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June 28, 2022

VIA ELECTRONIC FILING & EMAIL

Ms. Doreen M. Harris
President and CEO
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Mr. Basil Seggos
Commissioner
State Department of and Development
Authority Environmental Conservation
625 Broadway
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Re: Comments of Nucor Steel Auburn, Inc. on the Draft Scoping Plan Issued by the Climate Action Council for Implementing the Requirements of the Climate Leadership and Community Protection Act

Dear Co-Chairs Harris and Seggos:

Enclosed for your consideration as you develop the Draft Scoping Plan are the Comments of Nucor Steel Auburn, Inc. on the Draft Scoping Plan Issued by the Climate Action Council for Implementing the Requirements of the Climate Leadership and Community Protection Act. If you have any questions regarding this filing, please feel free to contact me at (202) 339-6377.

Respectfully submitted,

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Enclosure

BEFORE THE NEW YORK STATE
CLIMATE ACTION COUNCIL

Comments of Nucor Steel Auburn, Inc. on the Draft Scoping Plan Issued by the Climate Action Council for Implementing the Requirements of the Climate Leadership and Community Protection Act

June 28, 2022

Preliminary Statement

In 2019, New York enacted the Climate Leadership and Community Protection Act ("CLCPA" or "the Act").[1] This legislation has the two-fold purpose of initiating measures to significantly drive down New York greenhouse gas ("GHG") emissions economy-wide while supporting a robust economy and to provide a model implementation plan for other jurisdictions to emulate. The ultimate targets, achieving an 85% reduction in New York GHG emissions from 1990 levels by the year 2050 with an interim goal of realizing a 40% reduction by 2030, are intended to be transformative and drive technological innovation to change how New Yorkers move about, live, and work. The Act recognizes, however, that lowering GHG emissions is a global issue, that aggressive actions by a single U.S. state will create significant competitiveness concerns which must be addressed, and that simply shifting emissions to points beyond New York's geographic boundaries (*i.e.*, leakage) is pointless or worse. The Climate Action Council's Draft Scoping Plan (the "Draft Plan") attempts to identify emissions-reducing opportunities and approaches within each sector of the New York State economy for achieving the Act's objectives, but also acknowledges the challenges that are presented. [2]

In these comments on the Draft Plan, Nucor Steel Auburn, Inc. ("Nucor") supports measures to reduce New York's overall GHG footprint in ways that are verifiable, durable, and affordable. Nucor urges the State to move cautiously in areas where economic or technical feasibility are, at best, speculative.

Executive Summary

1. The Final Scoping Plan Must Establish Cost-Effective Emission Reduction Priorities.

The Draft Plan seeks comments on the mix of strategies and "level of ambition" described in each of three alternative implementation scenarios.[3] The Draft Plan, however, does not assess the relative cost-effectiveness of any specific recommended action. This makes it impossible to ascertain which measures make the most sense in terms of overall emissions-reduction potential, economic cost, or technical feasibility and leaves a serious gap in the Council's recommendations to New York policymakers that must be remedied.

2. Affordability is Crucial.

As New Yorkers struggle to recover from the COVID-19 pandemic, they have been hit by record levels of inflation not seen in a generation, with dramatic increases in energy prices serving as a key driver to those inflationary pressures. In terms of achieving the CLCPA emission reduction goals, for New York to get on track, cost-effectiveness and affordability must be key to program priorities.

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[1] The CLCPA was codified as Chapter 106 of the laws of 2019.

[2] New York State Climate Action Council, Draft Scoping Plan (Dec. 30, 2021), *available at* https://climate.ny.gov/-/media/Project/Climate/Files/Draft-Scoping-Plan.pdf ("Draft Scoping Plan"). *See id.* Appendix C, *Just Transition Working Group Recommendations to the Council on Measures to Minimize the Carbon Leakage Risk and Minimize Anti-Competitiveness Impacts of Potential Carbon Policies and Energy Sector Mandates*, p. C-1.

[3] Draft Scoping Plan at 69.

3. The Final Scoping Plan Should Reward Early Adopters of GHG Reducing Technologies.

The Draft Plan acknowledges that there are New York businesses that are sustainability leaders in their respective industries, and recommends that the State support New York manufacturers whose early actions already reduce on-site and supply chain GHG emissions.[4] The Draft Plan correctly recognizes that expanded operation of New York manufacturers that produce materials demonstrating low-carbon intensities (specifically referencing electric arc furnace steelmaking facilities like Nucor Steel Auburn) can lower global emissions by displacing imports of products from high-emitting producers (*i.e.*, the inverse of leakage).[5] Maximizing such opportunities, especially to help revitalize the Upstate economy, should be a high priority of the final Scoping Plan.

4. The Draft Plan Fails to Adequately Address Reliability, Affordability or Technical Feasibility Concerns Regarding the Energy Sector Recommendations.

Converting prevailing fossil-fuel uses in the transportation and building sectors to electrified alternatives is the primary strategy in the Draft Plan for reducing New York GHG emissions. At the same time, the State is already implementing a host of energy sector mandates to alter the energy sector's emissions profile that present significant cost and network reliability concerns that will undermine electrification efforts in those sectors. The final Scoping Plan must realistically confront the serious challenges facing the electric sector concerning both reliability and affordability that are key barriers to success.

5. The Final Scoping Plan Needs to Mitigate Impacts on New York's Energy Intensive Trade Exposed ("EITE") Industries.

The CLCPA recognizes the importance of minimizing leakage and anti-competitiveness impacts, particularly among New York's energy intensive trade exposed industries ("EITE").[6] Such leakage will weaken New York economically and almost certainly increase net global GHG emissions; a lose-lose proposition that the Act aims to avoid. The Draft Plan, however, defers both defining EITE businesses (a prerequisite to action) and recommending specific leakage mitigation measures.[7] This is inconsistent with directives in the Act concerning New York EITE industries and fails to address the need to mitigate rising energy prices driven by New York clean energy mandates that disproportionately impact the State's energy intensive manufacturing.

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[4] *Id. Chapter 7: Just Transition,* Section 7.3, *Measures to Minimize the Carbon Leakage Risk and Minimize Anti-Competitiveness Impacts*, at 47.

