STATE OF NEW YORK

PUBLIC SERVICE COMMISSION

CASES 25-G-0073/25-E-0072

Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service and Gas Service.

REBUTTAL TESTIMONY OF

TESTIMONY OF ROGER CAIAZZA, RICHARD ELLENBOGEN, CONSTANTINE KONTOGIANNIS, AND FRANCIS MENTON

June 24, 2025

REBUTTAL TESTIMONY OF ROGER CAIAZZA, RICHARD ELLENBOGEN, CONSTANTINE KONTOGIANNIS, AND FRANCIS MENTON APPEARING AS INDEPENDENT INTERVENORS IN THE PROCEEDING ON MOTION OF THE COMMISSION AS TO THE RATES, CHARGES, RULES AND REGULATIONS OF CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. FOR ELECTRIC AND GAS SERVICE, CASES 25-E-0072 AND 25-G-0073

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS

A**.** Roger Caiazza, Retired air pollution meteorologist

A. Richard Ellenbogen, President, Allied Converters, Inc. located at 64 Drake Avenue, New Rochelle, NY

A. Constantine Kontogiannis, Energy Consultant, 1064 New Scotland Road, Albany, New York 12208.

A. Francis Menton, Attorney (semi-retired), Menton Law Office, 85 Broad Street, New York, New York 10004.

Q. ON WHOSE BEHALF ARE YOU APPEARING

A. Parties are appearing as independent intervenors on behalf of themselves. Richard Ellenbogen and Francis Menton are Consolidated Edison ratepayers directly affected by this hearing.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN A PROCEEDING BEFORE THE NY STATE PUBLIC SERVICE COMMISSION ("PSC" OR THE "COMMISSION")?

A Yes. Roger Caiazza

15-E-0302 Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard; ORDER INITIATING PROCESS

REGARDING ZERO EMISSIONS TARGET

24-G-0323 and 24-E-0322. Niagara Mohawk Power Corporation rate case.

A. Yes. Richard Ellenbogen has previously submitted testimony in various cases before the Commission including

08-E-0751 Proceeding on Motion of the Commission to Identify the Sources of Electric System Losses and the Means of Reducing Them. The proceeding was based upon a technical paper submitted by Richard to Consolidated Edison and adopted by the PSC as the basis for the conference.

08-E-1426 Allied Converters , Inc. - Petition for a Declaratory Ruling on the administration of solar net metering provisions at locations where multiple (hybrid) energy efficient generation technologies are installed.

15-E-0302 Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard; ORDER INITIATING PROCESS REGARDING ZERO EMISSIONS TARGET

A Constantine Kontogiannis — yes, Commission proceedings 24-G-0323 and 24-E-0322, the current Niagara Mohawk Power Corporation electric and gas rate case.

A Francis Menton - No

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND RELEVANT WORK EXPERIENCE.

A. Roger Caiazza has a Bachelor's Degree in Meteorology from SUNY Oneonta 1974 and a Masters Degree in Meteorology from the University of Alberta 1976. Before retirement he was registered as a Certified Consulting Meteorologist by the American Meteorological Society. Upon graduation, he worked for several consulting firms that did contracting work

for the Environmental Protection Agency. In 1981 he joined Niagara Mohawk Power Corporation as an environmental analyst responsible for regulatory analysis, meteorological support, R&D project management as well as air quality monitoring and modeling. In 1999 he went to NRG Energy as an environmental manager where he had regulatory analysis, air quality modeling, and compliance responsibilities including emission reporting for former Consolidated Edison power plants. After retiring from NRG in 2010 he became the Director of the Environmental Energy Alliance of New York supporting environmental regulatory analysis for all New York utilities. In 2017 he retired as Director but continued to provide some support service until August 2024. Since 2017 he has authored the Pragmatic Environmentalist of New York blog. His opinions in this matter do not reflect the position of any of his previous employers or any other organization he has been associated with, these comments are his alone.

A. Richard Ellenbogen has a Bachelors Degree and a Masters Degree in Electrical Engineering from Cornell University. Upon graduation, he worked as the lead engineer in the Power Systems Laboratory of AT&T Bell Laboratories on the project to test all of the Power Supplies in the Bell System which at the time, powered approximately 90% of the phones in the United States. He is a published author and was an invited speaker at the first International Telephone Energy Conference in 1979. In 1980, Richard took a job as the Vice President of Allied Converters, a plastic food packaging manufacturer in New Rochelle. Since 1994, Richard has worked as the President of Allied Converters and focused on "Green" manufacturing. This will be elaborated upon later in the document.

