



June 2, 2025

Hon. Michelle L. Phillips, Secretary
New York State Public Service
Commission 3 Empire State Plaza
Albany, New York 12223-1350
secretary@dps.ny.gov

**Re: CASE 25-M-0149 – In the Matter of Implementation of the All-Electric
Buildings Act**

Dear Secretary Phillips:

Advanced Energy United submits for filing the attached comments in response to the *Notice Seeking Comments*, Issued March 11, 2025 in the above referenced proceeding.

Respectfully submitted,

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Advanced Energy United Comments

I. Introduction and Background

Advanced Energy United (“United”) thanks the New York Public Service Commission (“Commission”) and Staff for the opportunity to provide comment on the White Paper to Implement the All-Electric Buildings Act (“AEBA”). United is a national association of businesses that works to accelerate the move to 100% clean energy and electrified transportation in the U.S. The term advanced energy encompasses a broad range of products and services that constitute the best available technologies for meeting our energy needs today and tomorrow. These include electric vehicles (“EVs”), energy efficiency, demand response (“DR”), energy storage, solar, wind, hydro, nuclear, heat pumps (air- and ground-sourced), and smart grid technologies. United represents more than 100 companies in the \$374 billion U.S. advanced energy industry, which employs 4.1 million U.S. workers and over 231,600 in the state of New York.

First, we commend Staff’s effort to minimize exemptions and comply with intent of AEBA and Climate Leadership and Community Protection Act (“CLCPA”). United agrees that the core intent in formulating the All-Electric Buildings Act was to develop concrete policy recommendations to address the “severity of climate change,” in light of the CLCPA,¹ and with Staff’s instinct to interpret Subdivision 7(e) narrowly.² As New York works to meet the goals outlined in the CLCPA, every investment in gas pipeline infrastructure may stall the state’s progress in meeting these key greenhouse gas reduction targets.

Beyond state climate goals, market conditions are evolving, and heating electrification is becoming more and more widespread. Heat pumps have been outselling gas furnaces for the

¹ *Danskammer Energy, LLC v. New York State Dep’t of Env’t Conservation*, 76 Misc. 3d 196, 229, 173 N.Y.S.3d 134, 160 (N.Y. Sup. Ct. 2022) (CLCPA enacted to address the “severity of current climate change and the threat of additional and more severe change”) (Citing Chapter 106 of the Laws of 2019; i.e., the CLCPA).

² New York Public Service Commission Staff. White Paper to Implement the All-Electric Buildings Act, p. 6. Case 25-M-0149. February 27, 2025.

last three years nationwide.³ Simultaneously, investments in gas utility distribution networks continue, and are on pace to incur an additional \$28 billion in capital expenditures between now and 2043.⁴ As the market continues to trend toward electric technologies in homes and businesses, there is a looming risk that gas pipeline investments may go unused prior to being fully depreciated. Further, as more consumers opt for electric technologies, there will be a small set of customers sharing rising gas delivery costs.⁵ Those will likely be customers who lack the financial resources or ability to transition to electric appliances, such as low-income, seniors, renters, and other fixed-income residents. Avoided new gas infrastructure investment has the potential to reduce this risk of substantial rate increases, unmanageable energy burdens for vulnerable populations, and stranded assets.⁶ Therefore, United believes it is most important to minimize the buildout of new natural gas pipeline infrastructure that may unnecessarily burden vulnerable populations. In this case, this means that exceptions to the AEBA that lead to build out of new gas services or mains should be minimized to the greatest extent possible.