[5] *Id.* App'x C at n.1.

[6] N.Y. ENV L. § 75-0103(7)-(8) (2019).

[7] Draft Scoping Plan App'x C: *JTWG Recommendations to the Council on measures to Minimize the Carbon Leakage Risk and Minimize Anti-Competitiveness Impacts of Potential Carbon Policies and energy Sector Mandates.*

6. State Entities Need to Work with Stakeholders to Establish Industry Benchmarks to Reduce Embodied Carbon in Supply Chains.

Nucor agrees that a complete and viable New York emissions reduction plan needs to reduce embodied carbon in manufacturing, construction, and building supply chains while mitigating leakage. To accomplish this, it will be necessary to establish industry-specific benchmarks for production emission intensity.[8] Nucor recommends that the pertinent State entities engage stakeholders at the outset to develop appropriate benchmarks.

7. The Final Scoping Plan Needs to Take into Account Regional Priorities.

Varying regions of New York differ in almost every conceivable way with respect to factors affecting, and that are likely to be affected by, CLCPA compliance strategies. These include, among many considerations: emission sources and profiles, access to clean energy, population growth, economic drivers, and sensitivities to energy costs. A uniform approach designed to mitigate emissions in Manhattan likely will ill-serve residents and businesses in the Finger Lakes, and vice versa. In framing a statewide emission-reducing strategy it is essential to recognize and account for these core differences.

8. The Draft Plan Does Not Adequately Address the Anti-competitive Impacts of Potential Economy-wide Measures.

The Draft Plan discusses potential economy-wide measures (carbon fees, cap and trade, and a fuels tax) as a possible source of funding and a generic inducement for emission-reducing behavior.[9] The Draft correctly recognizes that a poorly designed economy-wide measure would be an economic burden,[10] and would have a particularly adverse effect on New York's EITE industries.[11] Applying any of three discussed economy-wide actions on a single-state basis would be a counter-productive, leakage-inducing measure that should be avoided.

9. The Final Scoping Plan Should Avoid Premature Restrictions on Natural Gas Use.

New York's electric sector is heavily dependent upon natural gas fired generation, natural gas is necessary for many high temperature industrial processes, and there are currently no viable alternatives to gas usage in either area. Prudence dictates that New York should take a disciplined and targeted approach toward reducing gas usage as a CLCPA compliance strategy.

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[8] *Id*. at 47.

[9] *See generally id*. *Chapter 17 economy-wide strategies*, at 252-63.

[10] *Id*. at 252.

[11] *Id.* at 259 ("Including industries that are energy intensive and trade-exposed in either type of program poses the greatest risk of emission leakage.").

I. About Nucor

Nucor Corporation is America's largest steel producer and recycler. All Nucor steel mills use an electric arc furnace (EAF) to melt recycled steel scrap which is re-cast into every type of steel product. Last year, Nucor mills turned nearly 23 million tons of scrap into new steel products.[12] EAF-based steelmaking is far less carbon intensive and much more energy efficient that traditional blast furnace methods that burn iron ore and coking coal. In fact, Nucor's approach produces less than one quarter the GHG emissions for every ton of steel produced compared to the global steelmaking average, and has only one-fifth the GHG intensity of the average blast furnace operation. Nucor's steelmaking GHG intensity is currently twenty years ahead of the Paris Agreement's most aggressive target for the global steel sector (known as the 1.5 Degree scenario). These factors make Nucor one of the cleanest steelmakers in the world.

Nucor Corporation operates two major facilities in central New York: an EAF steel recycling and manufacturing facility in Auburn, and a Nucor Vulcraft steel joist and decking fabrication facility in Chemung, New York. Together they provide more than 600 quality jobs and help anchor the Central New York manufacturing economy. EAF-based steelmaking is electricity intensive, and the Nucor Steel Auburn mill takes advantage of the abundant clean energy in Upstate to lower its carbon intensity even farther below typical mills elsewhere. [13] Nucor Steel Auburn produces its steel products with an average of 98.5% recycled content and, when considering both direct and indirect emissions, those products have an embodied carbon footprint that is lower than virtually any other steel mill on the planet. Appendix C to the Draft Plan correctly recognizes that expanded EAF- based steel production in Upstate New York could lower global emissions by displacing steel imports that employ much higher carbon emitting methods.[14]

Nucor Steel Auburn has persevered for several decades as an economic anchor in central New York through a combination of continued investment in its technology, an obsessive attention to efficiency opportunities, a well-compensated and highly skilled workforce, and competitively priced energy. As a result, Nucor Steel Auburn's products have lowered the embodied carbon in buildings and infrastructure throughout New York, including such iconic projects as the new World Trade Center, Yankee Stadium, Citi-field, and most recently, the One Vanderbilt building. The Nucor Steel Auburn facility exemplifies existing New York manufacturing operations that provide an economic and environmental win for the State that the recommendations in the final Scoping Plan must foster and build upon.

Our locally sourced, clean steel is part of the fabric of New York and supports an extended supply chain in the State while driving down supply chain emissions compared to steel sourced from high-emitting blast furnace operations in foreign countries such as China. In 2021, China produced approximately 90 percent of its one billion tons of steel using blast furnaces. This accounted for more than two-thirds of total GHG emissions from the global steel industry.

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[12] A significant benefit noted but not discussed in the Draft Scoping Plan is the fact that metallics now make up only 5% of New York's solid waste by volume, a dramatic improvement that would have been unthinkable 20 years ago. (*See* Draft Scoping Plan, Chapter 16, *Waste*, fig. 27 at 234.) This is attributable to large-scale recycling of scrap steel and its conversion into new products through EAF-based steelmaking.

[13] Upstate New York has by far the lowest CO2 emissions rate from electric generation of any NERC sub-region in the United States. *See* EPA eGRID data, *available at* https://www.epa.gov/egrid/data-explorer.

[14] *See* Draft Scoping Plan, App'x C, n.1 at 1.

