

Dutchess County, New York

Comments on the

New York State Draft Scoping Plan

for the

Climate Leadership and Community Protection Act

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Executive Summary

The task of providing a scoping document for the CLCPA is undeniably gargantuan, which requires a certain amount of generalization and a 10,000-foot scale just to be approachable. One valid criticism of the proposed plan is that it defines a path to a zero-carbon goal through an unknown future with incomplete knowledge of the developing technologies and resources that it relies upon. However, the benefits to be derived by New York State, the United States or the global community are suspect, even if the CLCPA goals could be achieved, which is doubtful. More concerning is the fact that the current energy infrastructure will be dismantled without proven replacement energy sources in place. This likely will have a catastrophic impact on the residents of New York State. The financial impact alone could cripple the state's economy, but the potential loss of life is unacceptable. Dutchess County is adamant that this project must be delayed until a realistic transition process can be identified, explained and implemented.

Dutchess County's concern with the proposed scoping document is that for the type of massive change in public behavior that would be required to achieve success, the plan should establish a flexible process with feedback loops that initiate change with self-correction and incentivize innovation. The supply and distribution networks for traditional fossil fuels must be maintained during the transition to continue to safely supply fuel to the diverse sectors that require it. Planning for this continuum will require an interactive approach that protects the State's citizens while continuing to advance climate-related goals. Far more specificity is needed to strengthen the plan, particularly related to the implementation schedule of the CLCPA and resulting actionable work items,

The State must recognize that increasing the pace of change comes with exponential increases in risk. A balanced pace of change accomplished with outreach, education, and incentives for consumers and producers is far less risky than rushed, mandated change driven by regulation and enforcement. Without enough time to ramp up production of needed equipment (i.e., electric vehicles, heat pumps, and solar panels), the resulting demand for these products and supply chain logistics will dramatically increase the cost of essential equipment, making desired transitions uneconomic and cost prohibitive.

The average New York State resident is not familiar with the CLCPA or the requirements it imposes. There has been little to no outreach or education about the timelines, impacts, or costs related to these dramatic, pending changes – many only a few years away. This plan will create new State costs that will total more than \$150,000 per resident over the next 30 years. This does not include the personal costs to individuals including increased utility, vehicle, and home improvement costs. This plan will directly impact every person's everyday life from how they live in their homes to how they get to work. More outreach and education are needed to ensure that the public clearly understands, is in support of, and is adequately prepared for the impending changes to their energy future. A limited number of public hearings (with none occurring in the Mid-Hudson Valley) is not adequate public awareness. Far more must be done to ensure the public's understanding of what is to come. Public support and understanding could spur greater action as opposed to requiring heavy-handed regulation and enforcement.

The benefits that New York State could achieve through the successful implementation of the CLCPA are questionable, but the risks of a failed implementation will be severe. As a society, we have achieved economic and efficient systems that deliver the diverse types of energy necessary for our standards of living. There is a huge risk inherent in putting all eggs in one basket by choosing electricity as the single source of energy supply.

Choosing Electricity

Dutchess County questions the ability of the grid to bear the CLCPA's required shift to renewables within the desired timeline. Maintaining the reliability of the grid is critical to all New Yorkers. More research and development, as well as realistic and acceptable regulations, are needed to ensure a smooth transition to the renewable energy grid proposed in the Act. The State and the CAC must assure that implementation of the CLCPA maintains the level of energy reliability currently enjoyed and needed by NYS residents, businesses, and local governments, and until the new grid is functioning and has been tested, the supply and distribution networks must be maintained.

A critical example of a promising, but an untested new source of renewable energy for New York is offshore wind generation. Currently, New York has no offshore wind generation but plans to install 9,000 MW between now and 2035. Constructing wind farms against a tight timeframe leaves limited availability to develop best practices and to build in increasing levels of engineered and constructed reliability.

There must be a trial period to allow the new grid system to experience and respond to extreme weather events, before turning off and dismantling other fuel supply and distribution networks. There is still a lot of work to be done to ensure the viability and sustainability of the proposed grid which will result from the CLCPA. Lacking reliability and certainty, the CLCPA will have the unintended consequence of driving businesses out of NYS. However, the opposite is also true. If New York State is successful in developing a reliable, distributed energy grid with a myriad of renewable energy generating sources and integrated storage, it will provide an incentive for businesses to move to New York. Therefore, the development of renewable grid that has been tested and proven successful and reliable must be the goal rather a goal of meeting arbitrary, mandated deadlines. Failure to do so will not only have enormous negative impacts on New Yorkers lives and our economy, but it will also discourage others to follow our "lead."

Given the reliance on electricity for a renewable energy future as outlined in the CLCPA, consideration should be given to a detailed analysis, likely on a county-by-county basis, as to what to expect with the pricing of residential, commercial, and industrial supply of electric energy and how reliable that supply is expected to be. Without this analysis, the long-term viability of electric supply cannot be ensured. Before the State of New York eliminates fossil fuels on the way to net-zero carbon, an equivalent energy system providing energy on demand must be modeled, established, and tested. Currently, there is no design for an energy system proposed in the Draft Scoping Plan that demonstrates that a reliable energy system for the State may be established to accommodate the elimination of fossil fuels. Such a system needs to be designed, a pilot model based upon the design needs to be constructed, and the constructed

model needs to be stress-tested by users of the system to see if the system will work. The Scoping Plan needs to delineate a process that will create the level of assurance in the successful transition of the grid that allows for decision-makers to make long-term investments based on their confidence in the future.

Additionally, we note that diversification of electric supply options is needed to ensure its long-term viability; electrical energy alone will not reliably usher us into the future, research and development on other energy sources must continue.

Climate Justice

We understand the desire of the Climate Act to address the burden that some “Disadvantaged Communities” (DACs) have borne from past and current emissions, and support actions that can mitigate similar impacts and provide for improved health and environmental conditions. However, we caution that placing the responsibility to redress all acts of discrimination through benefits from the CLCPA will not be possible and will condemn these efforts to failure on both fronts.

A Divided State and Disparate Conditions

A rural/urban or upstate/downstate divide to reactions to the scoping plan must surely be anticipated. There are significant differences that must be recognized, and approaches tailored for the different regions of the State. For example, single-family homeownership (SFH), as opposed to multi-family; commercially developed housing, represents very different problems in the conversion of buildings to all-electric HVAC. Decisions made by commercial owners on investing in improvements for developing income-producing properties are very different than finding room in the family budget for the large up-front cost of conversion. Without providing financial options like the Open C-PACE funding available for commercial properties to homeowners, financing these improvements will be out of reach for many.

Unaddressed Concerns

1. The transportation system infrastructure is supported by the gas tax, collections of which will be greatly reduced by the CLCPA if it is successful in electrifying the transportation industry. In addition, the implementation of a Mileage-Based User fee will disproportionately affect residents in suburban and rural communities where public transit is insufficient and trip chaining is less likely.
The scoping document calls for the conversion to electric vehicles (EVs). Even if such a massive transition could occur, the enormous electrical demand for daily EV charging would further tax the proposed intermittent wind and solar energy systems. The belief that public transportation will be available and acceptable is highly suspect and will likely cripple both the state’s economy and resident’s lifestyle. A modified transportation plan is imperative.
2. The Solid Waste portion of the Scoping Plan focuses first on the reduction of the volume of materials entering the waste stream and the removal of organics. These are both valid goals and will reduce the impact on the disposal of solid waste. However, it ignores the climate

implications of long- distance trucking of waste materials to be deposited in the few massive landfills remaining in the State. Communities that followed the past NYSDEC guidance and developed Waste to Energy plants (incinerators with cogeneration) will be left holding the unpaid debt on these facilities, much of which was incurred to add mandated pollution control equipment to reduce emissions. In addition, new technologies that seek to transform the waste into biogas, which could be used in various processing technologies, are not encouraged. Any evaluation of these technologies should at least be analyzed in the context of the true cost of landfilling which includes not only the potential for methane leakage but the cost of transporting the waste over long distances.

Dutchess County is concerned with the handling and proper disposal of waste after the CLCPA is in effect as we have a waste-to-energy resource recovery facility. We do not find there to be a suitable alternative to this type of waste treatment outlined in the CLCPA and Dutchess needs to continue to dispose of waste in this way until one is identified.

3. While beginning to look at the resources and taxes needed to implement the CLCPA, the Draft Scoping Plan states that it will require an “all hands-on deck” attitude for State Agencies across the board to implement the CLCPA. However, it does not address the significant increase in staffing levels that will be required across all levels of government in NYS. Of course, this comes at a time when staff levels have been significantly reduced due to retirements and employees leaving for other reasons related to Covid. Staffing issues are not just a temporary situation, but a significant problem needing to be overcome and one that requires immediate investigation and correction. The Scoping Plan must better define what government agencies will be charged with carrying out the different parts of the CLCPA transition and what resources will be required. Only then can the true costs of implementing the CLCPA be considered, and a transition schedule set based on the level of government intervention required to accomplish the desired outcomes in a just and achievable manner.

Approaches to implementation that should be replicated in other sections of the scoping plan

1. In the *Financial and Technical Assistance* section, “The transition for Industry to decarbonize and embrace new technological solutions will take time and require State support. Providing clear market signals of long-term commitments would bolster industry confidence in decarbonizing the sector.” This statement is important and will reassure the industry as to the State’s desire to work with businesses to achieve the CLCPA’s requirements.
2. From an implementation and timing standpoint, Chapter 15 on Agriculture and Forestry is more balanced than other chapters in the Draft Scoping Plan. There are several references throughout that lend themselves to such balance; for example: “seeking feedback from groups;” “continue and enhance training;” and “Dairy and crop farmers will need additional applied research and aid to deploy effective tools to reduce GHG emissions;” “allow private forest landowners to manage for multiple benefits;” “longer time frames will be required for other components;” and “would take several years to set up and implement” etc. In addition,

in numerous locations, the chapter provides recommendations for funding resources to assist the farmers in adapting to emission reductions or sequestering carbon. Other chapters in the Draft Scoping Plan would greatly benefit from the balance presented in this chapter.

3. It is noted in Chapter 23, Reporting, that an implementation report will be developed every four years to gauge how the implementation is progressing; the first report will be issued on January 1, 2028. Considering the scope of the changes outlined in the CLCPA, an implementation report is needed well before 2028. During the first few years of implementation, annual reports should be generated to ensure progress is occurring as desired and expected. These implementation reports should be a key component in developing the flexible implementation process with feedback loops that initiate self-correction and incentivizes innovation, as discussed earlier. Creating a self-correcting process, driven by real-life data from the implementation reports would ensure incremental progress toward the desired end state, instead of an all-or-nothing regulatory approach that could fail with tremendous consequences. The implementation of this Act should be an iterative process, requiring many status reports and readjustments, as that is how progress is made when the consequences of failure are too severe to risk.

Conclusion

Dutchess County remains steadfast in our commitment and work to reduce the carbon footprint and improve the environment we all share. The County has been and will continue to take priority actions recommended by the Climate Smart Communities Taskforce and Clean Energy Communities programs and has achieved a Bronze Level Climate Smart Communities designation as well as the Clean Energy Communities certification. If the CLCPA is to continue, it is critical to develop a flexible process with feedback loops that initiate self-correction and incentivizes innovation instead of inflexible regulation requiring threats of enforcement actions and punishment to drive change.

The CLCPA has multiple mandated regulatory deadlines looming, with some only a few years away. Yet, the Draft Scoping Plan creates many more questions than it answers. The mandated, regulatory timelines should be suspended until the residents, businesses and industries, governments of New York understand the dramatic changes that are looming, including the timing, impact and cost; and they can be assured that there is realistic plan in place ensuring energy availability, reliability and affordability before there is abrupt transition away from all fossil fuels. This Draft Scoping Plan does not do that and therefore must be revised.

Overview of Dutchess County Interests

Dutchess is a county located halfway between New York City and Albany, situated in a beautiful part of the Hudson Valley.

In July 2019, the New York State Legislature passed the Climate Leadership and Community Protection Act (CLCPA) which became effective at the beginning of 2020. The substance of the act was to significantly reduce the anthropogenic generation of carbon within and in some instances outside the State with the goal of net zero carbon by 2050.

The County, upon review of what is proposed in the Draft Scoping Plan, has concluded that, as planned, the implementation of the CLCPA will have deleterious impacts on the County and those who live, visit, or do business in the County and needs significant revision, particularly when weighed against the fact the plan's implementation will actually have no real impact on improving climate in Dutchess County.

Climate change is a worldwide phenomenon and though the State has taken the "admirable" step to provide an example to the rest of the world, such actions will have no demonstrable effect on the rest of the world which will continue to generate increasing levels of carbon emissions.

The County's comments focus on three segments of society to be impacted by the Draft Scoping Plan as presented. The segments are individual members of society, Dutchess County and New York State, and the rest of the world. The approach is meant to be heuristic since there are no complete solutions for addressing climate change, and actions that best protect the environment and human beings simultaneously should be the goal.

Along with the identification of the areas in the Draft Scoping Plan that are problematic, the County intends to provide a more measured approach to addressing climate change that needs to be considered by the State and the Climate Action Council.

The review and comments on this massive Draft Scoping Plan by the County took a significant amount of time to complete. It is patently apparent to the County that parties who worked to develop the Draft provided an unparalleled service for which they deserve acknowledgement for the services rendered to the State of New York. All comments to follow made by the County should not take away from that acknowledgement.

The comments provided herein are organized into three parts. Part I is a site-specific investigation of content as presented in the Draft Scoping Plan. Part II uses the investigative material of Part I and provides an analysis of what may be inferred or concluded. Part III is an overview of what has been learned from the previous Parts with recommendations provided by the County in moving forward.

Part I: Areas of Concern in the Draft Scoping Plan

Foundational Misconceptions

Throughout the Draft Scoping Plan there are statements made or positions taken which are not supported categorically or in fact. There are other statements or use of terms that tend to be misleading or mischaracterized. The County will provide example listings below, and term such under the broad heading of foundational misconceptions. Also provided is background to the extent possible, characterizing why the listing is furnished.

- On page 2 of the Draft in section 2.1 the Draft posits it is providing “Scientific Evidence of Our Changing Climate.” Examples are given citing Tropical Storm Isaias, Super Storm Sandy, Hurricane Ida, and Tropical Storm Irene as evidence of a changing climate.

As defined in the recently published book “Unsettled” by Steven Koonin, an expert on climate and climate change, climate is the long-term weather pattern in an area, typically averaged over 30 years. Weather refers to day-to-day temperature, precipitation, and other atmospheric conditions, whereas climate is the term for the averaging of atmospheric conditions over longer periods of time.

It is undisputable that man has caused changes in the climate, but using weather occurrences that have occurred in recent years as scientific evidence that such is the case is simply unsupportable by definition alone.

- On page 3 in Chapter 2 first paragraph the statement is made: “Women, femmes, youth, and children in poverty commonly face higher risks and greater burdens from the impacts of climate change.”

The same statement is repeated on page 32 under the heading of Climate Justice and the Climate Act. This statement is steeped in prejudice as evidenced by picking and choosing among different parts of the population of the state. Excluding by gender makes no sense, especially when it comes to the issue of poverty. Those in poverty, regardless of gender, face real challenges and the impacts of this Draft Scoping Plan’s mandates to fix climate change will certainly make life even more difficult for them.

- Continuing with the elimination of prejudicial picking and choosing on the bottom of page 219, top of page 220 in the chapter on Agriculture and Forestry the following is presented:

Support long-term agricultural land transfers: AGM, AFT, and land trusts should assist farmers in securing long-term leasing and farm transfer to BIPOC, women, LGBTQIA+, low income, veteran, and beginning farmers; long-term leases are required for long term perennial systems.

The prejudicial intent of the passage to exclude by gender and race has no place in a scoping plan and needs to be revised, reflecting openness and inclusivity.

- In Section 2.3 Benefits of Climate Action in the draft plan on page 7 toward the bottom the statement is made, “Climate Action means that the electric grid of tomorrow will be cleaner, more affordable, and more reliable.”