As it relates to the “reasonableness standard,” that the Commission has been tasked with creating, United agrees that a time-based standard is most appropriate. As Staff write in their White Paper, a cost-based standard introduces too many unknowns. That being said, the time-based standard as proposed seems too blunt and unnuanced an instrument for the many circumstances that may arise related to types of building and customers, development clusters, electrification and efficiency configurations. Below, United has detailed several considerations – and questions – for Staff and the Commission to consider as they further refine the reasonableness standard pursuant to Energy code Section 11-104(7)(e). Our comments make the following points:

³ Data from the Air Conditioning, Heating, and Refrigeration Institute. Available at: <https://www.ahrinet.org/analytics/statistics/monthly-shipments>

⁴ Building Decarbonization Coalition. The Future of Gas in New York State. March 2023. Available at: <https://buildingdecarb.org/wp-content/uploads/BDC-The-Future-of-Gas-in-NYS.pdf>

⁵ Building Decarbonization Coalition. The Future of Gas in New York State. March 2023. Available at: <https://buildingdecarb.org/wp-content/uploads/BDC-The-Future-of-Gas-in-NYS.pdf>

⁶ Building Decarbonization Coalition. The Future of Gas in New York State. March 2023. Available at: <https://buildingdecarb.org/wp-content/uploads/BDC-The-Future-of-Gas-in-NYS.pdf>

- United encourages the Commission to explore a more categorical approach based on the building size and type, rather than just one averaged time-based standard.
- United encourages analysis comparing electric upgrade scenarios to include ground-source heat pumps, load flexibility technologies and programs, building shell efficiency measures, time-varying rates (“TVRs”), distributed energy resources (“DERs”), and flexible interconnection agreements.
- Complementary policies should discourage the connection to the gas system in the case of exemptions.
- United recommends caution with applying exemptions in cases with multiple service requests.
- Exemption rules should become stricter as we approach CLCPA deadlines.
- The Commission should use its Proactive Planning docket (Case 24-E-0364) to ensure that exemptions to the AEBA are minimal.

II. United encourages the Commission to explore a more categorical approach based on the building size and type, rather than just one averaged time-based standard.

While United understands Staff’s approach to simplify and streamline the exemption required by Subdivision 7 of Section 11-104 of the revised Energy Code, and the urgency to do so prior to December 31, 2025, exemptions to the AEBA should be as selective and narrow as possible. A one-size-fits-all approach is unlikely to be the best way to minimize those exemptions. As such, we encourage the Commission to further explore a categorical approach that is more specific based on factors such as building size, building function, or customer class.

For example, within the residential class, there may be small single-family homes or condominiums that do not require any upgrades to the electric grid, while larger multifamily buildings may require more time-consuming infrastructure upgrades. For a seven-story building, the number of units, and extent of electric grid upgrades required to supply service, could vary significantly depending on existing capacity in the area, and whether units are intended to house individuals or families, and whether the building owner intends to provide 5

electric vehicle chargers or 20 – not to mention variations in electric grid needs between, say, a two-story building or seven-story building.

United understands that the exemption intends to strike balance between reasonable delays for electric system upgrades and carrying out the intentions of AEBA. United’s suggestions do not intend to slow down additional affordable and low-income housing developments; however, in practice, the exemption may unfairly apply to larger multifamily buildings. In New York, current units in five- to 50-unit buildings constitute nearly 20% of the housing stock in the state, and almost 70% of the tenants in these buildings are low- and moderate-income.⁷ Assuming low- and moderate-income individuals continue to be the primary tenants of multifamily buildings, and that low-income individuals will cover disproportionate costs of the gas distribution system as more homes electrify,⁸ a one-size-fits all exemption has the potential to further lock low-income multifamily dwellers into increasingly expensive gas bills.

In addition to variations in needed electric system upgrades within the residential class alone, there could be vast differences in electric system upgrades within commercial or industrial classes, as well as *between* various customer classes. The need for electric system upgrades for a commercial all-electric kitchen would likely not be the same for a single-family home or a local sandwich restaurant. In addition, industrial facilities all have varying processes, behavior, and time- and total usage-based demand.⁹

Importantly, the proposed 18-month standard is untethered to the related *construction* timelines. If an industrial facility will take 24 months to complete from receiving its final permit to energization, the 18-month exemption will provide an unnecessary “out.” Recognizing that