Conversely, the U.S., which increasingly relies on EAF technologies, accounts for less than two percent of global steel emissions.[15]

Going forward, steel will remain an essential material for roadways, bridges, buildings, wind towers, vehicles, and many other elements of modern society. Clean domestic steel production lies at the core of the Biden Administration plans to re-build America's infrastructure, create lasting American jobs and lower global emissions. Those are among the many reasons why Nucor supports Buy American policies, including those in the federal Infrastructure Investment and Jobs Act of 2021 and New York's Buy American Renewables Act enacted in 2020. Establishing and using a low carbon domestic supply chain must be a cornerstone principle for the Council's final Scoping Plan recommendations.

While dramatically more efficient and less carbon intensive, EAF-based steelmaking is very energy intensive, and there is no avoiding the intense global competition for steel products, particularly from countries with substandard labor and environmental practices. Without reliable and competitively priced energy, the transformation of American steelmaking to electric furnace-based methods would not have been economically feasible. As is discussed below, the Draft Plan correctly recognizes that rising energy prices and declining grid reliability are serious threats to provoking leakage among New York EITE manufacturers. New York's energy prices are already comparatively high, and the rapidly increasing out of market fees and surcharges authorized to recover the costs of an expanding suite of clean energy mandates, many of which are tied to long term contract commitments that will persist for decades, is a dangerously anti-competitive approach that threatens all New York energy intensive manufacturing. Further, the adverse affordability and reliability trends in the energy sector will have a counter-productive depressing impact on the electrification efforts in other sectors of the New York economy that lie at the heart of the Draft Plan strategies for overall New York emission reductions. In sum, retaining reliable and competitively priced energy is crucial to success in achieving the Scoping Plan's electrification and leakage mitigation objectives.

II. Comments on the Climate Action Council Draft Plan

1. The Final Scoping Plan Should Assess the Relative Emission Reduction Cost-Effectiveness of Individual Recommended Actions and Propose Implementation Priorities Accordingly.

The recommendations in the Draft Plan cut a very broad swath across the entire New York economy. *Chapter 9: Evaluation of the Plan*, describes how the Draft Plan is supported by an Integration Analysis that generally compares expected costs and benefits of three compliance scenarios (the CAC Advisory Panel Recommendations [Scenario 1], Strategic Use of Low-Carbon Fuels [Scenario 2], and an Accelerated Transition Away from Combustion [Scenario 3]) cases to a "business-as-usual inclusive of implemented policies" Reference Case. [16] The Draft Scoping Plan seeks comments on the mix of strategies and "level of ambition" described in each of the

[15] Today, EAFs provide 70% of steel made in the U.S. compared to only 30% globally.

[16] Draft Scoping Plan, App'x G: *Integration Analysis Technical Supplement*.

scenarios.[17] Based on the information presented, however, there is no rational way to assess those aspects for any of the scenarios that are described in the Draft Scoping Plan.

The Draft Scoping Plan does not provide an assessment of the cost-effectiveness of individual recommended actions or strategies that are described in any of the Integration Analysis scenarios. This makes it impossible to ascertain which measures make the most sense in terms of overall emissions-reduction potential, economic cost, or technical feasibility. Some recommendations may be transparently beneficial. For others, the marginal cost of emissions abatement may be astronomical compared to other choices. For still others, no meaningful cost comparison can be performed because the referenced technology is not commercially available or does not exist at all. The Draft Plan rarely touches upon these considerations and thus does not inform the State's policymakers regarding these crucial distinctions. It notes the magnitude of the emissions attributed to each sector but does not provide a basis for deciding where to start, what measures to emphasize, or where to prioritize funding.

This basic deficiency in the Draft Plan leaves a serious gap in the Council's recommendations to New York policymakers regarding the subsequent implementation policies, programs and regulations that will be guided by the Scoping Plan. Dozens of recommendations in the Draft Plan will require legislation or special funding. In all sectors, public acceptance and support are essential to success. Ultimately, New York has limited financial resources to fund compliance actions, and the final Scoping Plan must establish clearly identified priorities based on cost-effectiveness and affordability (*i.e.*, getting the biggest emission-reducing bang from every consumer dollar).

2. Affordability is Crucial.

Without repeating the above discussion on the need for sensible, clear-cut priorities, or the concerns regarding the electric sector noted below, there is no over-stating the importance of developing cost-effective and affordable strategies. As the State recovers from the COVID-19 pandemic, New Yorkers are seeing record levels of inflation, with dramatic increases in energy prices driven both by high commodity prices and utility rate increases that are heavily tied to CLCPA-driven, state-mandated investments.[18] In terms of actually achieving the CLCPA emission reduction goals, the final Scoping Plan must emphasize cost-effectiveness and affordability in developing implementation priorities.

3. The Final Scoping Plan Should Reward Early Adopters of GHG Reducing Technologies.

There are New York businesses, like Nucor, that are sustainability leaders in their respective industries, and the Draft Plan correctly urges the State to support New York manufacturers whose early actions already reduce on-site and supply chain GHG emissions.[19]

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[17] Draft Scoping Plan at 69.

[18] *See* Governor Kathy Hochul, Governor Hochul Announces Electric and Gas Utility Bill Credit Program for Low-Income Families (June 16, 2022), *available at* https://www.governor.ny.gov/news/governor-hochul-announces-electric-and-gas-utility-bill-credit-program-low-income-families (expanding program to mitigate unpaid utility bill arrears to $567 million).

[19] Draft Scoping Plan at 47.

Nucor applauds the Council's recognition that expanded operation of New York manufacturers that produce materials possessing low carbon intensities (specifically referencing electric arc furnace steelmaking facilities like Nucor Steel Auburn) can lower global emissions by displacing imports of products with high embodied carbon from high-emitting producers (*i.e.*, the inverse of leakage).[20] Maximizing such opportunities, through mitigation measures, green procurement initiatives, and other consistent actions, must be a high priority of the final Scoping Plan.

4. The Draft Scoping Plan Fails to Adequately Address Reliability, Affordability or Technical Feasibility Concerns Regarding the Energy Sector Recommendations.