This statement is a misleading exaggeration. The grid itself will not be any cleaner in the future than it is today. The same wires and structures and devices will continue into the future as they exist today and the grid itself will not change in cleanliness. In fact, the grid will become more expensive as more investments are made into the grid to carry a larger load anticipated in the CLCPA. Finally, as currently planned the grid will become less reliable. Electric supply will become less diversified as to source of fuel used in generation. Generation as well as storage will be intermittent and unreliable. Wind turbines and solar fields are inherently less reliable than fossil fueled or nuclear base load generation. **Therefore, the grid, which depends upon reliable generation, will not be any cleaner and will be less reliable.**

- In Section 5.1 on page 27 discussed is New York State’s Climate Vision. In the first sentence of the section stated is, “New York will undertake a sweeping set of measures to reduce the State’s carbon footprint, transform electricity generation in the State, and drive innovative solutions through technology advancement.”

This statement does not square with recent preemptive premature actions of the DEC denying Title V Air Permits for Danskammer and Astoria. The application for Danskammer pointed to the requirement to use innovative solutions through technology advancement to continue to operate under the requirements of the CLCPA. The DEC rejected such initiatives as “uncertain and speculative”. Specifically, for Danskammer in its rejection on page 10 and 11 issued on October 27th, 2021, the DEC states the following:

Overall, the Applicant’s plan for compliance with the Climate Act’s emission-free by 2040 generation requirement is uncertain and speculative in nature. With respect to the first potential compliance pathway – utilizing RNG or hydrogen as a potential compliance pathway – Danskammer has not established its feasibility from either a supply or GHG emission perspective.

For example, there is uncertainty surrounding the feasibility of firing hydrogen in existing combustion turbines. Nascent testing of hydrogen combustion at certain facilities is partially intended to address some of this uncertainty. While existing combustion turbines are generally capable of firing mixtures of hydrogen and natural gas, these fuel blends raise other concerns. When compared to natural gas, hydrogen has a higher explosive potential, a higher leak potential, a lower volumetric heating value, and a higher flame temperature. A lower volumetric heating value means that more fuel needs to be fired to achieve the same output. The additional volume of fuel fired, combined with the higher flame temperature when firing hydrogen, is expected to cause higher emissions of Oxides of Nitrogen (NOx) without the installation of additional NOx controls. An existing combustion turbine facility may be required to modify its fuel feed system, fuel firing system, and/or emission control system to facilitate hydrogen firing in the combustion turbine while maintaining compliance with its permitted emission limits. Further, if a blend

of hydrogen and natural gas is combusted, some amount of GHG emissions would still be generated from the natural gas component of the fuel mixture, potentially jeopardizing the facility's compliance with the zero emissions by 2040 requirement in the CLCPA.

With respect to RNG, while it may be technically feasible to operate the Project on RNG, Danskammer, in the ICF report, acknowledges that a transition to RNG is predicated on the availability of RNG in existing pipeline infrastructure by 2040. For this capacity to be realized, third parties would need to pursue approval for the necessary infrastructure to generate and deliver RNG in sufficient quantities to allow the Project to continue to operate. That approval process – which would likely also be subject to Section 7(2) of the Climate Act by the relevant agency or agencies – may affect the ability to commence construction and operation on a schedule that meets the needs of the Project. Further, neither the Department, the Siting Board, nor the PSC have yet determined the extent to which RNG combustion may be an acceptable means of meeting the zero-emission by 2040 requirement of the CLCPA.

Yes, innovation is uncertain and speculative and so is the New York State Climate Vision for the future. That Vision for the future is highly dependent upon how the State deports itself. Reading through the Draft Scoping Plan there are numerous R&D requirements stated as being necessary to adapt the State to current transition encumbrances. **The DEC statements above indicate the state is more interested in regulation and compliance against a preordained CLCPA schedule, rather than innovation and technological advancement.**

- On page 29, the Draft Scoping Plan states: “Advisory Panels delivered their GHG mitigation recommendations for Council consideration at the April and May 2021 Council meetings. The full slate of recommendations can be found in Appendix A.”

Throughout the body of the Draft there are only 4 references to Appendix A, which turns out to be one of the most significant parts of the Plan stretching out for more than 230 pages. The first is on page 29 as described above, the second appears in a foot note number 62 on page 103, the third is in the heading of Appendix A at the end of the Plan, and the final listing appears on the last page of the Plan where all the appendices are listed.

Now throughout the Plan there are references as to the presentations made by the Advisory Panels in the April to May 2021 time frame. Diligent readers must set the Draft Plan aside and review the minutes/presentations of the appropriate April or May CAC meetings to determine what the Advisory Panels had to say only to learn that probably the content of those presentations are provided in Appendix A.

The Plan, as currently drafted is not user -friendly and is hard to follow to develop a complete understanding of content and direction. Consideration should be given to an entire rewrite once all comments on the Draft Scoping Plan have been received.

➤ On page 30 under the heading of Integration Analysis the following is presented: *The Climate Act requires that the Council, in developing this draft Plan, evaluate the total potential costs and potential economic and non-economic benefits, considering the Value of Carbon established by DEC under the Climate Act, of this draft Scoping Plan for reducing GHGs. An integration analysis was developed to estimate the economy-wide benefits, costs, and GHG emissions reductions associated with pathways that achieve the Climate Act GHG emission limits and carbon neutrality goal. This integration analysis incorporates and builds from Advisory Panel and Working Group recommendations, as well as inputs and insights from complementary analyses to model and assess multiple mitigation scenarios. Key assumptions, drivers, and results of the analysis have been made publicly available throughout the analytic process, and feedback from Advisory Panels, State agency staff, CJWG, and the Council has been incorporated as part of the analytic process. In addition, a Technical Advisory Group of experts from academia and national labs were also consulted throughout the analytic process. The results from the integration analysis were presented to the Council in Summer and Fall of 2021 and are available to the public on the Climate Act website.*

Going to the presentations made on integration to the CAC on September 13th, October 1st, and October 14th, 2021, it is impossible to ascertain how the volume of data presented in these meetings could possibly be “incorporated as part of the analytic process.” On top of the presentations made in the summer and fall, the analyses were updated on November 18th and December 30th, 2021 with the Draft Scoping Plan being issued on December 31st.

Such forecasted presentational material dealing with energy expenditures: including energy flows, primary and net consumption, electric generation, energy pricing, air quality and health effects, and carbon pricing would take months to understand and assimilate. The updates to the forecasts add another degree of complexity when it comes to integration.

For example, on page 75 of the October 14th meeting materials with the title “Energy Efficiency Benefits: Results (2020-2050) Strategic Use of Low Carbon Fuels”, the chart gives values of benefits over the period time for low to moderate income families. One of the rows lists reduced trip and falls with a value of \$1.9 billion over a 30-year period. A complete understanding along with supporting data to determine whether this listing makes sense would take a considerable time.

The forecasting references the work done by NYSERDA with its release of the “Patterns and Trends: New York State Energy Profiles, 2003-2017.” The report was published in March 2021, some three years after the profile period in question. Such energy reporting and forecasting takes time to accurately gather data, extract erroneous listings, and develop a cogent report which will sustain a rigorous peer review.

To say the least, the analyses, reporting, drafting of the Draft Scoping Plan has been a rush to judgement that makes a rigorous understanding of all the consequences of what is being proposed impossible to formulate. The section on Integration Analysis is a case in point with a brief paragraph being supported in the background with a monumental study on all aspects impacting the draft plan.

➤ On page 149 at the beginning under Overview stated is, “New York’s electricity sector is comprised of traditional fossil-fuel fired power generation facilities, nuclear generation facilities, along with clean energy generation such as wind, solar, hydropower, energy storage, and transmission infrastructure.”

Based upon the CO2 accounting New York State is using, to the extent that there is any association with CO2 then that CO2 needs to be accounted for, even if imported from outside the state. This draws into question, how transmission and storage can be listed as renewable if both rely upon fossil fuels to work. Further confusing is how nuclear generation is not listed as clean energy generation while hydropower is, as hydropower is a known generator of methane.

Timing

On pages 3 to 6 of the Draft in Chapter 2 the following statement is made:

NYSERDA has also launched a climate assessment, New York State Climate Impacts Assessment: Understanding and Preparing for Our Changing Climate, which will provide:

- *Updated projections and methodologies;*
- *In-depth economic analysis;*
- *New regions;*
- *More diverse perspectives and stakeholder engagement;*
- *Adaptable formats to drive wider usage;*
- *Technical workgroups that cover eight sectors, including agriculture, buildings, ecosystems, energy, human health and safety, society and economy (including finance and insurance), transportation, and water resources; and*
- *Cross-cutting topics such as the impact on Disadvantaged Communities, municipal perspectives, and the effect on marine and Great Lakes coastal zones.*

Draft core projections for the updated climate assessment have been completed, including for average and extreme temperatures and precipitation. These resources will be made publicly available once the assessment is completed, which is expected in early 2023.

Exclusively based upon the work of NYSERDA, which is still underway, it would appear reasonable to wait until the assessment is complete in 2023. From this work ongoing by NYERDA especially dealing with economics it would appear that this Scoping Plan is premature. This also raises the issue of the timing specified in the CLCPA which apparently drove the development of the Draft Scoping Plan to be issued at the end of 2021. Should such timing be revised to adapt to the world of reality? Should a request be made by the CAC to the governor and legislature to reimagine the requirements of the Act to conform to what actually might be accomplished?

On the bottom of page 6 top of page 7 in Chapter 2 of the draft it states:

Although no single entity can solve this global problem on its own, the Climate Act established New York as a leader in the critical effort to maintain a livable planet. AR6 makes the critical nature of this clearer. The report notes that, while many of the changes observed in the climate

are unprecedented, strong and sustained reductions in GHG emissions would limit climate change. It is imperative that we take immediate action to aggressively reduce GHG emissions, as well as invest in resiliency measures.

Referenced in this paragraph is AR6 or the 6th Assessment Report of the Intergovernmental Panel on Climate Change. Unfortunately for all the Assessment Reports produced by the IPCC forecasting the future of world climate 30 to 100 years from now, all of the reports use forecasting models. The models use human interventions to fine tune modelling results.

The modelling that is performed for the IPCC was reviewed in detail in a recently published book by a world-renowned expert on modelling, Steven E. Koonin the former Undersecretary of Science, US Department of Energy under the Obama Administration. In his book, *Unsettled, What Climate Science Tells Us, What It Doesn't and Why It Matters*, Koonin provides an entire Chapter 4 on the models and modelling done for the IPCC and for the AR6.

The following passages from Chapter 4 are instructive. Starting on page 86 under the title of “A Range of Results” Koonin provides the following:

The Coupled Model Intercomparison Project otherwise known as CMIP-compiles the ensembles. Its CMIP3 ensemble informed the IPCC's AR4 report, while CMIP3 underpinned the 2013 AR5 report, and CMIP6 will be the basis for the upcoming AR6 assessment.

But here we need to pause. The implication is that the models generally agree. But that isn't at all the case. Comparisons among models within any of these ensembles show that, on the scales required to measure the climate's response to human influences, model results differ dramatically both from each other and from observation. But you wouldn't know that unless you read deep into the IPC report. Only then would you discover that the results being presented are “averaging” models that disagree wildly with each other. (By the way, the discordance among the individual ensemble members provides further evidence that climate models are more than “just physics”. If they weren't, multiple models wouldn't be necessary, as they'd all come to virtually the same conclusions.)

Koon continues on page 90 providing the following explanation:

And the CMIP6 models that inform the IPCC's upcoming AR6 don't perform any better than those of CMIP5 at least by these measures.An analysis of 267 simulations run by twenty-nine different CMIP6 models created by 19 modelling groups around the world shows that they do a very poor job of describing warming since 1950 and continue to underestimate the rate of warming in the early twentieth century.

The failure of even the latest models to warm rapidly enough in the early twentieth century suggests that it's possible, even likely, that internal variability-the natural ebbs and flows of the climate system-has contributed significantly to the warming of recent decades. That the models can't reproduce the past is a big red flag-it erodes confidence in their projections of future climates. In particular, it greatly complicates sorting out the relative roles of natural variability and human influences in the warming that has occurred since 1980.

All this is to say the science is in fact unsettled, while addressing a changing climate it is also appropriate to continue to be very deliberate in that endeavor and not waste the hard-earned resources of New Yorkers battling with mother nature herself.

Climate Leadership

Chapter 3 of the Draft Scoping Plan is set aside to address “New York’s Climate Leadership”.

The first sentence in the chapter states, “New York continues to set an international precedent for addressing climate change.”

The draft scoping document appears to be founded on a desire by the State to promote international leadership well beyond the borders of New York State. The question becomes how does that “international precedent” end up helping a Dutchess County resident. What performance standards has the State set to know whether the dollars being invested in such leadership are generating a return, and what valuable pursuits may have to be sacrificed to pay for this leadership?

On pages 13 through 17 of Chapter 3 under Leadership the Draft Scoping Plan provides a listing of past and current policies in the State dealing with climate change. These policies are presented under the headings of Executive Leadership, Regulatory Action, Legislation, and Programmatic Action. The policies as such follow:

- Signed MOU of July 14, 2020 with 14 other states on ZEVs
- DEC Commissioner’s Policy 49 on agency guidance to divisions incorporating climate change
- Executive Order 190 Health Across All Policies Initiatives
- Executive Order 166 Affirming the Paris Climate Accord
- Executive Order 4 on the Green Procurement and Agency Sustainability Program
- DEC proposed Part 218 Regulation on Advanced Clean Trucks
- DEC proposed Part 203 Regulation on the Oil and Natural Gas Sectors
- DEC Part 494 Regulations on Hydrofluorocarbons Standards
- DEC Part 490 Regulations on Projected Sea Level Rise
- DEC Part 242 Regulations on the Regional Greenhouse Gas Initiative
- Chapter 423 of the Laws of 2021 on Accelerated Renewable Energy Growth and Community Benefit Act
- Chapter 59 of the Laws of 2019 MTA Congestion Pricing
- Chapter 355 of the Laws of 2014 establishing the CRRA or community risk and assessment act
- Chapter 388 of the Laws of 2011 establishing the Power New York Act limiting CO2 emissions by newly constructed power plants (effectively eliminating coal fired generation in the State of New York)
- Chapter 433 of the Laws of 2010 establishing the Smart Growth Public Infrastructure Policy Act making growth consistent with the State Energy Conservation Law

- Chapter 433 of the Laws of 2009 relating to Article Six of the Energy Law on energy planning requirements in the State
- PSC Reforming the Energy Vision program
- PSC NY-Sun Program
- PSC Clean Energy Standard
- Evolve New York
- Drive Clean Rebates
- Clean Energy Communities
- The Clean Energy Fund
- Climate Smart Communities
- Charge New York
- PANYNJ Climate Resilience Design Guidelines

With all these regulation and programs in place to reduce and eliminate carbon generation in the State, why does the CLCPA need to be enacted? It raises the question of performance against these regulations and programs. How well has the State performed and at what cost? How will the State be asked to account for the cost of CLCPA leadership required and will there be tangible benefits?

In Section 3.2 of the Chapter on page 17 stated in the first two paragraphs are:

On July 18, 2019, the Climate Act was signed into law. This historic legislation cements the State's position as a leader in combating climate change. This Act, which became effective on January 1, 2020, builds upon the State's clean energy and GHG emission reduction policies described above, codifying critical goals as statutory requirements. The Climate Act will have far-reaching effects across all areas of the environment and economy. The implementation of the Climate Act requires a significant regulatory undertaking by DEC as well as substantial action by NYSERDA, the Public Service Commission (PSC), and other State agencies and authorities. These efforts will be informed by the Climate Action Council (the Council), the final Scoping Plan, and, recognizing the importance of ensuring a just transition, essential groups that are focused on environmental justice issues.