Richard is also the Adjunct Fellow for Energy at the Empire Center and was the Keynote Speaker in 2023 for the Business Council of NY State's Renewable Energy Conference.

Beyond the energy efforts, Allied Converters also recycles or repurposes over 99% of its Industrial waste byproducts. It was 100% prior to Covid but several supply chains broke as a result of the pandemic.

Richard has also served in the following capacities:

Town of Pelham Library Board from 1996 - 2008, Board President from 2006-2008.

Pelham Manor Planning Board 2020 – Present

President of Team Image Synchronized Skating Teams 2009 - 2018

Numerous other Non-Profit Boards

A. Constantine Kontogiannis has a Bachelors Degree in Aeronautical Engineering from Rensselaer Polytechnic Institute,. Over his thirty plus year career in providing energy consulting services, he has evaluated a wide variety of efficiency, peak load reduction, and generation projects, including dozens for clients in metro New York including the Metropolitan Transportation Authority, the Port Authority of New York and New Jersey, the State University of New York, the New York State Energy Research and Development Authority, Honeywell, Johnson Controls, CBRE, SL Green, Time Equities, Silverstein Properties, Vornado Realty Trust, and Brookfield Properties. He testified before the NYS Senate Standing Committee on February 12, 2019 regarding his initial concerns with the Climate Leadership and Community Protection Act, and has closely followed the implementation of this policy since that time. Along with Roger Caiazza and Richard Ellenbogen, he is currently challenging the technical feasibility of the Niagara Mohawk Power Corporation rate case in upstate New York.

A. Francis Menton — BA, Yale University, 1972 (s.c.l.), JD, Harvard University, 1975 (c.l.). Forty-year legal career at Willkie Farr & Gallagher LLP (31 years as partner). Currently he writes articles that cover, among other things, issues of energy and the environment, particularly affecting New York State at the Manhattan Contrarian Blog. He has quantitatively analyzed whether New York's plans for an "energy transition" to wind and solar electricity generation will be sufficient to supply the grid, whether a predominantly wind/solar grid can maintain reliability without redundant fossil fuel or nuclear backup, and whether wind and solar will make electricity more expensive for consumers.

Q. WHY ARE THE INDEPENDENT INTERVENORS PARTICIPATING?

A. Roger Caiazza, Richard Ellenbogen, Constantine Kontogiannis, and Francis Menton ("Independent Intervenors") are participating in this rate case because we share the common concern that there are unacknowledged thresholds associated with Climate Leadership & Community Protection Act (CLCPA) affordability, reliability and environmental impacts. We believe that wind and solar cannot adequately supply the grid, cannot maintain reliability without redundant backup, and will drive up costs dramatically for consumers. The building and transportation electrification initiatives proposed by Consolidated Edison Company (Company) in these rate proceedings will dramatically compound these detrimental impacts. Our testimony describes our concerns with the rate cases and makes recommendations to address them.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY

A. It has become apparent that the goals of the Climate Leadership and Community Protection Act (CLCPA) are not feasible and are putting the health and safety of New Yorkers at risk, while simultaneously adding huge costs to the electrical system that are a terrible burden on

the ratepayers. It is time for the PSC to invoke PSL Section 66-P(4) and, under that authority suspend CLCPA obligations contained in this rate case. Our testimony addresses problems related to CLCPA obligations confronting the Company specifically as they apply to these rate proceedings. The rate case includes programs and initiatives needed to comply with the requirements of the CLCPA but they are incompatible with the mandates for safe, reliable and affordable service.

The Independent Intervenors propose pausing implementation of CLCPA aspects of the rate case and concentrate on interim solutions to reduce carbon emissions and costs while improving reliability. Ellenbogen's experience with cost effectively reducing his own company's utility bills while simultaneously reducing its carbon footprint is a clear example of what can be done with proper planning and an adherence to science based solutions. Our experience with energy efficiency programs, electric energy systems, and fossil fuel operations provide further background to propose an interim decarbonization solution that avoids the risk of a costly false solution.