Large scale electrification in the building and transportation sectors (the highest GHG-emitting elements of the New York economy) is the central pillar of the Draft Plan's strategy for achieving the Act's target reductions. This is expected to produce very large increases (basically a doubling) in peak demand and overall electric consumption,[21] but that transformation is likely to be realized only if electric service remains reliable and affordable. For a plan that at its core relies upon electrification to displace conventional fossil-fuel uses, the Draft Plan fails to adequately address basic affordability, reliability and feasibility questions concerning the energy sector.

There are three well-studied but fundamental barriers to achieving New York's clean energy objectives. The first concerns the electric topography of New York captured by NYISO's reference to the "Tale of Two Grids."[22] New York has an abundance of clean generation Upstate, with roughly 90% of the energy produced having no demonstrable GHG emissions.[23] Further, given siting suitability requirements, most of the incremental land based wind and large scale solar PV generation to be built to satisfy the CLCPA objectives will likely be sited Upstate. As weather-sensitive, intermittent generation output expands, Upstate faces deliverability issues in getting renewable energy output to load centers, and the region needs higher load factor loads to absorb excess renewable energy output during low load periods.

In contrast, with the retirement of the Indian Point nuclear units, Downstate electric supply is almost entirely fossil-fueled (oil, natural gas, or dual fueled).[24] Much of that generation is needed today for load following and other reliability purposes, and both native load growth and the Draft Plan's electrification efforts are expected to materially increase electric demands and the continuing need for reliable, fast ramping, and dispatchable resources in the metropolitan area.

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[20] *Id.* App'x C, n.1.

[21] Draft Scoping Plan at 74 ("Even with aggressively managed load, electric consumption doubles and peak load nearly doubles by 2050 . . . .").

[22] *See* NY Indep. Sys. Operator, Power Trends 2022: The Path to a Reliable, Greener Grid for New York, fig. 1 at 8 (May 2022), *available at* https://www.nyiso.com/documents/20142/2223020/2022-Power-Trends-Report.pdf/d1f9eca5-b278-c445-2f3f-edd959611903?t=1654689893527; *see also* NY Indep. Sys. Operator, Power Trends 2017: New York's Evolving Electric Grid at 8 (May 2017), *available at* https://www.nyiso.com/documents/20142/2223020/2017-Power-Trends.pdf/7baea2ba-cdca-93a6-2e45-4d948383ccbd.

[23] NY Indep. Sys. Operator, Power Trends 2021: New York's Clean Energy Grid of the Future at 25 (May 2021), *available at* https://www.nyiso.com/documents/20142/2223020/2021-Power-Trends-Report.pdf/471a65f8-4f3a-59f9-4f8c-3d9f2754d7de/.

[24] *Id.* at 24 (showing that only 2% of Downstate capacity is zero-emissions in 2021).

New York's offshore wind investments and urban energy storage initiatives may relieve reliance on the In-City fossil units to some extent but are not considered sufficient to ensure reliable grid operation.[25]

Notably, under the Advisory Panel ("AP") recommendations scenario, Zone J (NYC) will require more than 8,000 MW of "zero emitting firm dispatchable resources" to replace existing In-City fossil-fired resources that today provide essential load following and network reliability functions.[26] To Nucor's knowledge, there are no technologies commercially available today that can fill that role, which would mean that Zone J would continue to require fossil-fired load following generating capacity. Indeed, under the AP Recommendations scenario, in 2050 Zone J would require almost as much In-City dispatchable generation (8,000 MW) as is installed today (9,600 MW).[27] Further, even if energy from Upstate renewable sources delivered to Zone J reduces the dispatch of the In-City load following units, those local units will require inflated capacity payments or out-of-market compensation to remain in service (a factor that does not appear to be considered in the Draft Plan's Integration Analysis of expected costs and benefits). Effectively requiring New York consumers to pay for both clean energy and reliable capacity will add considerably, and perhaps unnecessarily, to the cost burden of CLCPA implementation.

This leads to the second principal implementation barrier: the affordability of electric service. For decades, average electric rates in New York have been among the nation's highest.[28] The comparatively high cost of power has had a decidedly adverse effect on Upstate's manufacturing sector and overall economic prospects. In fact, the chronic erosion of quality jobs and population has been a long-standing concern in the Upstate region. The State has recognized the adverse impacts of New York's high electric rates on job attraction and retention, and the State enacted the NYPA-implemented ReCharge NY power allocation program in 2011 to help mitigate those impacts on economically significant employers.[29] The distinctly negative economic impacts of uncompetitively high energy prices is also a basic reason why the CLCPA requires an implementation plan designed to minimize leakage (*i.e.*, to avoid merely shifting emissions and jobs elsewhere).[30]

Today, the Public Service Commission has already established a broad suite of utility ratepayer-funded programs aimed at reaching the State's clean energy objectives. They include:

- The CES Tier 1 REC (new renewable energy credit procurement program);
- Tier 2 REC payments (existing renewable retention);

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[25] *Id.* at 45.

[26] Draft Scoping Plan, App'x G: Annex 2: Key Drivers and Outputs tab for Electricity Supply, Scenario 1. The Low Carbon Fuel and Accelerated Transition scenarios require comparable levels of local generation support.

[27] *Id.*

[28] According to the U.S. Energy Information Administration, New York's average retail electric rates are 40% above the national average and 7th highest in the continental U.S. (only California and five New England states are higher). *See* EIA, State Electricity Profiles, https://www.eia.gov/electricity/state (data for 2020).

[29] N.Y. COM L § 188-A.

[30] *See* N.Y. ENV L § 75-109(3)(e).

- The ZEC (zero emissions credit) nuclear plant retention program;
- Offshore Wind Renewable Energy Credits ("ORECs")
- The Tier 4 REC program (renewable energy delivered to NYC, including new high voltage DC transmission lines to deliver it);
- Transmission network expansion throughout the State to deliver remotely located renewable energy to load centers;
- Behind-the-meter renewable investments throughout the State supported by the value of distributed energy resource ("VDER") measures adopted in Case 15-E-0751, *In the Matter of the Value of Distributed Energy Resources*;
- Expanded utility-administered energy efficiency and heat pump promotional programs, and energy storage pilots;
- A "Build Ready" renewable siting assistance program; and
- Various customer-sited efficiency and clean energy measures supported by the Clean Energy Fund.