New York's Nation-Leading Climate Directives

- *85% Reduction in GHG Emissions by 2050*
- *100% Zero-Emission Electricity by 2040*
- *70% Renewable Energy by 2030*
- *9,000 MW of Offshore Wind by 2035*
- *3,000 MW of Energy Storage by 2030*
- *6,000 MW of Solar by 2025*
- *185 trillion Btu of end-use energy savings*

Herein lies the leadership dilemma. The minute critical goals become statutory requirements freedom of choice is eliminated and leadership which is typically characterized in America as democratic leadership becomes authoritarian and is termed autocratic leadership. Characteristic of autocratic leadership is limited creativity, suppression of opinions, and limited participatory

feedback. Democratic leadership is the opposite with bountiful participation, creativity, and a multiplicity of opinion and last, but certainly not least, freedom of choice. The Act with its directives is an authoritarian demonstration of leadership. **What makes the Act so oppressive are the time frames stipulated.**

Take, for example, the directive for 100% Zero-Emission Electricity by 2040. The electric supply system in New York, originally started by Thomas Edison at the lower tip of Manhattan with his Pearl Street Generator on September 4th, 1882, has evolved to the current day with the installation of some of the most complicated scientific, engineering, and human controls ever produced by man. The current electric system in New York may be best described as a sophisticated digital computer stretched across the landscape of New York. The system has achieved a level of reliability which is the envy of the world.

Instead of setting a series of voluntary goals with incentives, the NYS Legislature has mandated strict compliance with statutory requirements that have all the marking of a crash landing. Replacing continuously operating generation with intermittent sources of supply dependent upon intermittent weather patterns, which ironically the CLCPA is looking to control and make more predictable, is a recipe that needs to be well thought out, by experienced professionals that have an expertise in electric system planning, engineering, design and construction. A demonstration model of the new system needs to be constructed and stress tested to determine any unanticipated operational flaws. An electric system similar in size and scope to what NY is proposing exists nowhere else in the world. New York residents cannot be guinea pigs to test out what works and what does not. Upstate New York does not need to experience a winter without electric supply especially when all elements of heating are dependent upon that same electric supply.

A case in point of stress testing the New York State electric system is the proposed system to replace fossil fueled electric energy supply in the state with 9,000 Mw of offshore wind generation. New York currently has no offshore wind generation. Yet 9,000 Mw of wind generation is expected to be ready by 2035, just over 10 years from now. Constructing the wind farms against such a tight time frame leaves limited availability to learn from mistakes and to build in increasing levels of engineered and constructed reliability. New York's first offshore wind farm, the South Fork Wind project, is to be constructed east of Long Island and will cable into the LIPA East Hampton substation on Long Island using a 60 plus mile long cable operating at 138,000 volts. It is expected to be capable of supplying 70,000 Long Island homes. The 130 Mw 12-unit project will feed into an offshore substation on a tubular pedestal in the Atlantic Ocean. In the event of damage to the substation or cable, 130 Mws are lost, with repair potentially taking weeks or months. Multiply that by a 9,000 Mw loss, and using South Fork Wind's customer supply capability as a scaling factor, you are talking about 5,000,000 customers without power. Is it possible to lose the entire portfolio of 9,000 Mw? That is unclear, and that is why natural and man-made threats must be evaluated and tested as part of a modeled demonstration system or an operating directive as to how to protect the system developed and tested.

Without a well-thought-out system that will work in the long term through conceivable contingencies, it will tragically be the poor and indigent parties, who are the least capable of sustaining costly failures, but who will be forced to shoulder the greatest impacts.

As goes the electric supply, so goes the rest of the Scoping Plan all of which is dependent upon continuous electric system supply.

On page 18 in Chapter 3, the heart of the CLCPA is listed under GHG Emission Reduction Requirements.

The heart of the Climate Act is the addition of Article 75 to the ECL, (Environmental Conservation Law) which, among other things, directs DEC to establish statewide GHG emission limits, requiring a 40% reduction in statewide GHG emissions from 1990 levels by 2030 and an 85% reduction by 2050. The Climate Act also establishes a goal of net zero emissions across all sectors of the economy by 2050. Within four years of the effective date, the Climate Act requires DEC to promulgate regulations to ensure compliance with such statewide GHG emission limits.

Accurately stated is the fact that the Act, as currently on the books, does not request that the DEC provide regulations to provide a glide path into the future reaching the ambitious goals on GHG reductions. The Act, in an authoritarian fashion, orders the DEC to make the reductions.

The world-wide concentration levels of CO₂ in the environment are currently around 412 ppm. The UN and EPA use protocols to assess the GWP of various gas emissions and normalize them to an equivalent GWP standard using CO₂ as the base. To compare apples to apples measuring worldwide percentages of CO₂ concentrations, the same accounting standards worldwide need to be applied in New York. Taking the data from the 2021 DEC Statewide GHG Emissions Report the UN protocols indicate that New York emissions are at around 195 mmt/year. The total worldwide CO₂ emissions are around 36,000 mmt per year. This means that New York's contribution to the world-wide total is around .5% and on a per capita basis for the State amounts to 9 mt/year, tied with California as the lowest per capita state in the union. Total NYS emissions versus total US emissions have New York emitting 3.3 % of the US total with California and Texas emitting 6.8% and 13% respectively.

The 40% and 85% reductions required by 2030 and 2050 respectively would reduce the New York State .5% current yearly contribution to the world-wide level of CO₂ in the atmosphere. It is uncertain as to the level of contribution to existing levels of CO₂ in the atmosphere since the 36,000 mmt annual level is expected to go up. However, the percentage increase of total CO₂ in the world-wide atmosphere accruing from NYS total yearly emissions would likely be bounded by an upper limit of the .5% of the total since total yearly emissions levels in the State have declined since 1990 and continue to decline. Thus, the level of improvement or reduction in overall CO₂ in the world-wide atmosphere resulting from the 40% and 85% reductions in GHGs in NYS will be less than .5%.

The question is why should New Yorkers be required to reduce carbon more than any other state or nation when in 2050 there will be no appreciable impact on the level of CO₂ concentrations in New York or the rest of the world? New Yorkers will be forced to change their lifestyles, behaviors, and potentially their own well-being, while bearing considerable costs, for no discernable results other than demonstrating State leadership.

As detailed on the top of page 66, Steven Koonin in his book *Unsettled*, noted regarding CO₂, “concentrations in air samples over the past ten thousand years varied between 260 and 280 ppm before a sharp uptick began in the mid-nineteenth century.”

Again, referencing *Unsettled* in the first paragraph on page 67 the following is stated. “Only once in the geological past—the Permian period, 300 million years ago—have atmospheric CO₂ levels been as low as they are today. Plant and animal life flourished abundantly during times when CO₂ levels were five or ten times higher than today’s.”

Under Leadership on page 19 the Climate Action Council and Advisory Councils are described as follows:

Critical to the implementation of the Climate Act is the 22-member Council, made up of the heads of various State agencies, as well as other members appointed by the governor and Legislature. The co-chairs of the Council are the DEC commissioner and NYSERDA president. The Council includes Advisory Panels for particular subject areas including waste, transportation, energy-intensive and trade-exposed (EITE) industries, land use and local government, energy efficiency and housing, power generation, and agriculture and forestry. The Council is charged with developing a Scoping Plan, which provides recommendations for achieving the statewide GHG emission limits, including regulatory measures. The Council consulted with the Advisory Panels for subject-matter expertise when developing recommendations in this draft Scoping Plan. A final Scoping Plan will be released in 2023 and reviewed and updated at least every five years.

It is hard to imagine a scoping plan larger in content and import than the Scoping Plan assigned to the CAC for development. **The Council and Advisory Panels have no expertise in effecting such a Scoping Plan.** Membership on the CAC as well as the co-chairs are gainfully engaged in other pursuits to which the requirements of the CAC were added, and it should be noted that the work they perform is exceptional and the Council and all Advisory Panels should be congratulated for their contributions to the betterment of New York State. However, the scoping of this implementation plan is tantamount to creating a huge, huge business with many, many interlocking requirements that will **monumentally** impact every man woman and child in NY for decades to come and there is no clearly defined expertise and leadership heading the effort.

An update to the scoping plan every five years, what does that mean? Will it be the same CAC with continuing membership, or will a new group be engaged and face a steep learning curve?

Finally, under the Leadership chapter on page 21 in the second paragraph, the passage below is provided:

Further, DEC, in consultation with NYSERDA, established the Value of Carbon guidance to help State agency decision-making by placing a monetary value for the avoided emissions of GHGs. The Value of Carbon guidance provides metrics that may be broadly applicable to all State agencies’ and authorities’ actions—such as benefit-cost analyses, rulemaking processes, environmental assessments, and demonstrations of the benefits of climate change policies—to

demonstrate the global societal value of actions to reduce GHG emissions. The guidance provides a recommended procedure for using a damages-based value of carbon along with a general review of the marginal abatement cost approach and recommends the use of a central discount rate of 2%, which should be reported alongside a 1% and 3% discount rate for informational purposes. For example, use of the 2% central discount rate translates into a 2020 central value of CO2 of \$121 per ton, methane of \$2,700 per ton, and nitrous oxide of \$42,000 per ton.

In a review of the Value of Carbon Guidelines produced by the DEC, the Guidelines key on the work done by the Federal Interagency Working Group on the Social Cost of Carbon. The work performed by the IWG used a 100-year time frame and a set of discount rates between 2.5 and 5 percent. In the Guidelines provided by the DEC the time frame used was 20 years and the range of discount rates 1 to 3%. In lowering the discount rates and time frame the value of carbon goes up substantially in the DEC Guidelines developed. The basis for this deviation from established norms promotes the rush for reducing CO2 in the proposed plan.

Reliability of Energy Supply

Before the State of New York eliminates fossil fuels that have provided reliable, affordable energy supply on the way to net zero carbon, an equivalent energy system providing reliable energy on demand must be designed, modelled, established, with pilot models launched to be stress tested. Currently there is no design for an energy system proposed in the Scoping Plan that demonstrates that a reliable energy system for the State will be established to allow for the elimination of fossil fuels.

The energy system desired by the year 2050 within the CLCPA currently does not exist and has never existed anywhere in modern times. The system contemplated in the CLCPA is inherently unreliable based upon the intermittent nature of wind and solar generation and to the extent that storage relies upon intermittent sources of energy supply, storage also becomes intermittent.

New York has come a long way in areas of health, energy use, and societal well-being based upon a reliable energy system providing all the energy desired upon demand. **The CAC in its scoping document must assure that implementation of the CLCPA maintains such energy reliability. From what has been presented in the Draft Scoping document there are no assurances. This is unacceptable and we cannot dismantle existing energy infrastructure and supply until such assurances are acquired.**

New York is in competition with other States to acquire and retain business and manufacture in the State. Aside from businesses that organically arise and grow within the State there are businesses external to the state which might desire to enter the marketplace in the State. Reliability of energy supply, cost, and usage will be considered in its due diligence for site selection. Uncertainty relating to energy availability and usage may be a determining criterion for such a locational business move. The Draft Scoping Plan provides no assurances for businesses. Such assurances need to be pragmatic in nature and identify tangible benefits which immediately add to a business' bottom line.

Energy systems around the world continue to become more and more reliable, where especially for the undeveloped world, energy is a key element for these developing countries. These undeveloped countries know that in order to ramp up economic activity the use of energy will be required. Right now, that energy is fossil fuel energy. As New York has showcased its plans for substantially modified energy systems eliminating various aspects of fossil fuel use, the last thing these undeveloped nations need to witness is the establishment of unreliable systems which cause an economic decline within the State. As is the case for individuals and businesses the Scoping Plan does not provide assurances that the energy systems to be established within the State will be as reliable and cost-effective as those which currently exist. That level of assurance needs to be identified in the planning taking place by the CAC.

The Just Transitions Working Group

The Just Transitions Working Group (JTWG), as identified in the draft Scoping Plan, was established under the legislation to ensure that workers impacted by the CLCPA would receive a dignified retirement, legal rights, and the elimination of biases against them in rehiring. In addition, the JTWG should advise the CAC on power plants required to be shut down under the legislation providing advice on the reuse of sites for clean energy and sustainable manufacture. The JTWG provides recommendations to the CAC on a just transition from existing energy sources and industries creating opportunities and ensuring a good quality of life for New Yorkers. Also included by the legislation is the requirement for the JTWG to advise the CAC on carbon leakage into New York and business sector impacts.

In Table 2 of Chapter 7, *Just Transition*, provided is a set of principles to serve as a guide for other advisory panels reporting to the CAC. The principles and language may be best characterized as a guide to utopia. Examples of the principles extracted from the table are exhibited as follows:

- *Engage a diverse range of stakeholders via early, inclusive engagement in communities' transitions to local low-carbon economies, including New York's workforce and the State's Disadvantaged Communities.*
- *Encourage collaborative State and community-based long-term planning, capacity building, and robust social dialogue in order to ensure a gradual and supported transition.*
- *Ensure that transition plans, policies, and programs reflect and respect local wisdoms, cultures, and traditions, including recognition of indigenous sovereignty.*
- *Seek to lift up New Yorkers in the transition to a low-carbon economy by implementing transition policies and programs that promote cross-generational prosperity and gender and racial equity, in recognition of the disproportionate burden of environmental pollution and climate change on Disadvantaged Communities.*

- *Promote diversified, strengthened economies in the transition to a low-carbon economy, examine opportunities for community-centered ownership structures, and promote industry recovery, retention, and growth for regions and sectors in transition.*

Develop a robust in-State low-carbon supply chain, spanning full product lifecycles, to increase focus on exporting low- and no-carbon products and to ensure that jobs in these emerging sectors become more accessible to the local workforce and to Disadvantaged Communities.

On the bottom of page 42 going onto page 43 the Draft Scoping Plan provides the admonition under the title in section 7.2 “Workforce Impacts and Opportunities”, listed below.

Achieving a just and equitable transition will generate numerous opportunities for New York’s existing and emerging workforce. Since the Council’s JTWG and seven multi-sector Advisory Panels were launched, representatives from public, private, academic, environmental, and community groups; labor unions; environmental justice communities; impacted industries; and renewable energy developers have met on several occasions to debate and analyze the impacts of transitioning to clean energy on the labor market. Together, the JTWG and the Council’s Advisory Panels have identified the following recommendations to help ensure that New York’s workforce is prepared for and stands to benefit from the State’s transition to a clean economy.

The recommendations in the chapter which follows to address dislocations and other negative workforce impacts include worker support, evaluation of labor standards, financial support of businesses, new training programs, career pathway programs, community engagement, stakeholder input and general considerations. However, these are window dressing that paper over a real problem that the State of New York has created.

“Recommendations” will not “help to ensure that New York’s workforce is prepared for and stands to benefit from the State’s transition to a clean economy”. On the contrary, it is far more probable that much of workforce, forced from their employment, will experience gut-wrenching dislocation and face personal and family hardship.

Chapter 7 goes on further to state on the bottom of page 43 top of page 44 of the Draft Scoping Plan:

Distinct strategies and responses must be developed for key existing traditional energy sectors, namely electric power generation, transmission, distribution, storage fuels, and motor vehicles. In electric power generation, displaced power plant workers should be supported through retraining, retention, early retirement/pension support, and mutual aid/work agreements. One option might be to require a cost share by plant owners while distinguishing between workers and executives. In the transmission, distribution, and storage sector, natural gas utility workers are supported by PSC rules to retrain for roles on the electric side of dual utilities (supported by cost recovery), with specific wage floors and protections. In the fuels industry, it will be important to address changes to businesses. Finally, greater attention must be paid to addressing the shift in work for other sectors that are central to the transition to a low-carbon economy, for example automotive workers and service technicians as internal combustion engines are replaced with electric vehicles (EVs).

To affect an implementation of this above paragraph would take a group of extraordinary individuals to accomplish. How likely would it be for a plant owner, potentially on the way to bankrupting of the LLC that owns and operates the plant, to now focus on cost sharing between owners, executives (managers?), and workers. Operating a fossil fueled production facility, especially if sited on significant areas of real estate, is not a trivial exercise and requires focused attention to maintain a cost-effective facility that operates reliably and safely.

Each sentence in the above paragraph is steeped in extraordinary encumbrances to effectuate. The statement referencing the role of the PSC in retaining and moving employees around and simply billing the rate payer for additional costs incurred would place Commission capabilities in a world of dreams. The unions representing those employees would also have something to say about how bargaining unit employees might be manipulated.