In response to those who say that New York must act now to avoid climate change impacts we note that New York's greenhouse gas (GHG) emissions are such a small fraction of global emissions that New York efforts will prove to be futile despite what will inevitably be over $1 trillion dollars of expenditures. Independent Intervenor Exhibit 1 finds that even if all New York GHG emissions were eliminated the potential change to global warming is only 0.00014 deg C of avoided warming. Blind adherence to the aspirational goals of the CLCPA will result in affordability and reliability crises that would do more harm than good as an example for others to emulate.

Q. WHAT IS THE SIGNIFICANCE OF PUBLIC SERVICE LAW (PSL) ESTABLISHMENT OF A RENEWABLE ENERGY PROGRAM

A. Section 66-P Public Service Law (PSL) Establishment of a renewable energy program includes mandates for the Public Service Commission (PSC) that affect the Company'srate cases. Section 2 implements the 2030 and 2040 electric generation provisions of the CLCPA, Section 5 mandates specific technology capacities, Section 6 requires end-use energy savings, and Section 7 requires that program implementation provide substantial benefits to disadvantaged communities. However, PSC and the Company must balance the challenges with mandates for safe, reliable and affordable service. Sections 3 and 4 include requirements for implementation but the Department of Public Service (DPS) has not published required reports to fulfill that responsibility.

Q. **WHAT IS THE SIGNIFICANCE OF PSL SECTION 66-P(3)**

A. Public Service Law (PSL) 66-p(3) requires the PSC to issue a comprehensive review of CLCPA progress. The law states that "No later than July first, two thousand twenty-four and every two years thereafter, the commission shall, after notice and provision for the opportunity to comment, issue a comprehensive review of the program established pursuant to this section." On July 1, 2024, DPS Staff and the New York State Energy Research and Development Authority (NYSERDA) filed the Draft Clean Energy Standard Biennial Review (Biennial Review). On May 15, the PSC issued an Order adopting the Biennial Review. There are several findings that support our contention that the Company rate case should re-direct its spending on CLCPA-related efforts as described later. The PSC Order explicitly acknowledges that the 2030 goal of 70% renewable energy will not be met. The order increases the REC requirement, increasing procurement from 4,500 to

5,600 GWh per year but fails to conduct any coherent baseline comparison of affordability, reliability, or environmental impacts. The program evaluation criteria also fail to consider any grid inertia effects in the scoring. They also increase the REC terms to 25 years for onshore wind and solar, and 30 years for offshore without proper asset lifecycle substantiation.

Q. WHAT IS THE SIGNIFICANCE OF PSL SECTION 66-P(4)

A. Public Service Law (PSL) 66-p(4) is a safeguard mechanism in PSL 66-p Establishment of a renewable energy program. PSL Section 66-p charges the Commission with implementing renewable energy programs but includes feasibility safety valve conditions for affordability and reliability. Section 66-p (4) states: "The commission may temporarily suspend or modify the obligations under such program provided that the commission, after conducting a hearing as provided in section twenty of this chapter, makes a finding that the program impedes the provision of safe and adequate electric service; the program is likely to impair existing obligations and agreements; and/or that there is a significant increase in arrears or service disconnections that the commission determines is related to the program". The 2024 audit by the New York State Comptroller noted that the safety valve provision is essentially the only formal backup plan if Climate Act goals prove unachievable within prescribed timeframes.

Q. HAS THE PSL SECTION 66-P(4) SAFETY VALVE BEEN ADDRESSED?

A. Although there are several references to the safety valve provision in PSL Section 66-p(4) in DPS filings, there has not been any formal application of the provisions in this Proceeding.

Q. CAN PSL SECTION 66-P(4) BE ADDRESSED?

A. It would be difficult to address the safety valve provisions because the definitions are vague. The Commission has not defined "safe and adequate electric service". It is not clear what existing obligations could be impaired by CLCPA implementation. The final provision for a "significant increase in arrears or service disconnections related to the program" must differentiate between changes due to the CLCPA and other factors and no guidance has been provided for that evaluation. The DPS has not updated its first Annual Informational Report on Overall Implementation of the CLCPA required as part of Case 22-M-0149 – Proceeding on Motion of the Commission Assessing Implementation of and Compliance with the Requirements and Targets of the Climate Leadership and Community Protection Act that could provide information to estimate changes "related" to the CLCPA. It is conceivable that a comparison between costs in that report and observed customers in arrears could show a relationship to CLCPA implementation.