Most of these are multi-year, multi-billion dollar programs. Additional billions in local and bulk system transmission investments will also be required to maintain reliability while implementing these fundamental changes to the electric grid.

Significantly, although the costs of some of these programs are included in consumer electric rates today (*e.g.*, ZECs, Clean Energy Fund, and energy efficiency programs), in many instances New York has made long-term contractual commitments to project developers, but consumers are only beginning to experience the utility bill impacts (*i.e.*, most renewable energy costs for Tier 1 RECs, offshore wind RECs, and Tier 4 RECs will not hit electric bills for several years but will become embedded for decades thereafter). The billions of dollars in today's contractual commitments will substantially increase electric rates over the coming decade. [31] Further, the Advisory Panel recommendations expand well beyond current targets and commitments and call for almost 60,000 MW of solar PV compared to what is in place in New York today (the year 2020 baseline), more than 22,000 MW of energy storage and roughly an additional 9,000 MW of offshore wind energy.[32]

The Public Service Commission recently noted the considerable number of measures that it has already implemented that are aimed at meeting electric and natural gas sector-related CLCPA targets, and the Commission initiated a docket to track progress in meeting the CLCPA targets

[31] There is no formal New York State tally of the consumer cost of energy sector measures that have already been undertaken, mandated, or approved for recovery in utility rates. NYSERDA provides periodic reports on its Clean Energy Standard expenditures and commitments, Public Service Commission orders have authorized spending levels for discrete programs such as the Clean Energy Fund, and PSC rate orders have approved or mandated utility spending levels on energy efficiency, distributed system platforms, and related capital spending. Utilities also have filed discrete petitions seeking regulatory approval for CLCPA-driven transmission, substation, and related investments beyond the levels approved in rate cases. To date, it appears that from 2016-2030, actual expenditures and committed spending approved or authorized by the PSC that will be recovered in utility rates is conservatively estimated to be in excess of $30 billion.

[32] Draft Scoping Plan, App'x G: Annex 2: Key Drivers and Outputs tab for Electricity Supply, Scenario 1.

(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 proceeding will provide for periodic reports on annual funding commitments and expenditures, but the Commission should follow up those reports with measures needed to control the costs imposed on utility customers. As just one example, the vast majority of dollars collected from New York load serving entities ("LSEs") (and billed to their retail customers) today for renewable energy programs do not compensate renewable projects for producing clean energy and renewable energy credits (RECs). Too few RECs are currently produced, so most of the dollars collected from consumers and passed along to NYSERDA are "alternative compliance payments" (ACPs) required by the 2016 Clean Energy Standard Order.[33] The PSC should consider discontinuing the collection of ACPs and instead perform an annual true-up of actual REC payments, just as regulated utilities historically trued-up fuel costs in fuel adjustment clauses. This would eliminate a wholly unnecessary burden on New York consumer bills. In the same fashion, the PSC should consider allowing end-users that procure RECs on their own to offset those RECs against their LSE's assigned amounts. This will stimulate innovation in REC transactions that will benefit all.

Finally, as New York increases its reliance on remotely located intermittent and weather sensitive wind and solar PV generation, a host of serious reliability concerns are presented that are reflected in the NYISO's most recent 2021-2030 Comprehensive Reliability Plan and its Power Trends 2022 Report.[34] As noted above, fast-ramping resources capable of following load must be available all of the time even if used for very few hours annually. By the same token, large amounts of firm capacity must be available if substantial amounts of wind energy resources are not available to meet system needs (a common summer peak period occurrence), inclement weather negates large amounts of solar energy production (a common winter experience Upstate), transmission line outages disrupt delivery of Upstate energy to New York City (historically the reason why New York City needed large amounts of local generation), or any of a dozen other contingencies for which the electric network must be prepared.

Ultimately, all three scenarios in the Integration Analysis envision a New York grid that in the year 2045 will rely on four 70-year-old nuclear units operating at 90% capacity factors for a substantial amount of base level energy. Each of the scenarios, however, assumes that nuclear energy production in New York declines as those units retire, and none of the scenarios contemplates the possibility of new advanced nuclear technologies as a potential contributing resource.[35] Given the important role of the existing nuclear units in supplying large amounts of emissions-free baseload energy, as well on-going efforts to develop next generation advanced and

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[33] Case 22-M-0149, *In the Matter of Assessing Implementation of and Compliance with the Requirements and Targets of the Climate Leadership and Community Protection Act*, Order on Implementation of the Climate Leadership and Community Protection Act (May 12, 2022); Case 15-E-0302, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Modifying Clean Energy Standard Load Serving Entity Obligations and Establishing the 2024 Obligation (Mar. 16, 2022).

[34] NY Indep. Sys. Operator, *2021-2030 Comprehensive Reliability Plan* at 5-8 (Dec. 2, 2021), *available at* https://www.nyiso.com/documents/20142/2248481/2021-2030-Comprehensive-Reliability-Plan.pdf/99a4a589-7a80-13f6-1864-d5a4b698b916 ("2021-2030 Comprehensive Reliability Plan"). NYISO Power Trends 2022, *The Path to a Reliable, Greener Grid for New York.*

[35] Draft Scoping Plan, App'x G: Annex 1: Input Assumptions for Electricity Supply addresses the potential of existing nuclear only.

small modular reactors, the failure of the Integration Analysis even to consider new nuclear capacity seems incomplete.

Next, the Integration Analysis (Scenario 1) assumes a need in 2045 for more than 26,000 MW of unspecified zero-emitting firm resources running at less than 3% annual capacity factors to preserve system reliability.[36] By this time, New York is projected to be a winter peaking electric system (due to the above noted electrification efforts).[37] The Integration Analysis further assumes that solar PV will produce almost one-third of the State's electricity in 2045, but the capacity value of solar during winter peaks is negligible, which means that reliable system operation will require large amounts of firm, dispatchable resources.[38]

The Draft Plan acknowledges the magnitude of the concerns that the resource mix described above creates, and it recommends an "Evaluate and Adjust" approach[39] to planning and meeting the electric sector targets over time with system reliability remaining the top priority. Nevertheless, the Council must recognize that the recommended measures and assumed outputs for this sector under all scenarios presented in the Integration Analysis are effectively unconstrained by feasibility, reliability, or cost considerations.