Chapter 7, at the bottom of page 44, then covers support for businesses. Taken from the Scoping Draft is the following:

To build a diverse, equitable, and inclusive clean energy economy, businesses must be supported with targeted financial support to ensure access to contracting and procurement opportunities in the transition away from fossil fuels. Funding must provide for supported on-the-job, recruitment, training, hiring, and job retention for Disadvantaged Communities, minority- and women-owned businesses (MWBEs), service-disabled veteran-owned businesses (SDVOBs), employee-owned businesses, cooperatives, design and installation firms, community-based organizations, and start-ups. Concurrently, manufacturing of clean energy components and equipment must be promoted locally to stimulate the economy and increase job growth. Government support must target efforts both specific to clean energy technologies and to affected regions. The focus must be on creating stable, well-paid jobs as opposed to takeover by out-of-state workers in the “gig” economy. Entrepreneurship training and small business startup support could further increase small business creation and ownership in climate adaptation and resilience products and services, particularly by MWBEs and SDVOBs.

What does “targeted financial support” in the above paragraph mean? Where will those supporting dollars come from? Will businesses need to be corporations or may they be privately held? Will a business administration be created to police the support and ensure that the financial support is appropriately supplied?

Aside from accomplishing a feel-good state, the above paragraph opens a series of questions with no simple solutions.

The same feel-good statement may be applied to the sections in Chapter 7 dealing with “Training Curriculum and Programs” and “Comprehensive Career Pathway Programs”.

Under “Community Engagement, Stakeholder Input, and Market Assessments on page 46 the following paragraph is presented:

Finally, it is imperative to continue stakeholder engagement to identify and assess industry skills gaps, employee demand, as well as curriculum and training needs. Open dialogue among

relevant stakeholders will be key to sharing needs and best practices, support industry opportunity awareness, and enhance recruitment efforts for new, transitioning, and existing workers. Particular attention must be placed on fossil fuel workers to understand and leverage transferrable skills with complementary training in both energy and non-energy roles. Additionally, the needs of people in frontline communities, indigenous community members, formerly incarcerated New Yorkers, women in non-traditional trades, immigrants, and people transitioning from unemployment must be prioritized. Strategies must be in place to reach underrepresented communities and to include them in the development of clean energy policies, strategies, and solutions; ensuring their voices are not only heard but also drive the successful achievement of New York's clean energy future. These strategies include campaigns to build public awareness of climate change effects and solutions, including co-benefits of actions to mitigate and adapt to climate change through public calls for ideas and projects to advance Climate Act requirements in Disadvantaged Communities.

This above paragraph takes on biblical proportion to accomplish the tasks stated. How are strategies to target underserved community voices going to take place so that those voices may make future policy decisions to achieve successful clean energy outcomes? And once again, there is no mention of the New Yorkers who bear the cost of these initiatives.

Section 7.3 of the chapter goes on to provide instructions as to how to minimize carbon leakage risk and minimize anti-competitiveness. As noted in the legislation, leakage is defined as, “a reduction in emissions of greenhouse gases within the state that is offset by an increase in emissions of greenhouse gases outside the state.” Also stated in the section is that climate change is a global problem.

The problem is summed up in the first paragraph of the section with the statement:

New policies that increase the cost of energy, reduce the reliability of energy, or increase the cost of emitting GHGs could cause businesses to shift their production outside of New York State, or avoid the State altogether, and instead invest in out-of-State locations with lower energy cost and/or less stringent environmental and GHG emission reduction policies. Mitigating leakage risk is of interest to the State for both climate and economic reasons, which is further demonstrated by the Climate Act requirements related to mitigating anti-competitive impacts and for the emission reduction regulations ultimately adopted by DEC to incorporate measures to minimize emissions leakage.

This statement is extremely instructive and is an honest forecast of what lies ahead - . Thus, costs will be going up, energy reliability will be going down and businesses that remain in the state will be looking in some fashion to reduce costs. As a consequence, the Climate Act requirement for the DEC to minimize emissions leakage through regulation is provided as mitigating anti-competitive impacts. So, businesses that attempt to remain competitive through reducing costs will be further regulated increasing costs, and the regulation will be to mitigate anticompetitive impacts. What this is saying is the CLCPA defines competitive to be the same as anti-competitive.

The section points out that the leakage is a global problem. This problem goes well beyond the United States or North America and speaks to the issue of manufacturing taking place in China to supply consumer needs in New York. Whereas in the United States, natural gas has continued to replace coal as a fossil generating fuel, such is not the case in China where fossil fueled generators continue to be constructed and fueled predominately by coal, with 61% of electric generation in China now coming from coal firing. On a national scale China emits more CO₂ than the United States with yearly totals nearly double that of the United States as of 2020, 10.07 billion tons versus 5.38 billion tons for China versus the US respectively. As manufacturing shuts down in New York and those manufactured goods are sourced in China, those goods will be produced with a CO₂ emissions rate over double the emissions rate in New York on a per kilowatt-hour basis.

In addition, New York has one of the lowest yearly CO₂ generation per capita of any State in the nation. As of 2018 for which EIA data is currently available, CO₂ generation in the State was 9 metric tons/capita. Compare this against Texas which generates 23.9 metric tons/capita. It might serve New York better to simply assist Texas in reducing CO₂ generation with larger reductions at potentially less the cost and at the same time improving on the overall worldly impact. (On a yearly basis for 2018 Texas generated 701.9 million metric tons whereas New York generated only 167.7 million metric tons some 460% less.)

Section 7.4 in the Chapter on Just Transitions discusses “Cross -Cutting Principles of the Prevention Agenda” designed to “improve health outcomes, enable well-being, and promote equity across the lifespan”. The principals include focusing “on addressing social determinates of health and reducing health disparities,” “healthy aging”, “evidenced-based interventions for State and local action”, and “increased investments in prevention from all sources”. Stated in the section is that the “Embodiment of these principles is critical for developing a successful climate policy.”

Finally, Section 7.4 of the Just Transitions Chapter notes that:

The Climate Act provides a foundation that incorporates these principles in that it requires consideration of impacts to public health and Disadvantaged Communities, as well as mitigation actions that will address health impacts. This draft Scoping Plan goes further, identifying specific opportunities to reduce emissions, support communities, reduce existing health risks, and avoid introducing new risks. This chapter seeks to describe both the direct and indirect human health impacts of climate change and the health co-benefits of climate change mitigation and adaptation strategies and policies.

In the recently issued DEC 2021 Statewide GHG Report, listed in Table ES.2 are three GHG emissions in the State consisting of CO₂, CH₄, and N₂O. What is striking is that N₂O or Nitrous Oxides now makes up only 1% of the GHG emissions in the State using the inflated DEC GHG accounting system. The major emitters of Nitrous Oxides in the State are farms for soil management.

Section 7.4 of the Draft Scoping Plan as noted above is completely unbounded in reducing health risks both existing and new.

The first immediate question is who is going to pay for all these principle adoptions? How will outcomes be assessed? What organization will be created to administer to all these opportunities? What will be the psychological impacts of the health intrusions into the lives of New Yorkers who seek their own freedom to choose how they would like to live their lives? Will people from other states flock to the state to take advantage of this utopian healthy climate and environment created by the Act or will there be a mass exodus of New Yorkers fleeing the health mandates imposed?

Based upon the unbounded nature of this section of the Scoping Draft, the bureaucracy needed to effectively administer the policies needed to effectuate these principles will be enormous. Massive bureaucracies very frequently become governments within governments serving interests in self-preservation as opposed to the originating principles that created the organization.

On page 49 of the Draft Scoping Plan the following is presented under section 7.5, Power Plant Retirement and Site Reuse.

On the road to achieving the power sector goals within the Climate Act—namely, to achieve 70% renewable electricity by 2030, and 100% zero-emission electricity by 2040—the existing power sector will undergo significant evolutions and transformations, leading to uncertain outcomes for conventional power plants (primarily fossil fuel) and their workers and host communities. These impacts were contemplated by the Climate Act as something New York would have to proactively plan around: specifically, the Climate Act tasked the JTWG with two discrete deliverables, which the Group considered with the leadership of a Subgroup formed specifically to tackle these power plant topics. The two power plant tasks contained in the Climate Act include identifying generation facilities that “may be closed as a result of a transition to a clean energy sector” and identifying issues and opportunities presented by the reuse of those sites.

The JTWG, with the help of a Power Plants Subgroup, set about to tackle these two tasks with a robust, data-driven approach rooted in real-world case-studies and the “facts on the ground” as much as possible, while acknowledging that future scenarios would not be known and fixed. These full work-products are made available in Appendix D, with results making clear that power plant reuse is an area where there are both challenges as well as promises of opportunity moving forward.

A recent Report by McKinsey & Company published in January of 2022 by the McKinsey Global Institute entitled *The Net-Zero Transition*, warns on page 58 of the Report that “Net-zero emissions can be achieved only through a universal transformation of energy and land-use systems”. In multiple locations, including page 96, the report states, “Disruptions would be substantially higher under a disorderly transition” and further on the same page stated is: “How the transition is managed will be decisive. The effects described reflect the NGFS Net Zero 2050 scenario, in which gradual yet substantial reductions in emissions take place, resulting in a relatively orderly transition.” (NGFS is an acronym for Network for Greening the Financial System, an “organization set up by central banks and supervisors in December 2017 with the goal of strengthening the global response to climate change.”)

On page 12 of the McKinsey & Company report, under the heading Governance, institutions, and commitment, are the following:

The pace, scale, and systemic nature of the required transition mean that all stakeholders will need to play a role, working together in new ways. Securing an orderly transition will require leaders who have the commitment and capabilities to develop coherent, reliable, and workable policies and help their organizations navigate the changes that lie ahead. The transition is also unlikely to occur without the support of citizens and consumers, and in some cases, consumers may need to fundamentally shift behaviors to reduce their own emissions.

And

...the central role of energy in all economic activity, which means that transformation would need to be carefully managed. Indeed, the transition involves the transformation of the most important systems supporting our lives and well-being. Even small disturbances to these systems could affect daily lives, from raising producer and consumer costs to impairing energy access and could lead to delays and public backlash. Together, these factors highlight why the prevailing notion of enlightened self-interest alone is unlikely to be sufficient to help achieve net zero.

On page 33 of the report the below statement is made:

Our in-depth analysis of 69 countries focuses on four areas that can collectively help define a climate agenda: decarbonization actions and investment; managing transition exposures; capturing transition opportunities; and addressing physical risks. As discussed previously, low-income households across countries and regions would be most affected by a net-zero transition. Moreover, our analysis suggests that while all countries face some exposure to the transition, its effects would be unevenly distributed.

Finally in the McKinsey report under the title “Managing the transition” on page 171 the following is provided:

As this report has shown, the economic transformation required to reach the goal of net-zero emissions by 2050 is both universal and significant in scale, and it will be felt unevenly across sectors and countries. These characteristics of the transformation in turn raise major challenges for public- and private-sector leaders as they look to support an orderly transition, capture opportunities, and mitigate risks.

Many of these adjustments can be best supported through coordinated action involving governments, businesses, and enabling institutions, and extending planning and investment horizons. This action would need to be taken in a spirit of unity for two key reasons: first, the universal nature of the transition means that all stakeholders will need to play a role. Every country and sector contributes to emissions either directly or indirectly through its role in global production and consumption systems. Second, the burdens of the transition will not be evenly felt, and the costs will be much more difficult for some stakeholders to bear than others. This is all the more challenging because contributions to emissions have not been even across

stakeholder groups. Thus, stakeholders would need to approach the transition with singular unity, resolve, and ingenuity.

In this final chapter, we review potential actions to manage the transition that leaders may want to consider. We first highlight broad areas of action to support adjustments to the transition. While these may not be exhaustive, they provide stakeholders with an overview of the range of actions which could be considered to enable the economic and societal adjustments that will be needed. We then examine how these broad actions could be undertaken by specific groups of stakeholders: companies, financial institutions, governments, enabling institutions, and individuals. In undertaking these and other actions, they will need to consider both risks and opportunities to their organizations and their stakeholders and determine the role they can play in supporting the necessary adjustments for all.

Now the legislature in the State of New York, while being very well intentioned, has not had a history of well-managed implementation of enacted energy legislation. For example, in response to the federal Public Utilities Regulatory Policy Act of 1978 the NYS Legislature enacted Public Service Law 66-C in the later part of the 1970s dealing with the Conservation of Energy, which encouraged the development of alternate energy facilities to fulfill the needs of the state as determined in the state energy plan. This law, which was termed the 6-cent rule, placed a 6-cent floor on the purchase price of electricity from qualifying alternate energy generators. Thus New York State jurisdictional utilities were required by law to enter into contracts with alternate energy generators at the long run avoided cost of 6 cents/kwh with many of the contracts receiving front end loading well above the 6-cent minimum. Arguably the 6-cent provision, which was repealed in 1992, ended up costing New York State electric utility customers billions of dollars in additional costs. In the words of the governor at the time of repeal, “consumers are thereby relieved of the outdated minimum sales price while reasonable protection is provided to producers who relied on this minimum price provision.”

The State of New York again in response to the National Energy Policy Act of 1992, which opened the transmission network in the United States to marketers and exempt wholesale electric generators responded to the Act but this time in a more orderly fashion through the actions of the New York Public Service Commission.

In 1993 the Public Service Commission established a proceeding Case 93-M-0229, Proceeding on Motion of the Commission to Address Opportunities Available to Customers of Electric and Gas Service and Develop Criteria for Utility Responses. The Case number was changed to Case 94-E-0952 to reflect the focus of the subject matter on electric service excluding gas.

The competitive opportunities proceeding subsequently led to the unbundling of the New York State vertically integrated utilities and the sale of utility generating assets typically at a premium over net book value. The sales led to both customer and investor benefits accruing from the sale proceeds. This opening up of the NY bulk power marketplace to competition along the origins of retail electric supply access for customers, led to the dissolution of the utility-controlled New York Power Pool and the establishment of the New York Independent System Operator. The NYPP share the savings market structure between the state utilities was replaced by locational based marginal pricing for all competitive generators under the control of the NYISO. The PSC

origination and oversight of opening up the electric supply marketplace in New York led to customer, investor, generator, and State benefits. Customers were given choice and lower electric bills; investors received supplemental returns on investments along with investment stability; generators had a new and emerging market with good upside; and New York again demonstrated seasoned leadership relying upon some of the best and brightest to furnish regulatory guidance.

Opening the markets in New York was deliberate, took time to test what was formulated, and was a model of how to effect change maintaining high levels of reliability while protecting the New York State customer in the only fashion which is verifiable, i.e., keeping the lights on while constraining costs and providing consumer savings.

In comparison to the CLCPA, the New York State 6 cent law was grossly less consequential but still cost electric utility customers in the State additional millions in their electric utility bills. Again, the State has a history of implementing energy legislation with unexpected consequences shouldering customers with paying for the mistakes. Not only will the CLCPA shoulder the customer for any additional unexpected costs generated in the future but also the electric customers will receive the brunt of societal change required to implement the Act.

Utilities selling their power plants in the 1990s and the unbundling of the bulk power markets took place on a rational time frame with the oversight of experienced professionals taking the time necessary to complete the task to make it right. Each jurisdictional electric utility in the state worked directly with staff of the Public Service Commission to affect an unbundling agreement. There were no drop-dead dates, and the results produced a beneficial product.

As pointed out in the McKinsey report previously referenced, **the State needs to provide a well-managed transition plan including all stake holders if in fact the transition is going to work.**

Appendix D referenced above dealing with fossil fueled plant closures goes well beyond a hand full of utilities selling their facilities with commercial benefits accruing. There are numerous parties involved and closure is significantly different than a forced liquidation as enumerated in Appendix D. Appendix D raises more questions dealing with the entire list of “Non-Government Plants” provided, than it answers. When it came to the sale of utility generating assets, the utilities were compliant with the assumption that the PSC would keep the utility whole if in fact the sale of generation created stranded assets. Such is not the case with CLCPA mandated forced closures and the statement in Appendix D on page D-10 under the title Stranded assets and infrastructure impacts that, “Since New York has a restructured, competitive power generation market, this issue of stranded ratepayer assets should largely be mitigated” is highly questionable.