⁷ Federal Reserve Bank of New York. Window of Opportunity: New York’s Small Multifamily Buildings, Expiring Equipment, and Clean Energy Goals. October 2023. Available at: <https://www.newyorkfed.org/medialibrary/media/outreach-and-education/climate/window-of-opportunity-new-yorks-small-multifamily-buildings-expiring-equipment-clean-energy-goals>

⁸ Building Decarbonization Coalition. The Future of Gas in New York State. March 2023. Available at: <https://buildingdecarb.org/wp-content/uploads/BDC-The-Future-of-Gas-in-NYS.pdf>

⁹ Energydynamics. Industrial Customer Class. Available at: <https://www.energyknowledgebase.com/topics/industrial-customer-class.asp#:~:text=Industrial%20customers%20include%20manufacturing%2C%20construction,pulp%20and%20paper%2C%20and%20steel.>

this is not within the existing expertise of the Commission, United would still prefer to see some analysis on how construction timelines vary between types of projects and locations within the state, and how that compares to the proposed time-based reasonableness standard before supporting any given length of time. All in all, it is clear that there are too many unknowns within and between customer classes, and with respect to construction timelines in different regions of the state and for different types of buildings, to deem 18 months an appropriate standard without more information.

Furthermore, United has reason to believe that 18-months may prove much too short a timeline to minimize the number of exemptions grant. In Consolidated Edison's 2023 rate case, Appendix 22, Table 6 shows average timelines for transportation interconnection for upgrades of over 300 kW¹⁰ in relation to the utility's earnings adjustment mechanisms. The table looks at service installs and system upgrades, noting that a "new secondary service install and system upgrade" – meaning new service cables and conduits and grid reinforcement required to service new customer load, grid reinforcement that may include new transformers, and extending primary feeders and/or new service cable and conduit – took an average of 741 days. "New overhead service installs and system upgrades" – meaning new overhead service, as well as grid reinforcement required to service new customer load and grid reinforcement that may include new poles, overhead transformers, primary feeder extension, and/or new overhead service cable – took an average of 774 days.¹¹ New Vault Service Installs took an average of 1,156 days, while New High Tension installations took 2,266 days. These average timelines for electric grid upgrades are far more than 18 months. While the average all-electric building may not require such drastic measures, a large new subdivision, industrial park, or commercial strip mall with significant EV charging offerings may. The utility also may have future plans to cite a data center nearby and want to provide a higher level of service to accommodate that future development. Without data to assure us that those EV-related

¹⁰ New York Public Service Commission. Docket No. 22-E-0064. Proceeding on Motion of the Commission as to the Rates, Charges, Rules, and Regulations for Consolidated Edison Company of New York, Inc. For Electric Service, p. 502, Appendix 22, Table 6. July 20, 2023.

¹¹ New York Public Service Commission. Docket No. 22-E-0064. Proceeding on Motion of the Commission as to the Rates, Charges, Rules, and Regulations for Consolidated Edison Company of New York, Inc. For Electric Service, p. 502. July 20, 2023.

timelines are extremely unlikely to affect new all-electric buildings, we question if the proposed exemption is stringent enough to prevent nonessential exceptions to the law.

III. United encourages analysis comparing electric upgrade scenarios to include ground-source heat pumps, load flexibility technologies and programs, building shell efficiency measures, TVRs, DERs, and flexible interconnection agreements.

In addition to adopting a more tailored approach to exemptions related to building size, type, and/or customer class, United encourages the Commission to: 1) be more specific as to what must be considered in the (minimum of) two electric system upgrade scenarios, and 2) require consideration of various technologies and load modifying measures before giving up on the all-electric option. For example, ground-source heat pumps can reduce energy consumption by approximately 25-50% compared to air-source heat pumps,¹² effectively enhance the operational reliability of the electric grid,¹³ and, coupled with building envelope improvements, avoid the need for new transmission lines.¹⁴

Electric buildings can also be paired with other advanced energy technologies that further amplify bill savings, reliability and resiliency benefits, and grid efficiencies. Examples of such symbiosis include the pairing of heat pump adoption with rooftop and community solar, distributed energy storage, smart thermostats, advanced metering infrastructure and time-varying rates, and demand response programs that can stack consumer bill savings and minimize new load impacts on summer or winter electric grid peaks.¹⁵ Heat pump water heaters, which can heat water during off-peak periods, are particularly flexible and can