Obviously, there is much work to be done, and technical innovations will need to be pursued to achieve the Act's objectives, but there is far too much at stake for the Scoping Plan recommendations to be premised upon incomplete evaluations or unvetted academic presumptions. In the electricity chapter alone, there are dozens of recommended actions that will require funding from somewhere. Attempting to force all of the costs of mandated clean energy investment programs through regulated retail utility rates will accelerate rather than mitigate leakage, undermine the electrification efforts in other sectors, and devastate the remaining Upstate manufacturing base. Although the Draft Plan contains precatory language concerning energy planning and emission reductions, the Council's final Scoping Plan recommendations must target and prioritize cost-effective actions where most needed.

a. Integration Analysis Errors.

It is important to recognize that the Integration Analysis materially understates the expected cost impacts to New York consumers and businesses from the energy sector recommendations. The Reference Case assumes, as embedded costs, the programs that have been mandated or contractually committed in New York under "implemented policies," but, as noted above, for the most part the costs of those commitments are not reflected in consumer electric rates today. These looming future utility rate drivers include the costs associated with 9,000 MW of offshore wind, 7,475 MW of energy storage and 17,365 MW of new solar PV).[40] These projects (plus in many cases required transmission network upgrades) represent many billions of dollars in investments designed expressly to meet the CLCPA objectives that eventually will be recovered

[36] Draft Scoping Plan, App'x G: Annex 2: Key Drivers and Outputs tab for Electricity Supply, Scenario 1.

[37] Draft Scoping Plan at 151.

[38] Draft Scoping Plan, App'x G: Annex 2: Key Drivers and Outputs tab for Electricity Supply, Scenario 1.

[39] Draft Scoping Plan, Ch. 13, Electricity, at 159.

[40] Draft Scoping Plan, App'x G: Annex 2: Key Drivers and Outputs (compare tabs for the Reference Case and Scenario 1).

in New York consumer electric rates, but the Integration Analysis does not consider them to be incremental costs to consumers' present utility rates for Scoping Plan purposes (*i.e.*, it is as if those costs were already included in electric rates). This materially understates the real expected consumer cost of CLCPA compliance relative to current conditions. It is akin to buying a house knowing the roof must be replaced and the kitchen remodeled but ignoring the cost of those repairs when financing the house. The Reference Case in the Integration Analysis should be corrected to show all expected incremental costs to consumers from current rates.

b. Carbon Pricing Only for Electricity.

The Draft Plan discusses (but does not propose) whether, in contrast to an economy-wide carbon fee or cap and trade program, New York should consider if a carbon pricing adder applied only to wholesale electric energy will help achieve the Act's mandates. [41] In 2017, NYISO and the Department of Public Service floated the notion of adding such an additional carbon price to wholesale energy prices,[42] which NYISO stakeholders examined and debated at length. Since that time, NYISO has not filed its carbon pricing proposal for federal regulatory approval because it never received unqualified support from State officials for the proposal. The reasons for the State's reticence are straightforward and well-founded.

New York's prevailing clean energy approach selects and subsidizes certain technologies (*i.e.*, supporting wind, solar, existing nuclear, battery storage, energy efficiency and heat pumps and not gas, new nuclear, or other alternatives), and the State's approach is not reliant upon market forces to initiate the transformations that are required by the Act. The carbon pricing under consideration at NYISO was proposed, not as a market-driven alternative to state-mandated investments supported by long term contracts, but as a cost added supplement to the state-directed clean energy actions. At the time, it was estimated that such an adder would increase New York consumer electric bills by approximately $3 billion annually without materially reducing energy sector emissions, improving the dispatch of existing fossil-fired generation, or affecting a meaningful improvement in the location of renewable energy sources relative to state loads.[43] In short, it would not advance progress towards the Act's objectives but instead would heighten leakage risks and undermine the Draft Scoping Plan's electrification objectives in the building and transportation sectors by making electric options more expensive.

[41] Draft Scoping Plan at 172-73.

[42] The cost of emission allowances procured as part of generator compliance with the Regional Greenhouse Gas Initiative ("RGGI") are captured in New York wholesale energy prices today.

[43] Matter 17-01821, *In the Matter of Carbon Pricing in New York Wholesale Markets*, Nucor Steel Auburn, Inc. Comments on the Brattle Group Report and Suggested Analyses to be Incorporated in the Integrating Public Policy Task Force Workplan (Nov. 30, 2017).

5. The Final Scoping Plan Should Define New York Energy Intensive Trade Exposed ("EITE") Businesses and Recommend Mitigation Measures to Prevent Leakage.[44]

Since 1990, GHG emissions from industrial sources in New York have decreased by 49%.[45] During that same period, manufacturing jobs in New York decreased by about the same percentage.[46] Hence, the observed emission reduction was a small consolation to the chronic loss of quality manufacturing jobs Upstate. That job loss is central to the population erosion seen in many Upstate communities, and current forecasts show Upstate continuing to lose population even as the State's overall population grows and electric demand doubles.[47]

New York has long recognized the close interrelationship between manufacturing, energy costs, and the general economic health of the Upstate economy. The CLCPA accordingly directed the Climate Action Council to form an advisory panel to examine concerns affecting New York's energy intensive, trade-exposed industries ("EITE"),[48] to identify EITE industries and related trades in the State,[49] and to prepare recommendations on issues and opportunities related to EITE industries.[50]

The Draft Plan reiterates the importance of minimizing leakage among EITE industries, and acknowledges that these businesses are highly sensitive to increased energy and emissions costs.[51] The Draft Plan also correctly observes that emission mitigation strategies for this sector must emphasize approaches less likely to result in emission and economic leakage.[52] Nucor agrees with the assessment in the Draft Plan that effective mitigation strategies will need to be industry-specific and, in some cases, facility-specific.[53] Nucor further agrees that near term reductions in this sector should focus on energy efficiency improvements.[54]

Nucor notes that Appendix E to the Draft Plan reaffirms that mitigating energy cost increases and ensuring energy reliability are key challenges facing New York EITE

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[44] Draft Scoping Plan App'x C.