Independent Power Producers that purchased assets in New York in the 1990s were required to submit to light handed regulation with the quid pro quo that the operators would be allowed to operate within the state. Essentially even though the legislation terms plant closure as a “transition to a clean energy sector” the closure still constitutes a taking by the State of private property by virtue of the forcing of the closure and stranding of the asset. It is very unlikely that individual owners of fossil generation will universally walk away from performing assets settling

on redeeming the potential value of the property upon which the plant sits. Settling on closure and release of property for development of whatever kind will in all probability be protracted, costly, take away from the timely reduction in GHGs the CLCPA is committed to, produce unexpected consequences, and create an uncertain future.

The power sector is the driving force behind the entire Draft Scoping Plan, as goes the power sector so goes all the other sectors which are dependent upon reasonably priced power supply with levels of reliability equal to what is experienced today. As presented in this Draft Scoping Plan the transition to net zero for the power sector is anything but orderly and disorder holds the potential of producing dire consequences.

On page 50 of the Draft Scoping Plan is a Summary of Jobs Study Findings. The initial paragraph states: “As stated above, the Climate Act tasked the JTWG with conducting a study of the jobs needed to counter climate change, with explicit direction to focus on the buildings, fuels, electricity, transportation, and natural working lands sectors. A competitive process was established to select a team of leading consultants in the field of clean energy workforce to undertake this new analysis to accompany and complement the integration analysis work.”

Aside from complying with the Climate Act task to conduct a study, the document is a review of employment from 100,000 feet and has no relevance to developing an employment plan with timing to counter the changes which will take place. One is left with the impression that the developers of the document have no contact with the employed and unemployed and are more comfortable with data sets and modelling than interaction with the guts of society, which will completely change with the transition to take place.

Public Health

In Chapter 8 on Public Health, mid-page 53 and continuing onto page 54, the following is provided:

According to the New York State Department of Health (DOH) Climate and Health Profile there are several potential climate-related health impacts in the State:

- *Increased heat stress (such as heat edema, heat stroke, heat cramps, heat stress, and dehydration) and other heat-related morbidity and mortality*
- *Exacerbation of respiratory conditions (including pneumonia, asthma, and chronic obstructive pulmonary disease) and cardiovascular disease*
- *Increased risk for food- and water-borne diseases due to increasing temperatures and flooding*
- *Increased duration and severity of allergy symptoms due to increased duration and intensity of pollen season*
- *Increased risk for vector-borne diseases (such as Lyme disease, West Nile virus, and other pathogens)*
- *Increased risk of injury and death following extreme precipitation events and flooding*

Other significant impacts associated with public health that are not listed above include droughts, rising sea levels that threatening infrastructure, saltwater intrusion of our groundwater resources (which may impact drinking water supplies), poor indoor air quality

(such as mold and moisture), and deteriorating outdoor air quality, particularly ground-level ozone that increases with rising temperature. Climate change will add uncertainty to the continuity of the food system, which may have impacts on food security, particularly in low-income communities. Heatwaves and extreme heat events result in greater risk of heat stress. Heavy rainfall associated with the remnants of Hurricane Ida resulted in flooded subways and drowning deaths in basement apartments and cars.

Further on in the chapter the benefits of climate policy in the State are discussed as they relate to power generation, transportation, built environment, housing, and commercial/industrial facilities. The policies mandated in the CLCPA will provide some health-related benefits, but the description and hyperbole used in the Chapter as exemplified above are misleading and give a false sense of well-being accruing from these State policies. The Climate Act will not cure, for example, the fact, as stated on page 62, that “obesity has reached epidemic proportions with more than half (60.8%) of New York adults reported to be overweight or obese in 2016.”

Evaluation of the Plan

Contained in Chapter 9 is a summary of the “Plan” depicted in Figure 4 entitled Greenhouse Gas Emissions by Mitigation Scenario. The figure presents five lines starting in 2020 and terminating in 2050. One of the lines is a business-as-usual line or a Reference Case which (Appendix G footnote of page 12) “is used for evaluating incremental societal costs and benefits of GHG emissions mitigation. The Reference Case includes a business as usual forecast plus implemented policies, including but not limited to federal appliance standards, energy efficiency achieved by funded programs (Housing and Community Renewal, New York Power Authority, Department of Public Service, Long Island Power Authority, NYSERDA Clean Energy Fund), funded building electrification, national Corporate Average Fuel Economy standards, a statewide Zero-emission vehicle mandate, and a statewide Clean Energy Standard including technology carveouts.”

More detail is provided in Appendix G, Integration Analysis Technical Supplement in Section I on page 115 of the Supplement. The defining elements of the Business as Usual (which also includes implemented policies) Reference Case are as follows:

- o Growth in housing units, population, commercial square footage, and GDP*
- o Federal appliance standards*
- o Economic fuel switching*
- o New York State bioheat mandate*
- o Estimate of New Efficiency, New York Energy Efficiency achieved by funded programs: HCR+NYPA, DPS (IOUs), LIPA, NYSERDA CEF (assumes market transformation maintains level of efficiency and electrification post-2025)*
- o Funded building electrification (4% HP stock share by 2030)*
- o Corporate Average Fuel Economy (CAFE) standards*
- o Zero-emission vehicle mandate (8% LDV ZEV stock share by 2030)*
- o Clean Energy Standard (70x30), including technology carveouts: (6 GW of behind-the-meter solar by 2025, 3 GW of battery storage by 2030, 9 GW of offshore wind by 2035, 1.25 GW of Tier 4 renewables by 2030)*

Acronyms

GDP	Gross Domestic Product
HCR	New York State Homes and Community Renewal
CEF	Clean Energy Fund
HP	Heat Pump
LDV	Light Duty Vehicle
ZEV	Zero Emission Vehicle
GW	Giga Watt (1,000,000,000 watts)

Using the NYS carbon accounting standard, by the year 2050 the Business-as-Usual Case drops carbon generation to approximately 311 million metric tons of carbon dioxide equivalent (MMT CO₂e) from 379.43 (MMT CO₂e) in 2020. Following the Business-as-Usual Case are four other Cases or Scenarios which reduce carbon generation down from 2020 emissions level to the CLCPA goal of approximately 61.47 MMT CO₂e in 2050.

To accomplish the reduction in emission levels down to the 2050 total of 61.47 MMT CO₂e, requires additional high-level increases from the base case level reductions in the transportation, buildings, electricity, industry, agriculture and forestry, and waste sectors.

To accomplish these reductions will require internal combustion engine vehicles to be replaced with zero emission vehicles. Old internal combustion vehicles will be forced to retire. New personal comfort domestic, commercial, and industrial heating and cooling will be replaced with heat pumps, and existing fossil fueled heating systems will be forced to convert to heat pump installations. All electric generation will need to be zero emissions by 2040. Fossil fuels will be banned. As projected, fossil fueled cars and appliances (heating systems) will no longer be sold after 2035. New Yorkers will need to reduce the miles they travel and further insulate their homes. Typical New Yorkers will need to spend time and resources to accommodate the changes on the horizon. Very simply, the life blood of their living conditions, the availability and use of fossil fuel energy, will abruptly change.

Backing up these emission reduction requirements are the projections of emissions that existed in 1990 and how these emissions are accounted for moving forward in time. The emissions generated in New York State are accounted for in the DEC 2021 Statewide GHG Emissions Report. The report is unique to NYS. For example, Table ES.1 in the Report provides a “Comparison of GHG Emission Accounting Formats Used in This Report”.

	<u>CLCPA Format</u>	<u>Conventional Format</u>
Emissions Scope	In-state sources, imported electricity and fossil fuels, exported waste	In-state sources only
Gross versus Net	Gross and Net totals	Net totals are used, but gross emissions are also reported

Global Warming Potential	20-Year GWP from Fourth Assessment Report (AR5)	100-Year GWP from IPCC's Report (AR4)
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The conventional format noted above was developed for national parties to the United National Framework Convention on Climate Change (UNFCCC). This United Nations (UNFCCC) format is used universally by countries around the world including the USEPA.

Now there are various types of greenhouse gases emitted by New York State into the atmosphere. The climate change impacts of these gases which are accounted for, must find their origins in human causation termed anthropogenic. The gases listed in the table below which have a Global Warming Potential (GWP) are the gases that State is most concerned with:

<u>Gas</u>	<u>GWP(CLCPA/UNFCCC)</u>	<u>Total of GWP for NYS</u>
Carbon Dioxide	1	58%
Methane (Natural Gas)	84/25	35%
Nitrous Oxide	264/298	1%
Hydrofluorocarbons	various	6%

The GWP is used to place all anthropogenically emitted gases on an equivalent warming scale using carbon dioxide as a base. Thus, say there is a volume of methane which has a mass of one ton. Applying the GWP of the CLCPA for methane gas listed above the equivalent heating value of CO₂ would be 84 tons.

Complicating the issue of normalizing to arrive at a GWP for a gas is the projected life of the gas in the atmosphere. From the 2021 Statewide GHG Emissions Report (SWGER) for anthropogenic carbon dioxide the following statement is made on page 5 under the title Carbon Dioxide:

Carbon dioxide (CO₂) is the major anthropogenic climate forcer. The current atmospheric abundance of CO₂ has risen to 413.2 +/- 0.2 ppm from a preindustrial abundance of 278 ppm (WMO 2021), mainly due to fossil fuel combustion. Carbon cycle processes redistribute the CO₂ that is emitted to the atmosphere to terrestrial ecosystems and ocean carbon reservoirs. These CO₂ sinks take up roughly half of anthropogenic CO₂ emissions annually. But these sinks are responsive to changes in the atmospheric abundance of CO₂, and any deliberate net removal of CO₂ in the future will be partially offset by outgassing of CO₂ from the ocean and land sinks (IPCC 2021). The processes that remove CO₂ from the atmosphere act over different timescales that range from decades (e.g., incorporation into forest biomass, afforestation and reforestation processes) to centuries (dissolution and circulation in the deep ocean) to millennia (uplift and weathering of silicate minerals). These timescales mean that CO₂ is a long-lived greenhouse gas, and its present-day emissions will impact the climate long into the future (IPCC 2018).

From the same report (on page 6) the atmospheric lifetime of methane is “only 9 years (IPCC 2021)” and for nitrous oxide the “atmospheric lifetime is estimated to be 116 +/- 9 years (IPCC 2021)”. Such lifetimes come into play with the creation of the GWP that is integrated over the time horizon used. Other drivers such as radiative forcing integrated over a chosen time horizon

have a bearing on the value of the GWP. [Overall, the GWP of CO2 for a time horizon of 20 years may vary +/- up 18% and for a 100-year horizon may vary +/- 26%. For methane the GWP for the 100-year time horizon may vary from -30 to +40%. (November 21,2016 research paper on Global Warming Potential by Vijaysinh Jadhav, Stanford University)]

Turning to Table ES.3: 2019 New York State GHG Emissions, by Economic Sector in the SWGER for the CLCPA Format using the 20-year time horizon GWP20, and the UNFCCC Format using a 100-year time horizon GPW100, listed are Gross Total Emissions for the CLCPA Format of 379.43 MMT CO2e and for the UNFCCC format 194.56 MMT CO2.

Adding out-of-state emissions of 98.15 MMT CO2e, the 20-year time horizon delta of 86.72 MMT CO2e from additional methane emissions, and the UNFCCC Format brings the gross UNFCCC total up to the NYS CLCPA total of 379.43 MMT CO2e (98.15+86.72+194.56=379.43).

Essentially, the way NYS does its accounting makes the gross total metric tons that NYS emits almost 94% higher than the totals other governments are listing including the US government. In addition, the exactitude in which NY is doing its carbon accounting does not match up with the variability of GWP that is used to assess reductions.

Integration Analysis Technical Supplement

(Unless otherwise indicated, all references are to Section I in the Supplement.)

In Appendix G of the Draft Scoping Plan is an integration analysis technical supplement. The supplement “summarizes, reports, and documents the findings, results, and methodology of the Integration Analysis”. “The Integration Analysis evaluates strategies to achieve the Greenhouse Gas (GHG) mitigation aims of the Climate Act and assesses the resulting benefits and costs.” (From the Abstract first paragraph Appendix G).

Continuing in the Abstract of Appendix G, “Benefits of avoided GHG are assessed based on Value of Carbon Guidance developed by the New York State Department of Environmental Conservation (DEC) pursuant to the Climate Act. Additional public health benefits were assessed, as well as societal costs.”

Supporting these assertions above, also in the Abstract, is the following:

Additional data are available for download at <https://climate.ny.gov/>:

Annex 1. Techno-Economic Analysis Inputs and Assumptions

Annex 2. Techno-Economic Analysis Key Drivers and Outputs

Annex 3. Health Co-Benefits Analysis Supplemental Data

The Annexes listed above are referenced some 26 times in the Appendix, however, cannot be found on the Climate New York website. The Annexes which critically supports the work of the CAC should be readily available so public comment can be well informed in a process which will cost the State billions. Other works sponsored by NYSERDA are referenced such as a

laundry list of studies contained in the foot notes on the bottom of page 10 of the report which are claimed to be integrated into the E3 “New York Pathway” model used to build the Integration Analysis. One of the many other studies referenced is the 2021 New York Power Grid Study which is some 744 pages long.

One is left with a couple of impressions going through the Analyses, first there is an extreme rush to publish by year end 2021 to meet the dictates of the CLCPA and second is, if many lengthy superfluous references are provided maybe the interested party and also the CAC will just give up the detailed review and the report will not be questioned. It is hard to question what you cannot find or what is buried in a proprietary model with potentially thousands of built-in assumptions.

Aside from an Appendix, which is very difficult to wade through, there is another issue which is problematic in Appendix G. The issue is the reliance upon the “Value of Carbon Guidance” developed by the NYSDEC. The guidance “establishes a value of carbon based on an estimate of net damages incurred as a result of climate change that can be used by State entities to aid decision-making and used as a tool for the State to demonstrate the global societal value of actions to reduce greenhouse gas emissions.” (Listed on the DEC website as [Climate Change Guidance Documents - NYS Dept. of Environmental Conservation](#)). An issue of concern with the use of Guidance Document is that the DEC decided that the damages are not confined to the State.

As previously stated, NY State emits approximately 379 MMT CO₂e per year. NY State accounts for its CO₂e using a 20-year time frame versus a 100-year time frame and also includes out of State CO₂ inflating the amount of GWP emissions by some 94% versus the accounting done in most of the world. The total emissions from NYS should be around 195 MMT CO₂e versus the rest of the world, which is around 36, 000 MMT CO₂e per year. NYS contributes approximately .5% of the total yearly anthropogenic emissions in the world.

Now New York State does not exist in an atmospheric fishbowl and New York State concentrations of CO₂e are the same as those around the entire globe and in order of magnitude are around 412 ppm in the atmosphere. Based upon the use of fossil fuels those CO₂e atmospheric levels are going up and as previously suggested may be as high as 500 ppm in the year 2050.

Climate change damage is caused by the levels of CO₂e in the atmosphere and the levels of NYS yearly emissions are inconsequential in regard to the atmospheric levels in the world. NYS contribution to those atmospheric levels assuming increasing levels of 2.175 ppm/year (based upon the world increase from 2000 to 2020 of 43.5 ppm) is approximately .011 ppm/year. At this rate it would take NYS at its current emissions rate 91 years to add 1 ppm to the total CO₂e level in the atmosphere.

With the understanding that climate change damage occurs based upon the levels of CO₂ in the atmosphere, actions taken by New York State to reduce carbon in the atmosphere will prevent no climate change damage from taking place in the State. The benefit to cost ratio is fairly close to zero in regard to climate change damage affected by reducing GHGs in the State.

The same may be said about public health benefits since the gas levels in the atmosphere whether CO₂, CH₄, or NO₂ will be virtually the same no matter what actions New York State takes to reduce these emissions. Concentrations may differ based upon location but on average the levels will remain the same inside or outside the State. From the SWGER and using the State GHG accounting format, regarding NO₂, some 72% of the emissions come from waste or agricultural operations and not from fossil fuel combustion. Overall NO₂ makes up less than one percent of the GHG emissions in the State. Regarding particulates, there may be some health benefits, but overall, these may be controlled through simpler means than shutting down the entire fossil fueled energy systems in the State.