¹² U.S. Department of energy. Guide to Geothermal Heat Pumps. February 2011. Available at: https://www.energy.gov/sites/prod/files/guide_to_geothermal_heat_pumps.pdf

¹³ Oak Ridge National Laboratory on behalf of the Department of Energy. Grid Cost and Total Emissions Reductions Through Mass Deployment of Geothermal Heat Pumps for Building Heating and Cooling Electrification in the United States. November 2023. Available at: <https://info.ornl.gov/sites/publications/Files/Pub196793.pdf>

¹⁴ Oak Ridge National Laboratory on behalf of the Department of Energy. Grid Cost and Total Emissions Reductions Through Mass Deployment of Geothermal Heat Pumps for Building Heating and Cooling Electrification in the United States. November 2023. Available at: <https://info.ornl.gov/sites/publications/Files/Pub196793.pdf>

¹⁵ Thomas Navidi, et al. Coordinating distributed energy resources for reliability can significantly reduce future distribution grid upgrades and peak load. August 2023. Available at: <https://www.sciencedirect.com/science/article/pii/S2542435123002659>

maximize benefits from whole-home electrification.¹⁶ Other technologies, like smart thermostats, home batteries, and even newer electric stoves with built-in battery storage, can shift electricity usage away from peak demand periods, stabilize the grid, and increase grid reliability and home resiliency.¹⁷

Flexible interconnection and automated load management tools can also be considered as a tool to limit exemptions to the AEBA, as they can allow DERs, like heat pumps and electric vehicle chargers, to connect to the grid with an understanding that their output can be curtailed in real time based on grid conditions, effectively reducing the capacity needs of the facility.¹⁸ This means that instead of forcing new projects to wait years for infrastructure upgrades, developers could connect their projects sooner, as long as they can adjust their consumption or generation during periods of congestion.¹⁹ The flexible interconnection agreement may even be temporary, serving only as a bridge until the utility is able to complete the full system upgrade. In United's opinion, this would be preferable to approving an exemption that further entrenches the pipeline system. We also believe that this type of exploration for workable alternatives is necessary to minimize the total number of exemptions and fully comply with the intent of the law.

IV. Complementary policies should discourage the connection to the gas system in the case of exemptions.

As laid out in section I, New York should be doing everything in its authority to avoid additional buildout of gas pipeline infrastructure. United encourages the Commission and Staff to consider including provisions in the exemption that would discourage the non-all electric alternative from relying upon pipeline infrastructure. If a development does qualify for a reasonable exemption to the AEBA, propane or other equipment, with the intention of

¹⁶ U.S. Department of Energy. Heat Pump Water Heaters. Available at: <https://www.energy.gov/energysaver/heat-pump-water-heaters>

¹⁷ National Renewable Energy Laboratory on behalf of Resilient Energy Platform. Battery Storage for Resilience. June 2021. Available at: <https://www.nrel.gov/docs/fy21osti/79850.pdf>

¹⁸ Camus Energy. What is Flexible Interconnection – and How Does it Help? Available at: <https://www.camus.energy/blog/what-is-flexible-interconnection--and-how-does-it-help>

¹⁹ Camus Energy. What is Flexible Interconnection – and How Does it Help? Available at: <https://www.camus.energy/blog/what-is-flexible-interconnection--and-how-does-it-help>

eventually replacing the equipment with all-electric alternatives, may be preferable to further buildouts of the gas pipeline system.

This could mean either encouraging temporary appliances that are ready to swap out of the building once grid capacity is available, or hybrid systems that rely upon delivered fuels as a backup fuel rather than piped fuels. For example, in California, TECH Clean California participants can receive emergency loaner water heaters to ensure residents have hot water while a contractor makes necessary upgrades or installs a new heat pump water heater.²⁰ In addition, the Commission should consider requiring buildings that qualify for an exemption from the AEBA to still be constructed “all-electric ready,” including having adequate electric panel capacity for full electrification, or requiring part of the application for exemption to include a pathway and timeline to become an all-electric building compliant with the AEBA and CLCPA.