[45] NYSERDA, New York State Greenhouse Gas Inventory: 1990-2016, Table S-2 at S-10 (July 2019), *available at* https://www.nyserda.ny.gov/-/media/Files/EDPPP/Energy-Prices/Energy-Statistics/greenhouse-gas-inventory.pdf.

[46] In 2021, New York manufacturing jobs were approximately half the 1990 level. U. S. Bureau of Labor Statistics. *See* data and charts available at: https://data.bls.gov/pdq/SurveyOutputServlet. Also, between 2010 and 2019, the New York State population outside of New York City decreased by 0.8%, whereas the New York City population increased by 2.0%. *See* N.Y. Dep't of Health, Vital Statistics of New York State 2019, Table 2, https://www.health.ny.gov/statistics/vital_statistics/2019/table02.htm.

[47] *See* NY Dep't of Labor Regional Reports re: Significant Industries, *available at* https://dol.ny.gov/lmi-workforce-planning.

[48] NY ECL §75-103 (7).

[49] *Id*. at §75-103 (8)(b).

[50] *Id.* at §75-103 (8)(f).

[51] Draft Scoping Plan: *Chpt.14: Industry* at 180-81.

[52] *Id.*

[53] *Id.* at 181.

[54] *Id.* at 182.

manufacturers.[55] The Just Transition chapter to the Draft Plan further concedes the serious potential for leakage and further quality job and population loss that could arise from CLCPA compliance efforts. These are discussed at length in Appendix C to the Draft Plan. The exploration of potential mitigation measures in the Appendix, however, focused largely on efforts elsewhere to establish economy-wide regulatory programs, and notably Congress' attempt in 2009 to pass a national carbon cap and trade program (the American Clean Energy Security Act or "ACES"), and California's cap and trade regulations.[56]

The 2009 ACES legislation sought to mitigate anti-competitiveness impacts of a national carbon allowance trading program by allocating zero cost allowances to EITE industries to account for both direct emission and energy cost impacts.[57] The California cap and trade program was limited to large emission point sources, and expressly exempted electric arc furnace based steelmaking facilities as a beneficial local manufacturing alternative to imports from high emitting sources.[58]

Although Appendix C describes possible EITE metrics based principally upon the debate in 2009 surrounding the ACES bill, the Draft Plan declined to establish an EITE definition or recommend mitigation measures. The Draft Plan explains that because it discusses, but does not actually propose, a New York economy-wide carbon tax or cap and trade program, it deemed it premature to define either EITEs or potential mitigation measures before such actions were proposed. However, the Draft Plan emphasized the importance of crafting effective EITE mitigation measures if such proposed actions are put forth.[59]

Nucor agrees that any state economy-wide GHG-related proposal that may be considered must establish effective mitigation measures for New York's EITE manufacturers, but the Draft Plan's reluctance to address needed mitigation at this juncture is misplaced. First, as discussed above, New York has already begun to implement a host of costly measures to achieve the Act's goals, particularly in the energy sector. Moreover, for the most part the costs of the clean energy mandates are recovered in utility rates through energy (per KWh) charges, which disproportionately affects energy intensive manufacturing. The State's long-term contractual commitments to renewable energy, related transmission, energy storage, and mass-market energy efficiency initiatives are rapidly becoming a significant component of energy costs in New York that are not shared by competing producers in other states and abroad. In addition, New York regulators recently have moved toward a rate setting approach to recover on a statewide basis the costs of subsidized clean energy projects targeting New York City energy sector emissions that are tied to CLCPA compliance. This distorts price signals that are needed to promote energy efficiency, peak load reduction, and the development of energy storage, distributed energy, and other local grid solutions that will become increasingly important as CLCPA implementation programs proceed in earnest. Indeed, the Draft Plan highlights the need for greater accuracy and

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[55] Draft Scoping Plan, App'x E, *JTWG Recommendations to the Council on Issues and Opportunities Related to the EITE Entities,* at E-3.

[56] Draft Scoping Plan, App'x C at C-6.

[57] *See* 111th Congress, H.R. 2454, American Clean Energy and Security Act of 2009 §§ 763-764.

[58] Draft Scoping Plan, App'x C at C-14.

[59] *Id*. at C-12.

granularity in retail rate design and wholesale pricing[60] in order to encourage more efficient end use,[61] dynamic load management and distributed resource development,[62] and demand side solutions.[63] The recently revised cost allocation policy is inconsistent with the Draft Plan's repeated calls to better align utility rates with the Scoping Plan's objectives.

The combination of the rising impact on utility rates of clean energy commitments and socialized cost allocation will place undue burdens on Upstate energy intensive manufacturing, which means that EITE mitigation measures concerning CLCPA-driven energy costs should be addressed now. The final Scoping Plan should complete the assigned task of defining and recommending appropriate mitigation measures for EITE industries, starting with utility rate design and cost allocation policies to provide improved and more granular pricing signals.

With respect to defining New York EITE industries, the final Scoping Plan should follow the definition of energy intensive, economically significant facilities that form the foundation for the NYPA ReCharge NY program enacted in 2011, and recommend further mitigation measures based on that legislation.[64] Rather than relying on national manufacturing classifications that may not be representative of New York's circumstances in many respects, the Scoping Plan should align with the State's basic energy cost mitigation program (ReCharge NY) for regionally significant employers that are energy intensive.

6. State Entities Need to Work with Stakeholders to Establish Industry Benchmarks to Reduce Embodied Carbon in Supply Chains.

The buildings sector is the largest source of emissions in New York State.[65] Electrification and improved efficient end use are two keys to decarbonizing this sector, and reducing the embodied carbon associated with building construction is a significant issue to address as well.[66] Nucor agrees that a complete and viable emissions reduction plan needs to reduce embodied carbon in manufacturing, construction and building supply chains while mitigating leakage. Nucor further agrees that in-state manufacturing can grow to produce low-carbon products, and that New York should establish procurement requirements and other measures that expressly consider embodied carbon content.[67] Since construction materials are sourced globally, to accomplish this the Draft Plan correctly concludes that embodied carbon throughout the supply chain should be considered, and this will require industry-specific benchmarks for production emission intensity.[68] Nucor recommends that the pertinent State entities engage stakeholders at the outset to develop appropriate benchmarks.