Q. WHAT IS THE TREND IN CUSTOMERS IN ARREARS

A. The Company files a monthly report in the PSC Case 91-M-0744 docket that details arrears and service terminations. The monthly data from that docket is in New York Open Data and provides information that can be used to determine the number of residential customers in arrears.

Independent Intervenor Exhibit 2 documents our analysis of the number of Company customers in arrears, the source of the data and the results for the Company service territory. Table 1 in the exhibit shows that the annual average number of customers in arrears greater than 60 days was 294,709 in 2019 the last year before the CLCPA was

implemented and the average in 2024 was 468,108 customers in arrears which is an increase of 173,398 customers, a 58% increase.

The Public Safety Law section 66-p (4) criteria for consideration of suspension or modification is a "significant increase in arrears or service disconnections that the commission determines is related to the program". The standard deviation of the number of customers in arrears from 2010 to 2019 is 26,570. Because the observed difference, 173,398 is greater than two times the standard deviation the increase is statistically "significant".

The final provision for a "significant increase in arrears or service disconnections related to the program" must differentiate between changes due to the CLCPA and other factors. The information in the DPS annual report required as part of Case 22-M-0149 could be used to determine if the increase is related to the program but it has not been updated since July 2023. Alternatively, the graph of the quarterly number of customers in arrears (Independent Intervenor Exhibit 2, Figure 1) enables an estimate. The quarterly trend of customers in arrears shows a step change increase in the distribution during the COVID-19 crisis. CLCPA implementation started at the same time complicating interpretation. The Independent Intervenors note that since 2022 the number of customers in arrears has trended upwards whereas it was relatively flat from 2013 to 2019. That is consistent with an increase due to the CLCPA.

Q. WHAT IS THE STATUS OF ENERGY AFFORDABILITY IN NEW YORK?

A. Independent Intervenor Exhibit 3 references the report from the NY State Comptroller "New Yorkers in Need, The Housing Insecurity Crisis". The report notes that cost burdens are "the primary driver of housing insecurity". The report noted that:

- In 2022, New York had 2.9 million households paying 30 percent or more of their income for housing.
- Approximately 20 percent of New York households were severely cost-burdened, paying more than 50 percent of their income for housing.
- The share of New York's renters who are cost burdened (52.4 percent) is far greater than the share of homeowners (28.0 percent).
- High rental burdens are a problem in regions across the state, but are more prevalent in urban areas

The Independent Intervenors submit that until such time that the Commission addresses the obvious need for a cost threshold that it is inappropriate to unnecessarily raise utility rates that will make the cost of living even more unaffordable.

Q. HOW DOES LOCAL LAW 97 AFFECT EMISSIONS AND COSTS?

A. Independent Intervenor Exhibit 4 explains that there are unintended emission and cost consequences of New York City's Local Law 97 GHG emission reduction from buildings law. It has a direct impact on utility usage on both the gas and electric side of the rate case. LL97 is not fuel neutral and that will force utility ratepayers to choose more expensive and less energy efficient options than otherwise necessary, thereby raising their utility costs. The numbers underpinning Local Law 97 are underestimating electric grid emissions by 36% at a minimum. By making the electric utility system look "greener" they are providing a false basis for the entire law.

Further, the electrification mandates in Local Law 97 will add at least an additional $240 per month to every renters bill and every apartment owners carrying costs. That is based upon the electrification of one building in Brooklyn renovated in isolation. As a

widespread project across the city, the resulting material supply shortages and labor shortages will drive the costs far higher. The Company has noted the same issues in its filings as related to upgrades of its substations. The Company policies are pushing ratepayers and renters beyond their ability to pay, for a net benefit of 0.0000075 degrees-C. That point can't be emphasized enough. The cost-benefit analysis of these laws and mandates has never been done.

