to cost-effectively decarbonize the buildings sector and effectively comply with the CLCPA. Setting declining emissions caps for gas utilities will provide clear guidance in the long-term planning process and should happen in the context of this State Energy Plan and as part of any long term gas system transition plan.

To minimize the cost of decarbonizing the buildings sector, mitigate the risk of imprudent gas system investments by gas utilities, and to ensure more rational long-term gas planning, the State Energy Plan and any subsequent gas system transition plan should establish clear parameters and targets to direct a managed downsizing of the gas system and further empower the PSC to effectively enforce this planning process.

Conclusion

There are significant unintended consequences that will result if gas utilities' spending and investment in gas infrastructure is not effectively checked. Even as New York continues to be a leader in pursuing ambitious climate goals, a multi-pronged policy approach will be necessary to tackle the challenges posed by the pressing need to decarbonize our buildings while also achieving the necessary equity and emissions reduction results.

We look forward to continuing this work with you toward developing a comprehensive and responsive State Energy Plan that meets the moment demanded of us by reducing harmful climate-altering greenhouse gas emissions, improving public health outcomes, and helping to combat climate change while advancing environmental justice and investing in disadvantaged communities statewide.

The staff of the Building Decarbonization Coalition and the members of our Coalition look forward to continued work with the State to implement these recommendations and ensure that New York's energy system transition advances towards a healthier, zero-emission future while protecting affordability, reliability, equity and environmental justice and a thriving economy with good jobs for New York's workers.

Respectfully Submitted,

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