In addition, Appendix G provides an estimate of costs and benefits for the various scenarios for reducing carbon again based upon the DEC Value of Carbon Guidance previously referenced. For the Carbon Guidance the following statement is pulled from page 17 under the heading of “Consider the fullest geographic scope of damages.”

The CLCPA directs the Department to establish a value of carbon that considers global damages, which would best protect the public and the environment. As such, the Department recommends that the State use the global estimation of damages established by the federal IWG, as updated through the work of NYSERDA and its consultant Resources for the Future, as opposed to the U.S. domestic damages estimation that is currently used by federal agencies.

So, the reach of the Guidance goes well beyond State borders and does not even stop at the boundaries of the United States, but includes the globe.

On pages 63 through 70 of the Appendix the net present values of costs and benefits are provided using a discount rate of 3.6% over a 30-year time horizon from 2020 to 2050. The costs and benefits are provided as incremental, over and above the reference case previously discussed to maintain the status quo of currently projected expenditures by the state absent the dictates of the CLCPA, projected to be \$2,700,000,000 over the 30-year period.

On average, the benefits are projected in the range of \$400 to \$420 billion while the respective costs are in the range of \$290 to \$310 billion over the 30-year period. Again, these costs, discounted by 3.6%, will be over and above the \$2.7 trillion base level of discounted costs. From the bottom of page 67 in 2030 direct yearly incremental expenditures are projected to be \$15 billion escalating to \$45 billion in 2050.

At \$2.7 trillion over a 30-year period the State is not scrimping on addressing energy and climate change considerations most of which will in some fashion come out of the pockets of New Yorkers no matter how the dollars are moved around to hide their origins. Of most concern is the direction being taken by the State to expend those dollars to address damage in the far reaches of the globe. **Including the entire globe as the area of damage to be concerned about is another indication of the extraordinary reach of the CLCPA legislation.**

New York State Transportation

In Chapter 11 of the Draft Scoping Plan, is an overview of the transportation sector that suggests that there are too many vehicles on the road, motor fuel prices are too low, and individual consumers prefer large less fuel-efficient vehicles. Consumers drive too many miles and there are too many short trips. The section offers a laundry list of ways to cure all these ills, along with many others, in the name of climate change and reducing the emissions of greenhouse gases.

Cures include trying to get rid of 9 million light duty internal combustion vehicles registered in the State; replacing the vehicles with 10 million ZEVs by 2050; changing where New Yorkers live with mobility-oriented development; gaining the support for complementary national, regional, and local strategies; promoting better designed, denser, more diverse, transit-oriented land use and development policies; influencing travel decisions; enhancing public transportation services; serving underserved communities; mitigating single occupancy discretionary trips; supporting the development of the ZEV supply chain; impacting adversely disadvantaged community avoidance; reducing personal vehicle trips; improving the biking, walking infrastructure; providing people with easier access to jobs, schools, and services; creating a mix of regulatory and investment actions to achieve ZEV adoption; providing for the availability and affordability of future fuels and green hydrogen; and many, many, many charging stations. This is only a partial listing of all the things that need to be done to address emissions from the transportation sector.

Now the section lists (page 100-101) the key stakeholders responsible for successful implementation of getting emissions out of this Transportations Sector include the following:

- *Transitioning to ZEVs and equipment: DEC, NYSERDA, DOT, DPS, New York City Department of Buildings, New York State Department of Motor Vehicles, New York State Office of General Services (OGS), DOS, New York State Education Department, NYPA, Dormitory Authority of the State of New York (DASNY), NY Green Bank, PANYNJ, MTA, New York City, utility companies, automotive original equipment manufacturers, EV charging station providers, car and truck dealers, port operators, transit agencies/authorities/municipal sponsors, and the New York Legislature*
- *Enhancing public transportation and mobility alternatives: NYSERDA, DOT, DPS, OGS, DOS, NYPA, MTA, utility companies, bus manufacturers, and transit agencies/authorities/municipal sponsors*
- *Reduce VMT: DEC, NYSERDA, DOT, DPS, DOS, NYSTA, NYPA, ESD, MTA, New York City, New York State Council on the Arts, transit agencies/authorities/municipal sponsors, local governments, companies providing mobility services, major New York employers, and the New York Legislature*
- *Market-Based Solutions and Financing: DEC, NYSERDA, DOT, DPS, New York State Department of Motor Vehicles, New York State Education Department, New York State Department of Taxation and Finance, NY Green Bank, and local government*

There is no sense of who is going to be coordinating, let alone manage, these ensembles. While there are many assertions on what needs to be done, there is no coordinated schedule for start and completion outside the two key dates of 2030 and 2050.

The chapter points out some potentially odious future outcomes, which may not sit well with New Yorkers such as:

- Telling New Yorkers to get rid of the internal combustion engines
- Telling New Yorkers how they need to live so that they can travel with less emissions
- Restricting access to motor fuels
- Charging New Yorkers for miles driven
- Forcing New Yorkers to install home auto chargers
- Establishing enforcement rules and regulation
- Forcing purchase and sales of privately owned vehicles to meet the dictates of the State
- Forcing disadvantaged communities into expensive ZEVs.,
- Forcing contractors to purchase and use State mandated equipment
- Forcing New Yorkers into buses
- Restricting parking
- Increasing registration fees on certain types of vehicles.

Currently, the vast majority of New Yorkers are unaware of the Climate Leadership and Community Protection Act. These same New Yorkers depend on their cars, including their internal combustion engines, particularly those in the same disadvantaged and low-income communities this act is focused upon helping.

Noted in the chapter, bottom of page 97, is the fact that New York uses less energy per capita on transportation than any other state in the union.

The chapter, as written, forms no basis for a workable plan of action and reads like a wish list for a transportation utopia. Unstated is what happens on the interstate highway system where other trucks and vehicle are entering and leaving the state. How are they refueled and what is their rite of passage?

New York State Buildings

Chapter 12 highlights what is proposed for buildings in the State. Buildings, using the state's unique accounting system for emissions generation, are responsible for approximately 32% of the CO₂e emissions generated by the state, which is the largest contributing sector, even higher than transportation at approximately 28%.

If only part of what is proposed in the chapter is implemented, the impacts could be frightening. The quiet enjoyment of your home will change dramatically. Implementation carries with it replacing your gas or oil heating system, probably rewiring your home, keeping track of how much energy you used (to be provided if you attempt to sell your home), reinsulating your home, being restricted from repairing your fossil fueled heating system, dealing with higher levels of risk based upon electric supply dependency, restrictions on appliances purchased for the home, dealing with the Department of State that is enforcing efficiency standards with energy use

disclosure statements, restrictions on maintaining fossil fueled energy systems, enclosing your fire place. This is just a partial list of what is to come.

Not all New Yorkers will be impacted in the same fashion but all 7.4 million households in the state will be impacted in some inconvenient fashion. And inconvenient is essentially a euphemism, with for example a housing system retrofit, costing as much as \$40,000 for the replacement of a heating system as listed in the chapter. Not mentioned are the parties who will be impacted to the greatest extent, the elderly who will find it difficult on fixed incomes to makes such investments to remain in their homes.

There are some 6 million residential and commercial buildings in the state. From a climate standpoint, the buildings are in two different worlds, warmer in the south around New York City and much colder to the north especially at the Canadian border. As noted in Chapter 12, some 48% of the households statewide consist of low- or moderate-income residents. Energy use takes place for HVAC, water heating, lighting, refrigeration, cooking, office equipment, and small appliances. Building greenhouse gas generation comes from burning fossil fuels with associated upstream emissions. As a matter of fact, 33% of the emissions in the sector comes from upstream emissions with 34% coming from residences, 19% from commercial buildings and HFCs, as released from insulation and building equipment.

Proposed is to replace all heating, cooling, and systems not currently using direct electric supply with heat pumps either air-source heat pumps (ASHP) or ground-source heat pumps (GSHP). The replacement will need to take place by 2040 less than 20 years away. RNG, along with green hydrogen, will be allowed to meet back up demands of larger buildings which cannot convert to a heat pump application. From 2030 on, some 250,000 homes per year will have to be converted or retrofitted with heat pumps.

To achieve the emissions goals set for 2050, some of the actions that need to take place are listed subsequently under the headings. The actions are pulled from the written narrative in Chapter 12 covering the entire chapter and are listed to demonstrate how extensive the requirements are. Obviously, the requirements which are essentially placed upon the doorstep of the State, although some of the requirements fall to utilities, will take extended periods of time to understand and accomplish and are testimony to how unrealistic the 2030 and 2050 mandatory emissions requirement dates are. Some of the line items listed below were taken verbatim from the chapter text. Others are a synopsis of listed content. If some of the listings appear to be redundant, the repetition accrues based upon differing listings of Building Strategies by theme as presented in the chapter. It is likely the listings will have differing requirements.

Areas Still Requiring Additional Work or Research and Development and Demonstration to Implement the CLCPA

- Research differential grid impacts, costs, and benefits of cold climate air-source, ground-source, and community thermal heat pump systems
- Provide for technological innovation
- R&D in affordable batteries
- R&D in affordable thermal storage
- R&D in grid-interactivity

- R&D in ultra-low GWP refrigerants
- R&D into hardest-to-electrify building types
- Catalyze innovation and bring leading technologies to New York
- Spur public private partnerships promoting demonstration projects for visionary, low carbon buildings
- Consider management of the risks of power outages
- Assess resilience of building and energy systems with demonstration projects
- Understand building load profiles for thermal comfort and safety during power outages
- RD&D for demonstrating heat pump solutions to maintain centralized heating and hot water in large buildings
- Cold climate packaged/window heat pumps for high rise apartments
- Reducing space conditioning loads and recovering waste heat
- Conversion of steam to hydronic distribution to accommodate lower temperatures
- The State should develop a pilot and financial support for large scale solutions for hundreds of homes or businesses, contracted for energy retrofits or upgrades
- Explore opportunities to convert buildings to heat pumps on a neighborhood basis to allow the decommissioning of gas infrastructure
- PSC to consider dynamic underlying electric rate structures and programs to provide price signals for incentive deployment of DERs, heat pumps, battery and thermal storage, and other load modifiers to address system peaks
- Pursue development and deployment of specific technologies, such as long duration energy storage, ultra-low GWP alternatives to HFCs, natural refrigerants, spray foam insulation, HVAC, water heating and refrigeration technologies
- The State to support RD&D to help bring new companies and manufactures to NY that offer innovative CLCPA solutions for buildings, grid-interactive buildings, and for reducing embodied carbon in buildings
- NYSERDA and ESD to leverage federal resources to identify and commercialize advances in technologies for building decarbonization and resilience
- NYSERDA and ESD to scale up resources to bring foreign innovative building decarbonization technologies and design approaches to the New York market
- NYSERDA and ESD to support MWBEs, cooperatives, and business enterprises by providing advisory services, internships, fellowships, and board placement in innovative companies with access to venture capital
- NYSERDA and ESD to support next generation building decarbonization solutions for HVAC, building envelopes, design approaches, building performance, lower costs, cold climate performance for all heat pumps, domestic hot water heat pumps, hard to electrify buildings, community thermal loops, advanced heat recovery and ventilation, improved thermal storage for HVAC, innovative materials, construction approaches, improving manufacturing methods for building envelopes
- NYSERDA and ESD to support next generation grid interactive building solutions for standards across manufacturers, efficient buildings, load flexibility, modulation capabilities for grid management and reliability, market signals, revenue generation, grid services, sharing with neighboring buildings, assessment of market mechanisms, and pilots and demonstrations to inform rulemaking and ratemaking

- NYSERDA and ESD to support RD&D needs for use of low carbon fuels in buildings (RNG, green hydrogen, wood, high percentage biodiesel blends) and bioenergy with carbon capture and storage for hard to electrify buildings
- NYSERDA and ESD to support building resilience RD&D dealing with extreme weather, prolonged power outages, and long-term energy and storage solutions
- The State to lead RD&D to reduce embodied carbon in building construction regarding GHG generated in mining, harvesting, processing, manufacturing, transporting, installation of products and materials, designs, as well as end-of-life disposal
- The State to establish reduced carbon procurement requirements for State-funded projects supporting education, building reuse, building deconstruction, RD&D, and in-state manufacturing of alternative products
- The State should support demonstration projects and technology transfer for enhance low embodied carbon construction using low embodied carbon designs and industry outreach

What New York State Must Do to Implement Chapter 12 CLCPA Requirements for Buildings

- Train for electrification and energy efficiency jobs
- Invest in financial support to match dramatic growth required
- Change state codes to require improved efficiency in all construction
- Change state codes to require only electric energy supplies in construction
- Change building codes to be resilient to the effects of climate change
- Provide utility price signals
- Support expansion of grid-interactive buildings
- Support expansion of storage
- Support demand side solutions for load shifting
- Manage, phase in, just transition buildings away from fossil fuels
- Manage away from gas distribution systems in buildings
- Eliminate fossil fuel subsidies
- Catalyze energy efficiency and electrification of space and water heating
- Expand access to comfortable, healthy, and energy efficient homes and buildings
- Accelerate speed and scale to decarbonize buildings
- Establish 2030 goals for the building sector to meet CLCPA targets
- Reduce thermal energy demand by avoiding the use of electric boilers
- Use flexible technologies and grid-interactive appliances for resilience and reliability
- Provide for prolonged building passive survivability
- Provide for on-site renewable energy separated from the grid for survivability
- New code credentialing programs for inspectors
- Need technical solutions to retrofit high rise and commercial buildings rapidly to comply with CLCPA scheduling
- Require existing buildings to go zero emissions when existing equipment reached the end of useful life
- Based upon enacted legislation NYSERDA should set energy efficiency standards for buildings
- Based upon NYSERDA efficiency standards DOS should take enforcement steps
- Educate consumers, brokers, building owners on energy benchmarking

- State agencies should work together to implement enforcement of energy benchmarking and disclosure
- Provide public funding to accelerate market adoption of equipment replacement in existing buildings for the first 10 years with a longer time frame for LMI customers and to support next-generation technologies
- Scale up direct cash incentives for energy efficiency, electrification, and electrification readiness in residential and commercial buildings
- Along with utility incentive programs the State should develop a statewide program that help installers reach customers
- Develop regulatory and planning mechanisms to support zero-emission district and community thermal systems
- Modify regulatory framework for energy efficiency and electrification to further align with CLCPA goals and requirements
- Address the lack of lender interest and awareness in financing building electrification and efficiency programs through lender education and outreach and make it easy to underwrite energy performance standards and regulatory requirements
- Provide consumer protections for financial products and services especially those targeting LMI
- Strategically deploy public and utility financial resources to leverage private capital to accelerate the transition to decarbonization
- Expand training for incumbent and new clean energy workers
- Coordinate training with educational institutions, training organizations, industry actors, local government, community-based organizations workforce one-stops, and foundations
- Training provided for code officials and building inspectors, for heat pump contractors, technicians, and designers
- Training provided for reducing HFC emissions and spray foam insulation
- Continuing education on decarbonization for licensing of architects, engineers, trades, contractors, building operators, real estate professionals, brokers and inspectors
- Training for planners, designers and planning boards
- Training and resources for building operators and service workers
- Healthy home training for energy auditors, health and social workers, and contractors who make home visits
- Training to increase the number of geothermal drillers
- Training for workers in fossil fuel industries to transfer their skills to clean energy opportunities
- Require building decarbonization curricula and career services in K-12, technical schools, apprenticeships, and engineering and architecture programs
- Increase ranks in MWBEs and SDVOBs and worker cooperatives through work force training, business development support, and certification assistance
- NYSERDA, PSC, utilities will scale up multilingual public and consumer education through large scale, coordinated awareness, inspiration, and education campaigns on the CLCPA
- NYSERDA, PSC, utilities will create CLCPA public awareness and consumer education through strategic partnerships with trusted community leaders, religious leaders, community-based organizations, cooperative extensions, business councils, industry

organizations, leading companies, unions, schools and teachers, film and public venues, and State and local elected officials, promoting decarbonization and sunsetting of fossil fuel as a cleaner choice