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[60] Draft Scoping Plan at 172.

[61] *Id*. Ch. 12; Buildings, at 139.

[62] *Id*. at 161.

[63] *Id.* at 174-75.

[64] Economic Development Law §188-a, ReCharge NY Power Allocation Program.

[65] Draft Scoping Plan at 119.

[66] *Id*. at 145-47.

[67] *Id.*

[68] *Id*. at 47.

7. The Final Scoping Plan Should Consider Regional Constraints and Priorities.

While the CLCPA applies to every sector and location of New York, to establish coherent and effective implementation strategies, it is necessary to take into account the markedly different concerns, challenges and priorities that apply to different regions because they will substantially influence the felt impacts of New York's compliance actions

Upstate communities have an abundance of clean energy but are economically more reliant on EITE industries and have experienced chronic quality job and population losses. The Upstate region needs to exploit its clean energy advantage to drive sustainable economic growth, and the region is well situated to become a hub for low-carbon industries that can meet the Scoping Plan's interest in lowering embodied carbon in supply chains as long as energy supply remains reliable and competitively priced. Extra-market clean energy subsidies are becoming a major cost driver of energy rates, and spiraling energy costs increases not experienced in other jurisdictions will quickly outweigh possible economic development opportunities.

In contrast, Downstate zones are expected to see continued population growth, economic expansion, and increasing electric usage (and peak demand), especially as electrification efforts in the building and transportation sectors take hold.[69] The increasing energy demand will force continued reliance on existing load following generation resources, which in turn makes appropriate energy price signals for energy efficiency, DER, and demand response initiatives crucial to any realistic expectation for achieving emission reduction goals and displacing local fossil generation that are the source of pollutants that disproportionately affect urban disadvantaged communities. Appropriate price signals are also essential to the development of energy storge initiatives and other technology innovations, which will necessarily be local, to secure reliable electric network operations (*i.e.*, the unspecified but essential zero emission firm dispatchable resources assumed in the Integration Analysis). In sum, the final Scoping Plan needs to align its recommendations with other core State economic and environmental policy imperatives.

8. Economy-Wide Measures.

Chapter 17 discusses potential New York economy-wide polices that might generally promote GHG emission reductions, serve as a funding vehicle for other polices identified in the Scoping Plan, and provide a consistent market pricing signal among all sectors of the economy.[70] The Draft opines that well designed broad-based programs could support economic development and innovation, but recognizes that a poorly designed effort would be a burden on the economy.[71] The Draft Plan identified, but did not recommend, three options for discussion:

- **Carbon Pricing**. A Carbon tax or fee applied economy-wide;

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[69] New York, New York City Population Projections by Age/Sex and Borough, 2010-2040 (Dec. 2013) (Updated from the original PlaNYC Projections, 2000-2030), *available at* https://www1.nyc.gov/assets/planning/download/pdf/planning-level/nyc-population/projections_report_2010_2040.pdf.

[70] Draft Scoping Plan at 252-63.

[71] *Id.* at 252.

- **Cap and trade (or Cap and Invest)**. A system for limiting state-wide emissions by creating a state-wide system of tradeable emission allowances (*i.e.*, similar to what applies in the electric generation sector today through the RGGI program); and
- **A tradeable fuels performance standard**. A system of carbon credits applicable to liquid or gaseous fuels.

In theory, a carbon price fixes the cost of emitting but does not assure a particular level of emission reductions, a cap-based system limits emissions but the cost is uncertain, and the final option targets carbon fuels rather than emissions directly. The Draft Plan invites comments on factors to consider in evaluating these alternatives. The Draft Plan acknowledges that both carbon pricing and cap-and-invest programs enhance the risk of leakage because they inherently increase the cost of doing business in New York.[72] The draft suggests that a tax on carbon fuels would not pose the same risks, but that is mistaken.

Adding to the cost of oil, natural gas, and other fuels will raise the cost of electric energy and any manufacturing process that uses natural gas. Transportation costs for both raw materials and finished products would also increase. For EITE businesses, those increases may be significant and competitive pricing for their products will force them to absorb those costs. As the Draft Scoping Plan recognizes in Chapter 14, such general economy-wide measures, while typically seen as a potential source of funding, are likely to create significant counterproductive outcomes.[73] Clearly, the above-noted New York economy-wide measures are problematic if applied on a single-state basis. Any such measures would need to effectively address direct and indirect compliance costs and incorporate effective border adjustment provisions.

9. The Final Scoping Plan Should Avoid Premature Restrictions on Natural Gas Use.

Electric sector emissions have declined in the State since 1990 primarily because New York's wholesale power markets and environmental policies resulted in the replacement of all of the State's coal-fired generation with natural gas or dual-fueled resources.[74] By the same token, energy sector emissions recently increased when the retired Indian Point nuclear units were effectively replaced by natural gas-burning generation. New York does not currently have a commercially viable substitute for gas-fired load-following generation in or near the metropolitan area. Also, plans for the electric sector are heavily dependent upon continued operation of four aging Upstate nuclear units for baseload generation whose output could not readily be replaced by intermittent renewable sources. Further, there are no viable alternatives to natural gas usage in many high temperature industrial processes. New York should take a disciplined and targeted approach toward reducing gas usage as a CLCPA compliance strategy. And should avoid premature actions that may precipitate significant leakage, electric sector reliability or other serious adverse consequences not intended by the CLCPA.

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[72] *Id.* at 259.

[73] Draft Scoping Plan at 180-82.

[74] *Id.* at 149-50 ("Electricity sector emissions have declined 46% since 1990.").

CONCLUSION

Nucor Steel Auburn urges the Climate Action Council to incorporate the above comments and suggestions into its final Scoping Plan.

Respectfully submitted,

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