Q. WHY ARE YOU CONCERNED ABOUT THE IMPLEMENTATION OF THE CLCPA?

A. The PSC is responsible for setting utility rates as part of its mission to regulate and oversee electric and gas utilities in New York State while ensuring that these essential services are provided safely, reliably, and at just reasonable rates for all residential and business consumers. However, no one is taking responsibility to ensure the feasibility that the massive CLCPA overhaul of the electric and gas system can provide essential services safely, reliably, and affordably. Utilities like the Company are saying that they are following the rules of the PSC, the PSC states that they are following the CLCPA and PSL 66p, and the politicians who passed the law are attacking the utilities and the PSC over the skyrocketing rates in the rate cases. Independent Intervenor Exhibit 3 references an article from Mid-Hudson News "Skoufis blasts PSC approved rates for O&R customers" that described State Senator James Skoufis (D, Cornwall) response to the approval of the Orange & Rockland rate case. All of this is being caused by a failure of NY State to listen to engineers instead of Climate Activists that have absolutely no understanding of the utility system, physics, or thermodynamics. The reality of the Laws of Science don't care about words on paper. Reality always bats last and when the reckoning comes the result will be high costs and a

broken system. Out testimony proposes a better way to reduce carbon emissions that will also reduce costs.

Q. WHAT DOES THE NYISO SAY ABOUT ELECTRIC SYSTEM TRENDS

A. The mission of the New York Independent System Operator (NYISO) is to "ensure power system reliability and competitive markets for NY in a clean energy future while working together with stakeholders to build the cleanest, most reliable electric system in the nation." The Independent Intervenors agree with their recent analyses that point to an impending reliability crisis because electric system generation safety margins are getting critically low.. The latest report, the NYISO 2025 Power Trends, was released in early June (Independent Intervenor Exhibit 3).

Page 5 of 2025 Power Trends describes the challenge of gearing up for new large sources of load while at the same time deploying weather-dependent zero-emissions generating resources to meet the CLCPA mandates:

> High-tech manufacturing is expanding in New York. Several projects are underway or on the horizon, promising to create thousands of jobs for New Yorkers while also highlighting the need for large investments in energy infrastructure. The challenge for policymakers and industry stakeholders is how to continue to power our society and economy in a way that is reliable, affordable, and sustainable — even while much of the clean generation technologies mandated by state policies are weather-dependent and thus variable in nature. The transition of the electric system presents a set of challenges that can only be solved through a coordinated effort of industry, government, and stakeholders. Together, we must keep a careful watch on

how the electric system itself reacts and responds to this change. The reliability of the system is showing strains under a mix of changing conditions and new pressures. Balancing the needs of grid reliability with the growing amount of weather-dependent generation and increasing demand requires careful attention to system data and information.

Page 9 of 2025 Power Trends notes that there is another problem. Reliability margins are declining as older fossil-fueled resources retire and don't get replaced:

> As traditional fossil-fueled generation deactivates in response to decarbonization goals and tighter emissions regulations, reliability margins on the grid are eroding. Further, the remaining fossil-fueled generation fleet, which provides many of the essential reliability services to the grid, is increasingly made up of aging resources, raising further concerns about grid reliability. Strong reliability margins enable the grid to meet peak demand, respond to sudden disturbances, and avoid outages. They also support the grid's ability to respond to risks associated with extreme weather conditions. As these margins narrow, consumers face greater risk of outages if the resources needed for reliability are unavailable due to policy mandates or failures associated with aging equipment.

These issues must be addressed as part of all utility planning because system reliability has to supersede all other aspects of any rate case. Energy failures will incur an enormous cost, both in terms of human safety and economic well-being.

Q. WHAT IS THE BIGGEST CHALLENGE FOR A WEATHER-DEPENDENT ELECTRIC SYSTEM?

A. The Independent Intervenors believe that the biggest challenge facing electric resource planners for the PSL 66-P renewable energy program is the necessity to provide electric energy at all times. Weather-dependent resources vary in time and space and planners must account for the impacts on resource availability. It is expected that peak loads will shift to the winter in response to CLCPA building and transportation mandates. Unfortunately, New York solar resources are weakest in the winter due to the latitude and persistent lake-effect clouds and snow. The biggest challenge will be for the gap when there are extended periods of light winds in the winter. New York electric planning experts agree that a new category of generating resources called Dispatchable Emissions-Free Resources (DEFR) is necessary. Independent Intervenor Exhibit 5 includes a summary of a highly technical analysis by Professor Lindsay Anderson of Cornell that explains why DEFR is needed.