- NYSERDA, PSC, utilities should publicize best practices for efficient building operations and recognize leaders that support building occupants
- NYSERDA, PSC, utilities should create an incentive program/challenge to attract others or encourage others to sign a pledge to commit to carbon neutrality
- NYSERDA, PSC, utilities should provide technical resource tool kits for building decision makers and residents for low carbon solutions
- NYSERDA, PSC, utilities should support tenant engagement and develop case studies showing the feasibility, performance, and costs of pathways to full electrification, phased electrification, and electrification readiness
- State agencies to require environmental product declarations for building materials and require the use of modeling software for calculating such declarations
- State agencies to require lower carbon specifications for State-funded projects
- The State to set carbon reduction targets for reducing embodied carbon in project materials
- The State to immediately require embodied carbon budgets as part of permit processing for all commercial and institutional new construction for State entities and by 2025 for local government entities
- The State to provide State-funded training and resources for designers and permitting entities to check carbon budgets for completeness at first and then for accuracy as the market improves its abilities
- The State to identify and pursue financial incentives, changes to building codes, to encourage building reuse
- The State to provide assistance to expand in State manufacturing for products of lower embodied carbon such as biogenic or agriculture-based materials
- The State to incorporate low-carbon specifications for the most carbon intensive products such as foam insulations in home
- The State to provide resource tool kits, programs, resources, incentives, and make low-GWP refrigerants technologies available and affordable
- NYSERDA to support design professionals and provide workforce training and education around low-GWP refrigerants and alternatives
- The State should immediately update codes including the mechanical code on low-GWP alternatives to HFCs
- The State to provide education and training, technical assistance, and economic support to aid local industry with transition away from HFCs

Regulations Required in the State to Implement the Chapter 12 CLCPA Mandates

- Provide regulations to phase out fossil fuels in existing buildings
- Provide regulations on energy system replacement in existing buildings
- Provide regulations on energy performance of large buildings
- Provide regulations on compliance dates

- NYSERDA, DEC and DOS identify regulatory requirements to end fossil fuel combustion in buildings by prohibiting fossil fuel equipment replacements
- Promote equitable outcomes through careful design of regulation
- PSC to require utilities to account for updated building codes in their planning and investments
- Regulations by NYSERDA and DOS to prohibit gas/oil equipment for space conditioning, hot water, cooking, and appliances
- Funding for new code enforcement
- PSC should implement standards for building performance, appliances, and equipment through actions taken in regulation of gas utilities
- By 2027 require lighting upgrades for all properties larger than 25,000 square feet
- By 2030 adopt energy efficiency standards for multifamily properties larger than 25,000 square feet
- By 2024 PSC should prohibit utilities from providing new gas services to existing buildings
- By 2030 prohibit gas/oil replacements for heating and cooling equipment in residential homes
- By 2035 prohibit gas/oil replacement of heating and cooling equipment in large multifamily buildings and commercial buildings
- By 2035 prohibit gas appliance replacements for cooking and drying clothes
- By 2035 the DEC should adopt zero emissions standards to prohibit gas/oil burning in large burning equipment
- By 2023 commence yearly statewide energy benchmarking and disclosure of energy and water consumption for 10,000 square foot multifamily and commercial properties to NYSERDA for public disclosure
- PSC to require gas, electric, water utilities by 2023 to provide utility customer data directly to the EPA Energy Star Portfolio Manager
- By 2025 properties larger than 25,000 square feet to undertake energy assessment audits at least every 10 years that may require investments in energy efficiency upgrades along with NYSERDA filing of periodic assessment reports on a cycle determined by the State
- NYSERDA to lead implementation, development, and enforcement of the assessment audits
- By 2025 for sale of a single or multifamily property or commercial property the owner must provide energy billing data for the previous year
- By 2027 owners of single-family buildings must obtain and disclose an energy performance rating to sell the property
- PSC to direct utilities to place priorities on clean DERs (including energy efficiency, storage, and electrification of heating) to reduce peak electric or gas demand
- By 2023 all construction projects that receive Tax Credits through HCR (Homes and Community Renewal) should be required to be high-performance and all electric buildings
- Integrate energy performance into lender underwriting
- The DEC to promulgate regulations regarding the proper disposal of HFCs accompanied by training of installers and contractors on handling, equipment maintenance, and disposal protocols

- The DEC to provide regulations for proper disposal of appliances containing HFCs at the end of useful life along with verification and reporting
- The DEC should coordinate regulations with the EPA and prohibit certain HFCs in refrigeration equipment, foams/aerosols/solvents as low and ultra-low GW options become available

New Laws or Legislation Required in the State for CLCPA Implementation

- Strengthen building codes and energy efficiency standards
- Enact legislation as soon as possible to enable regulatory action to take place
- Pass low rise construction codes in early 2022 leading to regulatory actions
- New construction codes for high efficiency, zero emissions, and building resilience
- Revise the Energy Law relating to the State Energy Code to consider lifecycle and societal effects.
- Adopt high efficiency State Energy Code additions for thermal performance and air tightness, space conditioning, hot water, cooking, dryers
- Adopt highly efficient State Energy Code for electric vehicle readiness, solar, green roofs
- Adopt into State Energy Code disconnectable energy storage and generation facilities
- Adopt into the State Energy Code grid-interactive appliances to support reliability
- Align State Energy Code and Uniform Code with the CLCPA by 2024
- Performance standards for large buildings requiring efficiency upgrades
- Development of codes, standards, and regulations based upon analysis of societal and consumer benefits and costs
- Compliance pathways for extenuating circumstances based upon housing affordability/health/safety/emergencies
- Enactment of legislation to enable regulatory action to institute performance standards by gas utilities
- As soon as possible enabling the establishment and enforcement of efficiency standards for appliance sold, leased, or installed in New York
- NYSERDA should set zero emission standards for sale of building equipment in coordination with DOS for enforcement
- Enact legislation to enable regulation of utilities to provide energy benchmarking and disclosure
- Enact enabling legislation to expand energy savings performance contracting to public sector buildings
- A new statute should allow Design/Build and integrated delivery methods for public sector buildings which achieve deep decarbonization performance
- Create a revolving loan fund for building decarbonization and reuse of buildings and building materials
- Create community-to-employment pipelines and career pathways
- Targeted training for good wages, benefits, and hiring through Community Benefits/Workforce Agreements and On the Job Training Funding

Ensuring Protection of Disadvantaged Communities/LMI/Poor and Working-Class While Implementing the CLCPA

- Afford opportunities to make investments

- Protect from cost burdens of planning and building electric capacity
- Protect from displacement and threats to affordability
- Repair structural inequities in housing, credit, economic opportunities, environmental resources, and a clean and healthy environment.
- Advance equity, create clean energy jobs, support energy affordability, and prioritize benefits
- Additional goals and public investments that benefit affordable housing
- Need for affordable upgrades for zero emissions heating and hot water systems
- Mitigate potential market price harm accruing from property performance disclosure
- Provide technical and financial assistance for out of market homes to scope and finance upgrades
- Provide financial grant support programs to enable households to make and benefit from energy upgrades to buildings efficiency and electric systems improvements
- Expand utility Energy Affordability Policy programs to limit energy billing to 6% of income
- Coordinate with other home energy rebuild incentive programs available
- Adopt inclusive engagement processes that incorporate Disadvantaged Communities and LMI households in program designs
- Accelerate efficiency, electrification, and resiliency in public housing especially in NYC
- Support resiliency centers to be used during power outages, including back-up power from storage for multiday outages
- The State should create a retrofit and electrification readiness fund to cover costs for non-energy related improvements with broadband installations
- Leverage funding for healthy homes and community development such as from the Weatherization Assistance Programs, Medicaid's Value-Based Payment program, Community Development Block Grants, and USDA Home Repair funds
- Provide greater access to low-cost financing for upgrades
- PSC to consider subsidized rates or expanded discounts for heat pump retrofits
- Target Disadvantaged Communities for marketing efforts, education, and technical assistance on public awareness and consumer education on the CLCPA
- Utilities to maintain the Energy Advisor website for a one -stop-shop source of clean energy, electrification, and energy efficiency programs for LMI households
- NYSERDA, PSC, utilities to fund and expand community hubs to offer education, resources, local contractors, technical assistance, and program navigator support accruing from the CLCPA

Each one of the line items listed above will take significant amounts of resources and time to implement. The purpose of the 170 listings is to provide some context as to the size of the endeavor. Much of the responsibility for accomplishment falls upon NYSERDA, not an organization with a long history of operational expertise for performing building modifications. The DEC has some responsibilities also that go down to the household level of modifying building performance with what will come. Many unexpected consequences may be assumed in the implementation. Not to be left out of the responsibility mix include the PSC, the DOS, and all the regulated utilities. Currently these organizations are not sitting around waiting for something to do. So, all these organizations will need to modify what they are currently doing, adding costs

and most likely staff to accomplish the implementation suggested in Chapter 12. The amount of time to adequately accomplish all the issues listed above does not speak to the problem with the timing mandates in the CLCPA. The CLCPA requires by 2030 a reduction in GHG emissions below 1990 levels to a limit of 60% and by 2050 a limit equal to 15% of 1990 emissions levels. The timing of these limits drives the suggested rush in the chapter to get things done in a hurry. It is already 2022 and some 8 years away emissions in the State must drop by some 40% with the entire 170 item list above currently remaining to be tackled. To say hitting that 40% reduction target in 8 years, based upon the current status, will be a stretch is a gross understatement.

As a blanket statement, the fatal flaw in the CLCPA is mandated timing, which does not consider the scope and magnitude of what needs to be accomplished. Placing accomplishment time frames on things which have never been accomplished in the history of the world is reckless, when considering the scope and impacts on New Yorkers.

Whether it is dollars, people investing time, data input to track, people to manage, people to coordinate, people to enforce, people to train, people to be trained, equipment to install, equipment to remove, people to protect, carbon to tract, reports to file, and on and on, the resources to apply are astounding. Applying all these resources in an organized well managed fashion, while maintaining the same quality of life and enjoyment New Yorkers who own buildings and homes experience today, is highly unlikely based upon the narrative in Chapter 12. There will be more laws, more regulation, more investigations, more subsidies, more burdens placed upon State agencies to perform. There will need to be much, much more enforcement, under what is described in the chapter.

This chapter on buildings provides no plan or working model as to what needs to be done to meet the emission reduction mandates. There are restrictions listed, laws to be enacted, burdens placed on homeowners, R&D that needs to take place and be successful, training of just about everyone in the state, and a rush to accomplish emissions reductions which will have no impact on climate related damages that might occur in the state or in the entire world due to climate change.

What is being proposed has never taken place in the history of the world and to assume what is proposed will work is simply a hallucination. No other State or Country is taking such onerous steps and the State is out on a limb on its own. If implemented, the State will become the most highly regulated State in the nation with nothing to show for the effort except touting “leadership”. The cost of energy will go up, homeowners will become dependent upon installers and contractors who have yet to be created. Job opportunities are pointed to with training to accommodate the jobs, even though the jobs have as yet to be developed. About as much as we know about these jobs is simply stated as opportunities. If a problem area is identified especially in disadvantaged communities - not to fear because public funds should address the problem. It appears that the mending tape to hold things together is more legislation and regulation.

But who is in charge to see that things develop to meet timing mandates in the CLCPA? Well, no one is in charge. To oversimplify the obvious in the society we live in today, guidance takes place through the auspices of the invisible hand. (Adam Smith’s invisible hand is a concept that – even without any observable intervention – free markets will determine an equilibrium in the supply and demand for goods. The invisible hand means that by following their self-interest –

consumers and firms can create an efficient allocation of resources for the whole of society.) The CLCPA has replaced the invisible hand with legislative mandates. The legislative mandates, however, go beyond assigning legislation to the executive branch for execution and instead provides additional mandates but leaves no entity in charge.

Compounding the issue is that buildings are just one piece that needs to be coordinated and managed as necessitated under the CLCPA. Transportation, the electric system, agriculture, waste, all need to be considered and integrated into the management that takes place on buildings.

For businesses, residents, renters, leasers of property who will be impacted by what is proposed in the chapter the future in New York State does not appear to be bright. The chapter talks about attracting manufacturing. What manufacturer is going to want to come into a state where the energy costs are high, the reliability of the electric system is dubious, where tracking and reporting on property carbon from cradle to grave is a mandate, and where the ownership of private property is under attack? Renters and leasers of buildings and apartments will see pricing go up. For homeowners, dependent upon fossil fuels and getting close to retirement who view the quiet enjoyment of living in a residential community thrown into chaos, they will think long and hard about continuing to reside in New York State. All the promotional rhetoric provided in the chapter on the benefits of the CLCPA will pale in comparison to the promotional material which will come from other states with freedom of energy choice and a much lower cost of living. Those skilled productive workers with highly valued energy production skills will also think very hard about staying in a state where there is a high potential of losing a fossil fuel-based craft job. Employers will pay a premium to get an employee who has craft skills which are immediately useable and avoids years of costly training.

It is not rocket science to determine that what is being proposed for buildings probably will not work and the CLCPA will eventually end up like the 18th Amendment to the Constitution. In the process it is incumbent upon the CAC to describe just how onerous what is being proposed in Chapter 12 of the draft scoping plan for buildings including homes will be to New Yorkers.

Electricity

Chapter 13 of the Draft Scoping Plan is entitled Electricity. Now electricity will virtually become the only source of energy supply in the State if the CLCPA is implemented as anticipated in the legislation. By 2050 if you own a home and drive a car and heat your home and cook your food and heat your hot water and cool your environment, your life will be directly connected to a source of electric supply. You will be completely dependent upon that electric supply because there will be no access to any type of other energy supply which all, in some fashion, are fossil fuel based.

Now the state learned back in the early 1970s with the oil embargos that occurred, “never” to be dependent upon one type of fuel and the direction of the State was to encourage fuel diversity predominately to reduce the retail cost of energy supply. Electric bills in the mid-Hudson valley skyrocketed and steps were taken to use fuels other than oil to fire generation. Central Hudson took steps to convert parts of its generation to coal firing and went as far as Venezuela and Columbia South America to import DEC- permitted low sulfur coal to fire generation.

Consequently, Central Hudson at the time, a vertically integrated gas and electric utility had the lowest retail rates in the state and for that matter in the entire northeast. Such corporations as IBM, which had several manufacturing facilities served by Central Hudson, could expand and grow their business in the Mid-Hudson Valley. That was at a time when the New York Public Service Commission's mission was to ensure "public service," which meant a reliable product at the lowest reasonable price provided by the utilities it regulated.

Chapter 13 starts out by indicating the progress being made in New York by utilities and generators in the state since 1990 with CO₂e emissions going down by 46%. Overlapping the same period, the State of New York decided that it would develop a renewable portfolio standard and the PSC in 2003 instituted a proceeding Case 03-E-0188 to move the State from 19% renewable generation to 25% renewable generation by 2013. The State missed its target for 2013 and in-between created several more ambitious targets for renewable generation, but at this juncture in 2020 only 27% of the electric supply in the State comes from renewable sources of supply. Now the State has set the target at 70% for renewable generation by 2030. The program is no longer voluntary and is instead mandatory and the accomplishment needs to take place in essentially 8 years.

Speaking of leadership on a yearly basis per capita New York uses less energy than just about any other state in the nation except Rhode Island. (Per the EIA for 2019 New York was at 198 mmbtu/capita/year and Rhode Island at 180mmbtu/capita/year.) New York has the lowest generation of CO₂e emissions of any state in the nation tied with California (again from EIA beginning of March 2022, data for the end of 2018) and that is based upon the national accounting for CO₂e which is much lower than the New York State accounting. Emissions per capita for the State were at 9 mt/year of CO₂e. This level is 84% below the national per capita average at 16.6 mt/year.

The chapter provides no guidance regarding the risks involved with the dismantling of the other energy systems in the state and how to accommodate these risks. Also not given is some assessment of how much sense accelerating compliance makes for the citizens of New York who in many regards are going to have their lives turned upside down to meet the compliance commitments and who will have to pay the additional costs to move in that direction. Nothing is provided on the short-term escalation in energy pricing to comply on a residential, commercial, or industrial customer basis within the State or on a franchise utility catchment area basis. As proposed, "Will this system work?" is an outstanding question. If the system does not work, what is the recourse and who will be held accountable?