We note that this will require an individualized, project-by-project review by the Commission, and United is in favor of that approach. The Staff White Paper is currently silent on how exemptions will be evaluated and approved by the Commission. If the number of exemptions is kept to a very small minority of new buildings, such an individual review should not be overly burdensome on the Commission.

V. United recommends caution with applying exemptions in cases with multiple service requests.

Regarding Staff’s request for responses to how utilities should consider treating multiple requests for service in the same area,²¹ United encourages the Commission to consider either forgoing the exemption in these cases or extending the time-based exemption. There are many unknowns and potential hinderances to the intent of the AEBA when considering multiple

²⁰ MCE Launches Emergency Water Heater Loaner Program. September 2024. Available at: <https://mcecleanenergy.org/mce-launches-emergency-water-heater-loaner-program/#:~:text=This%20loaner%20program%20will%20help,pump%20water%20heater%20when%20available>

²¹ New York Public Service Commission Staff. White Paper to Implement the All-Electric Buildings Act, p. 11. Case 25-M-0149. February 27, 2025.

service requests in the same area. For example, say a new subdivision with 300 homes requests to connect to the grid, how would this request be treated on its own, and how would it impact other, smaller developments in the area?

In addition, how would a customer with a large load requirement (e.g., a data center or charging depot) be treated alongside a request for service from, an affordable housing development in the same area? With load growth from data centers and multiple sectors electrifying, is it possible to determine which request takes priority? Can electric grid improvements be stacked for multiple requests? The 18-month rule is very likely too blunt an instrument for these circumstances, and there is little to no discussion provided in the White Paper to support its use here. United supports a nuanced approach to this question that aims to maximize ratepayer dollars for electric system upgrades – which will need to happen sooner or later.

VI. Exemption rules should become stricter as we approach CLCPA deadlines.

As New York approaches greenhouse gas emissions reductions goals outlined in CLCPA, it may be worth making the exemption narrower and narrower. For example, the Commission could extend the time-based exemption(s) at regular intervals (e.g., in 2030, 2035, 2040) to ensure exemptions are given on a more limited basis as we near CLCPA deadlines. Or increase the number of CLCPA-friendly scenarios the building must consider to avoid long electric service delays. Or require a concrete proposal to become an all-electric building within a number of years.

As time passes, it may be reasonable to assume that electric technologies will improve in efficiency, and that load managing technologies will improve in performance. The electric grid is also likely to become more load flexible and receive more improvements that require fewer service upgrades as we get closer to 2040 and 2050. Therefore, exemptions may (and should) become less necessary.

VII. The Commission should use its Proactive Planning docket (Case 24-E-0364) to ensure that exemptions to the AEBA are minimal.

The Commission's own docket to create a framework for a process to proactively plan for EV and building electrification (Case 24-E-0364) is highly relevant to AEBA implementation. Done right, delays to upgrade the grid in areas where there are known constraints should be exceptionally rare. A successful proactive planning framework should increase the confidence of the utility to make those distribution system investments before a problem occurs or be ready to act when the problem is surfaced. In particular, the utilities might consider designing a program whereby, with high confidence, they pre-order standard grid equipment in bulk so that they can respond more quickly to new all electric building requests and avoid supply chain delays, inflationary pressures, manufacturing backlogs, etc. The interconnection deadlines, and any accountability metrics, incentives, or penalties identified in the proactive planning docket should also serve as complementary policy that minimizes exemptions under the AEBA. Finally, that docket may also be used to explore and design flexible interconnection agreements, which have largely been understood and discussed in the case of EV charging, for buildings.

VIII. Conclusion

United appreciates the opportunity to provide comments in response to the *Notice Seeking Comments* and looks forward to future discussions on this matter.