There are ramifications of this challenge on the Company rate case. Acknowledging the problem is only the first step in resolving it. Electric planners are still trying to figure out how to incorporate the need for DEFR into reliability planning criteria. Determining how much DEFR will be needed requires extensive analysis of historical observations. The biggest challenge is that there are no commercially viable DEFR technologies available.

At present, the only mature technology that can act as a DEFR is nuclear. Conventional nuclear has been met with a great deal of resistance in NY State and even with the recent change of mindset, development of additional nuclear plants will take at least 15 – 20 years based upon the last two nuclear plants built, Vogtle 3 & 4 in Georgia. It is estimated that Small Modular Reactors will not be available for deployment until well after

2035 so what technologies will be available to support the wind and solar buildout presumed in the Company rate case?

Q. WHAT IS THE DEFR IMPLICATION OF CASE 15-E-0302?

A. PSC Case 15-E-0302: Clean Energy Standard Implementation addresses DEFR in an order initiating a process to identify technologies that can close the gap between renewable resource availability and projected load during periods of extended low resource availability (Independent Intervenor Exhibit 5). The missing piece in this order is a timeline for PSC to make a decision how to proceed with DEFR. Studies show that between 18GW and 45GW of an unknown DEFR resource is needed for renewable energy to be safely employed when the "zero emissions" electric system in 2040. Despite the lack of a quantifiable reliability metric in PSL 66-p(4), the current approach of building renewables and hoping that massive amounts of a new resource will be tested, permitted, and deployed by 2040 surely meets the intent of PSL 66-p (4) that the PSC should hold a hearing to consider temporary suspension or modification of provisions of the CLCPA because the program impedes the provision of safe and adequate electric service.

Q. ARE THERE TECHNOLOGICAL CHALLENGES THAT AFFECT THE COMPANY'S CLCPA IMPLEMENTATION STRATEGIES

A. PSC Case 15-E Compounding the above, these policies are based upon sham science. Local Law 97 uses false metrics for its emission standards that contradict EPA values. These issues are clearly documented in Individual Intervenor Exhibit 4. The issues are so egregious that if a ratepayer were to misreport their emissions to the same degree that the city is gaming their metrics, they would be subject to a $500,000 fine and 30 days in jail. That exhibit clearly documents the obstacles to electrification both from a standpoint of the

energy user and the utility. Examples of the Company's difficulties with upgrading their substations and the exorbitant costs that are being incurred in those efforts are documented, as well.

Q. ARE THERE MISPLACED PRIORITIES THAT AFFECT THE COMPANY'S CLCPA IMPLEMENTATION STRATEGIES

A. The Independent Intervenors believe that the CLCPA includes priorities that detract from a pragmatic decarbonization plan. The demonization of natural gas by the Climate Action Council (CAC) that was responsible for the Scoping Plan outline of implementation strategies precludes what we believe is part of the best decarbonization approach.

Viewed through a pragmatic lens, the New York obsession with eliminating natural gas is irrational. Increased use of natural gas has been responsible for most electric generation emission reductions observed in the state. Natural gas provides efficient, resilient, and safe energy to homes and businesses. Independent Intervenor Exhibit 6 explains that the vilification of methane is based on mis-understanding of chemistry and radiations physics. Eventually, reality will overcome political ambition and the insurmountable challenges of a weather-dependent electric system will be impossible to ignore. Coupled with the immeasurable effect on global warming of natural gas use in conjunction with nuclear power it will be obvious natural gas has a future role.

Q. WHAT CAN BE DONE IN THE COMPANY'S SERVICE AREA TO MITIGATE CARBON EMISSIONS AND LOWER COSTS

A. As explained in Independent Intervenor Exhibit 7 the Allied Converters Manufacturing Facility is an example of what can be done in the Company's service area to mitigate carbon emissions and lower costs effectively and efficiently. Richard Ellenbogen currently

generates or offsets 72% of its electrical energy use onsite with a building Carbon Footprint 30% - 40% lower than the electricity supplied by the Company. Not only does the facility reduce Company load by generating on-site power, the facility reduces reactive loads that increases grid capacity and reduces transmission and distribution system energy losses.

Unfortunately, there is a problem with the approach. The low energy cost at Allied was accomplished using a high efficiency Combined Heat and Power System (CHP) (the first microturbine system in the Company Service Area) and a large solar array (The first commercial scale solar array in New Rochelle). The aspirational goal of zero emissions and the irrational vilification of methane precludes replicating these proven results.

Natural gas provides efficient, resilient, and safe energy to homes and businesses. Not so long ago the idea that natural gas could also be used a bridge fuel until the aspirational "green" generating resources and energy storage technologies could be tested at the scale needed, perform like a natural gas fired generating unit, and provide power at a similar cost, was generally accepted as a rational approach. The Individual Intervenors maintain that this is still a realistic approach and expect that when the many disadvantages and challenges of the CLCPA net-zero decarbonization plan can no longer be ignored, this will be once again be accepted as a rational approach.

Q. WHAT IS THE PRIMARY CONCERN WITH THE RATE PROCEEDING AS CURRENTLY PROPOSED.

A. The Company and the PSC have completely failed to reconcile the grid integrity concerns identified in the recently released NYISO report entitled Power Trends 2025 with the significant shortfall in renewable generation identified in the PSC's May 15, 2025 Order Adopting Clean Energy Standard Biennial Review as Final and Making Other Findings.

The PSC order acknowledges that the renewable generation goal of seventy percent in the year 2030 is not just impossible, but that we're actually headed in the wrong direction - statewide renewable energy production was slightly over forty six percent of the total in the year 2022, but is actually projected to drop to less than forty four and one-half percent in the year 2030. This is in large part due to building and transportation electrification load growth outpacing new generation coming online. At the same time, the NYISO is warning of significant reliability issues due to both load growth and CLCPA-induced natural gas constraints. As currently designed, this rate proceeding will dramatically increase ratepayer cost and decrease electric grid reliability, while failing to produce any tangible lifecycle sustainability benefit.

Q. WHAT SPECIFIC CHANGES ARE YOU PROPOSING TO THIS PROCEEDING.

A. First, the Company and PSC must focus all transportation electrification efforts within this rate case solely on improving traction power regeneration across the Metropolitan Transportation Authority (MTA) with a specific focus on the New York City Transit subway system. According to a 2022 NYSERDA study (Independent Intervenor Exhibit 3), roughly eight percent of traction power energy is recuperated, whereas many other subway systems throughout the world are achieving thirty five percent or greater system regeneration. The same study identifies New York City Transit as having a peak electric load of roughly 2.4 gigawatts and annual consumption of roughly 1,500 gigawatt hours. Focusing all transportation electrification efforts within this rate proceeding on improving subway traction power regeneration will save more that 400 gigawatt hours annually, and the electric cost savings alone will contribute roughly 80 million dollars per year towards the cost of this project. More importantly, this project will reduce coincident peak load

between 0.6 and 0.9 gigawatts across the subway system, and also provide voltage and frequency regulation and support in many load pockets throughout New York City. Directing all rate case transportation electrification funding will also provide the greatest return on investment and net sustainability benefits for ratepayers, many of whom are also regular users of the subway system.

Second, the Company and PSC must focus all building electrification efforts within this rate case solely on transitioning approximately one thousand five hundred existing customers of the Company's steam system to electric cooling and hybrid heating solutions. Although Company has not released any systemwide energy or heat balance information in approximately twenty years, the overall consumer thermal efficiency is believed to be around fifty percent (Independent Intervenor Exhibit 3). This is far less than typical heat pump or natural gas heating efficiency, due in part to system leaks and faulty steam traps. The coefficient of performance of steam-driven cooling equipment is between four and six times worse than commercial- and industrial-scale electric cooling equipment. The lack of condensate recovery in the steam distribution system results in a massive waste of potable water resources, along with significant amounts of parasitic energy required for deionization and deaeration. Moreover, the high temperature condensate causes significant damage to the municipal sewer system, while also increasing the overall load on waste treatment facilities. Directing all building electrification funding in this rate proceeding to this subset of the New York City building stock will provide the greatest reliability, affordability, and sustainability benefits to ratepayers. Retaining high pressure steam at the various powerplants for bottoming cycle optimization will dramatically improve in-city electric generation, with the added loads of heating and cooling electrification within this

building subset accounting for less than fifty percent of the gross expanded capacity. Valuable water resources will be conserved, and further damage to the sanitary sewer system will be avoided. Utility rates for this building subset will be dramatically reduced, and the benefits of additional in-city electric production and grid reliability – including voltage and frequency uplift - will accrue to all ratepayers.

Third, all Company and PSC support of Local Law 97 within this rate proceeding must reflect the actual electric grid emissions for the downstate region, and not the blatantly false and fictitious projections that have been provided by the City of New York. Based on the aforementioned reconciliation of Power Trends 2025 and the diminished Clean Energy Standard metrics, a fuel-neutral approach to the local law is advisable. A particular emphasis should be placed on ensuring the Company's local electric distribution system headroom is maintained and not diminished solely for the purpose of building and/or transportation electrification. Moreover, in order to ensure ratepayer affordability, no energy efficiency project should be promoted that has a benefit to cost ratio of less than two, exclusive of all implementation incentives available from the Company, NYSERDA, or any other mechanism. This includes all distributed generation such as rooftop solar systems promoted through Local Law 97.

Fourth, the quantification of all sustainability benefits claimed through this rate proceeding must be reflective of all lifecycle components from component production through comprehensive system decommissioning. These calculations must also factor the carbon footprint of any incremental cost upcharge in accordance with gross domestic product emissions projections as defined by the Intergovernmental Panel on Climate Change and

compounded by the number of typical money cycles within the Company's service territory.

Fifth, again reconciling Power Trends 2025 and the diminished Clean Energy Standard metrics, all Company distribution system upgrade investments based solely or in part on CLCPA building and transportation electrification projections must be terminated in whole or proportion, in the interests of ratepayer affordability, grid integrity, and lack of substantiated lifecycle environmental benefits.

Finally, Allied Converters is a classic example of what can be achieved in the Company's service territory with existing, proven technology that combines large CO2 reductions with low operating costs. Support should be given to these types of projects because they will help to mitigate the energy shortages being faced in the downstate region. Solar on large, flat shade free roofs (greater than 50 KW) coupled with Combined Heat and Power (CHP) systems is an ideal way to generate electricity while providing heating and refrigerant (GHG) free cooling to buildings. Electricity generated at the point of use reduces the need for larger transmission and distribution (T & D) capacity while also eliminating the 7% energy losses on the T & D system related to that energy. Solar arrays on large flat roofs are more cost effective than small ones. While likely the oldest example, Allied Converters is not the only example. The designers of One Vanderbilt had the foresight to build something similar within the last decade. Sadly, the inclusion of a CHP system is now criticized as documented in Independent Intervenor Exhibit 7.

Q. DO YOU HAVE ANY CONCLUDING REMARKS?

A. Our testimony describes issues with current plans. According to the NYISO, downstate system reliability has been severely compromised due to state policies and the CLCPA. According to Professor Lindsay Anderson, following the prescriptions of the CLCPA will make that an issue into the distant future. According to the Company, it will need to spend billions of dollars to upgrade substations to handle building electrification while navigating complex logistical issues and equipment shortages. Many of its substations are already operating near their safety margins forcing the Company to move forward equipment enhancements. Moreso, those improvements will not mitigate the energy shortages currently being faced, reduce utility costs or reduce carbon emissions. Electrification of building heat will double rate payers utility bills when compared to gas heat while also increasing loads on the existing, already compromised system. In many cases, this may occur prior to the project completion dates. The "pseudo-science" used to support these policies has no firm basis in math or physics but is instead ideologically based. Current policies are diverting valuable resources from projects where they would be far more effective at both mitigating emissions and reducing costs for rate payers and transit riders.

Our testimony addresses problems related to CLCPA obligations confronting the Company specifically as they apply to these rate proceedings. Among our recommendations we suggest that the Company rate case re-direct its proposed spending to address CLCPA goals on building and transportation electrification initiatives as follows:

- Focus transportation electrification funding to improve MTA regenerative braking in the subway system because there are significant potential benefits;

- Focus building electrification efforts on customers in the Company's steam system where the returns on investment will be highest;
- Adopt a fuel neutral approach and require a benefit to cost ratio of less than two for projects; and
- Encourage the use of CHP for commercial users following the successful model of Allied Converters.

Our recommendations will provide energy savings that will lead to tangible cost benefits and increased reliability as well as carbon emission reductions. While they are incompatible with zero emissions aspirations, we believe that physical reality will lead to the inevitable recognition that the zero emissions is an impossible target. The recommendations will also help to greatly avoid the dire predictions of the NYISO and Lindsay Anderson.