Under the Vision for 2030 section on page 150 stated at the end is, "include support for the CES and storage deployment, refined electric grid modeling to improve decision making, and improve coordination across State agencies." This statement leaves the impression that current electric grid modeling does not lead to appropriate decision making. Current electric grid modeling in fact is some of the most technologically advanced and sophisticated in the world and if the level of sophistication and experience of the decision maker is compatible with the modeling taking place then there is no way to improve upon the decisions being made. In addition, the coordination improvement across State agencies is confusing. What State agencies need to be coordinated, with what?

In several parts, the Chapter referenced is maintaining reliability and affordability (see the bottom of page 150). What happens if the system becomes unreliable and costly?

On page 161 under the title interconnection at the top of the page, stated is, “The State should speed up the pace of interconnection applications and need for right-sizing human resources at utilities to mitigate delays in application processing.” How does this tie back into getting the interconnected project online, how does it tie back into the developer providing adequate information, how does this tie back into system planning or hosting capacity? Should the State issue a notice that it will pay x number of dollars for every developer that submits an interconnection application by a date certain to speed up the number of applications. Apparently, the drafter of this section in Chapter 13 has not been involved with PSC jurisdictional rate cases, at least not for utilities in the Hudson Valley since rightsizing human resources for hundreds of work tasks are discussed and agreed to by the DSP staff in such rate cases. Hours and hours are invested in determining whether an additional employee should be hired at all by a utility and frequently, when, during a rate year, the hiring should take place.

The treatment of nuclear in the chapter is highly deficient. Currently nuclear holds the only potential for reliably meeting CLCPA mandates and the chapter states on page 177, the following:

Nuclear power generation is a complex technology with potential impacts on host communities as well as questions relating to the impacts of nuclear waste on health and the environment. Yet at the same time, nuclear generation provides a significant amount of baseload resources and is carbon-free, providing a complement to the increasing amount of variable generation renewables being added to the grid. Analysis should occur prior to the end of the Zero Emissions Credit program in 2029 to determine whether subsidizing any of the State’s remaining nuclear reactors will be necessary for meeting the 2040 emissions mandate and/or whether more cost effective and environmentally friendly alternatives are available. The analysis should consider the ability of nuclear to contribute to baseload and meet reliability requirements, as well as cost, health, safety, community impact and environmental concerns of nuclear power generation.

There are numerous other indications in the Draft Scoping Plan that steps need to be taken immediately to effect results required under the CLCPA. One of those steps is to maintain a reliable system. The State has essentially said in the CLCPA we want to prevent damage from climate change and create more certainty that climate damage will be prevented. If anything must be accelerated, it is determining how nuclear fits into that mix of base load resources.

What about the pricing of electric supply in the chapter? **There needs to be a detailed analysis probably on a county-by-county basis as to what to expect with the pricing of residential, commercial, and industrial supply of electric energy and how reliable that supply will be. New Yorkers need to be informed as to what the projections are.** The analysis also needs to be developed and completed by unbiased consultants who have no vested interests in New York’s consulting market and who will give an unbiased evaluation as to what to expect. The chapter is promotional in its perspective, touting the climate change steps required to meet

CLCPA dictates without tangible, meaningful concern about reliability, cost, or customer impacts. As is the current case in the winter of 2022, the state is experiencing the customer pricing outcomes of the shuttering of Indian Point Units 2 & 3 on customer billing most specifically in the Hudson Valley. Compounding the issue is the denial of drilling permits for natural gas supply in the State as well as the restrictions on new natural gas transmission projects to deliver reasonably priced gas into the State especially during peak load periods. Such current pricing outcomes were all predictable, but predictions were avoided based upon a reticence to present New Yorkers with full disclosure as to the outcomes of actions being taken by the State. A potential reoccurrence based upon CLCPA implementation needs to be fully disclosed.

Education of New Yorkers in the CLCPA and the actions that will occur in the future needs better definition than what has been provided in the chapter. If the education is one of discussing the litany of all the things that could potentially happen in the environment, then such instruction is of limited value. Any education should be based upon how the steps being taken will improve the lives of New Yorkers. Statements under Education such as on page 169, which states, “The State should continue engagement, outreach, education, and support for local municipalities, communities, and residents to improve acceptance of energy delivery projects”, Sounds merely promotional and unrealistic based on past experiences. If the engagement is “continuing”, what has resulted from past engagements and what percentage of the residents have improved their acceptance of delivery projects?

Based upon the fact that electricity is being touted as the quintessential resource to get the State to net zero by 2050 and that there is nothing more important that the State is engaged in than demonstrating climate leadership, then the definitions provided in this chapter to start the process to get to the 15% mandate of 1990 emissions levels are simply stated inadequate. Opportunities will not keep the lights on in the future and climate resilience hubs are no solution for freezing cold homes in upstate New York during prolonged power outages. Much, much more needs to be done to qualify the plan for public dissemination and acceptance if in fact the plan is to be used as a national and international model as to how to proceed going forward. For anyone taking the time to read through what is proposed in the chapter the conclusion is that what is being presented will not work in the time frame allotted and New Yorkers will again be left holding the bag. As is the case with many of the other chapters in this draft only promotional material is discussed without potential existential flaws being disclosed and analyzed to the extent possible.

Industry

The direction set on industry in Chapter 14 replicates that of other actions to be taken on buildings, the power industry, transportation, residences. The plan provides no certainty as to an actual direction the State will take. For business in New York State the future does not look bright because of implementation of the CLCPA. The chapter reads like a hazard sign featuring warnings of potential danger or, as an alternative, just move from New York State. The mitigation proposals in the chapter, while sounding good on paper, have limited real time and financial benefits. As an example, the suggested availability of low cost NYPA hydro power is tantamount to addressing industrial costs by hitting the lottery. Overwhelming any mitigation is the push to decarbonize operations. What follows are some statements taken from the draft plan that are not very encouraging to businesses in the State or for businesses thinking about coming

into the State. After the listing, commentary will be provided as to why the statement is of concern to retaining, growing, and acquiring businesses in New York State:

- On page 181 under the heading Other Energy-and Emission-Intensive Industries: *Given the thirty-year time horizon of this draft Scoping Plan, it is possible that new potential industrial GHG emission sources may emerge or grow to become significant sources of GHG emissions. For example, energy-intensive operations such as data centers and cryptocurrency mining operations have the potential to consume significant amounts of electricity and, in some cases, generate their own electricity from fossil fuel combustion.Accordingly, the State should monitor and evaluate emerging industries and develop policy responses needed to ensure that those industries do not interfere with meeting the statewide emission limits or other Climate Act requirements.*

Commentary:

The cryptocurrency mining operations seek locations where an abundant amount of energy and capacity is available to drive the server farms. These developing crypto mines can locate anywhere on the globe and why would these operations seek a place like New York to essentially drive up the cost of operations with no certainty of what those costs might be?

- Again, on page 181 under Industrial Sector Consideration: *Additionally, energy- or emission-intensive and trade-exposed industries are likely to represent a high share of industry sector emissions. These industries are both highly sensitive to increases in the cost of energy or emissions, as well as limited in their ability to pass along higher costs to consumers due to trade competition. As a result, non-incentive-oriented approaches are likely to cause leakage, whereby businesses leave or avoid the State and locate in other jurisdictions where they can emit higher levels of GHGs than they would have had they remained in the State.*

Commentary:

This is a great summary that is a common-sense description of what industry will be considering in regard to its future in New York State. Relocation to other states is also a distinct possibility since Pennsylvania, New Jersey, Connecticut, and to a certain extent even Vermont, are encouraging industry to relocate with open arms and incentives.

- In the first full paragraph on page 182 under Industrial Sector Consideration: *Greater emissions reductions (via the use of carbon capture, low-carbon fuels, or other) will likely occur in the longer term as innovation takes place and technologies scale, mature and become more viable. However, significant opportunities for emission reductions currently do exist in industry and can be achieved primarily through increased organizational focus on energy management and efficiencies.*

Commentary:

Increased organizational focus on carbon is not exactly what makes industry products attractive to consumers. The suggestion that emission reduction innovation will occur in the long term is almost like putting salt in the wounds by stating the future may have

better, simpler, and cheaper access to emissions reductions, but for you, industry, take whatever is available now.

- Under Vision for 2030 on page 182:
Achieving the State's Climate Act requirements and goals are expected to require the industrial sector to embrace solutions within each pillar over time as new technologies and innovative solutions are developed.

Commentary:

Embracing solutions assumes that the industry has an attraction to New York State and as in any type of attraction the relationship must be a win-win proposition. When it comes to climate change in New York State under the CLCPA the proposition is win for the State and who knows, for the industry. Such a relationship may in fact lead to a divorce, with a neighboring state holding the attraction for the jilted industry.

- Under Vision for 2050 on pages 182 and 183:
Most industrial facilities need high temperature heat in their manufacturing process, and solutions to reduce emissions from industrial heat could include green hydrogen and/or other low-carbon fuels, as well as carbon capture, use and storage. A few of these solutions are at the early stage of development and will require investment in RD&D to prove at scale and advance to market. In some limited instances, industrial sources might be able to qualify for the use of an alternative compliance mechanism if DEC has established such a mechanism and if the source can meet the stringent requirements set out in the Climate Act to govern their use.

Commentary:

The solutions suggested as detailed throughout the scoping document are uncertain and industry thrives on certainty. Early stage of development when it comes to RD&D means years, if not decades, away. But alternative compliance mechanisms may be a solution however, the DEC has yet to act upon them?

- On pages 183 and 184 under the heading Existing Sectoral Mitigating Strategies second paragraph:

Mitigation strategies are those that directly reduce emissions or sequester carbon. The State has already adopted several mitigation strategies that address industrial GHG emissions. NYSERDA, NYPA, and ESD each offer programs in this area, while DEC employs a regulatory approach.

NYSERDA offers support to industry through a variety of programs, with a goal to promote energy efficiency, GHG emissions reduction, and the deployment of renewable energy. Programmatic support can be broadly categorized into four areas: Technical Assistance and Training; Equipment Incentives; Competitive Grants; and RD&D Support. An example of one of NYSERDA's programs is its Strategic Energy Management Program, through which it offers training to industrial facilities to help optimize energy use through a continuous improvement approach.

NYPA's mission is to lead the transition to a carbon-free, economically vibrant New York through customer partnerships, innovative energy solutions, and the responsible supply of affordable, clean, and reliable electricity. NYPA Energy Services programs develop projects in the areas of energy efficiency, EVs, DERs, such as solar and storage, smart street lighting, data driven energy reduction, as well as support other clean energy initiatives.

ESD offers financial assistance (loans, grants, tax credits, venture investments) to incentivize industry in exchange for investment or job commitments, as well as technical assistance to conceive and scale disruptive technologies. For example, ESD's Division of Science, Technology, and Innovation encourages greater collaboration between private industry and universities in the development and application of new technologies, including alternative energy systems. Another ESD program is New York Ventures, the State's innovation venture capital fund that provides seed and early-stage venture capital funding to support and attract new high-growth businesses.

DEC, as a regulatory agency, reviews air pollutant permit applications for new industrial facilities and significant modifications to existing facilities to ensure that the proposed actions are not inconsistent with and will not interfere with the attainment of the statewide GHG emission limits established under the ECL.

Commentary:

The listing of mitigation strategies is bizarre. First three seemingly helpful strategies to help attenuate the impact of the mandated requirements, to be ultimately followed by the DEC the regulator holding all trump cards.

- On pages 184 and 185 under Financial and Technical Assistance:
The industrial sector is confronted with many barriers and other challenges to implement emission reduction strategies, the most significant of which include risk aversion that solutions will interrupt manufacturing processes, lack of in-house expertise in new technologies, lack of time to commit to energy savings solutions, lack of trust that the solution will deliver the intended benefits, and intense competition for internal company capital. The State should help overcome these barriers by providing technical and financial assistance in implementing various solutions for decarbonization. Specific solutions could include NYSERDA's engineering study support, financial incentives to buy-down project costs, and, although it is a limited resource, leveraging some portion of NYPA's low-cost clean hydropower. Implementation of this mitigation strategy would continue from the present until 2050. Most emissions reductions prior to 2030 will be achieved through energy efficiency and low-temperature electrification. As technology advances, support through this mitigation strategy will further enhance emission reductions by 2050 through other means.

The transition for Industry to decarbonize and embrace new technological solutions will take time and require State support. Providing clear market signals of long-term commitments would bolster industry confidence in decarbonizing the sector.

Commentary:

Where did this statement originate? It is just completely out of context with most of the draft scoping document. Is it believable that transition to decarbonize will take time and that the State should support taking time to decarbonize? Certainly, the statement up above makes sense and obviously is a reasonable approach to implementing the CLCPA. Couldn't a similar statement be incorporated in the power sector, the housing and building sector, the transportation sector? Could the industry sector as a result make the statement that the State was business friendly?

- On page 185 under the two headings of Energy Efficiency and Decarbonization Programs and Low-Cost Power Programs:

The PSC should continue to support and approve of funding for development of programs that embrace energy efficiency, electrification and decarbonization, and adjust its efforts to ensure alignment with the Climate Act while also focusing investments and their associated benefits in Disadvantaged Communities. State programs administered by NYSERDA and investor-owned utilities should be complimentary and coordinated to maximize market impacts.

The State should continue to provide qualified industries and businesses with lower electric energy cost through allocations of NYPA power.

Commentary:

The statements which are meant to be economic incentives to green economy businesses beg the question of why aren't these programs in place now. The answer is that they are in place now and utilities and NYSERDA are always coordinating programs through the auspices of the PSC. In regard to the allocations of cheap NYPA hydro power, that power is already fully subscribed.

- On page 189 in the section on Research, Development, Demonstration first full paragraph:

Given current trends, many of the required technologies for deep decarbonization of the industrial sector will not be available in the timeframe necessary for the State to meet its targets. However, the State could speed the deployment of some of these solutions with a robust RD&D agenda. This agenda should be informed by an analysis of which solutions are will have the greatest impact on the State's emissions. This includes impacts on not only the industrial sector, but the buildings, transportation, and power sectors, which are all likely to benefit from advancement of many of these solutions. Research should also determine guidelines that indicate which solutions should be incentivized and the manner in which they should be deployed. These guidelines should be set to prioritize those with lowest cost and those that will result in the greatest reduction of GHG emissions. The guidelines also should ensure that solutions are pursued only if they meet benchmarks for environmental justice and equity as well as for economic and technical scalability. After this analysis, public capital should be directed at supporting solutions via research funding as well as pilot and demonstration projects.

Commentary:

The prior passage on pages 184 & 185 indicated deliberation and due diligence. A couple of pages later on, the commentary is back to speeding deployment of RD&D, which is an area that by its very nature requires deliberation and due diligence and from the commentary of pages 184 and 185 a “long term commitment.” Is it likely that industry in the State believes that “public capital” will be directed at supporting solutions?

- On page 190 under the heading Greenhouse Gas Reporting:
The ECL requires DEC to consider establishing a mandatory registry and reporting system for individual sources to obtain data on GHG emissions that exceed an established threshold. DEC should promulgate regulations to establish a GHG registry and reporting system. The system should include sources that currently report emissions to DEC on an annual basis and would expand the universe of facilities that are required to report their annual emissions data to DEC by establishing a reporting threshold that is lower than what currently exists.

Having a more complete picture of the amount of GHGs emitted from a larger percentage of facilities would allow for a more focused effort to reduce GHG emissions from existing industrial sources, which can often be accomplished by reducing fuel combustion. Since fuel combustion also releases other contaminants, including hazardous air pollutants, the communities in which these facilities are located can be expected to experience improved air quality and health outcomes.

The registry and reporting system would allow DEC to collect, review, and make publicly available the submitted GHG emissions data. Facilities required to report GHG emissions to the new system would be responsible for the costs involved in generating the data and reporting it. Reporting of GHG emissions by industry and verification of reported GHG emissions would not be expected to vary significantly from methods used by the agency for other pollutants or increase administrative costs significantly. DEC would attempt to align, to the extent possible, the new reporting requirements with existing DEC and EPA GHG emissions reporting programs.

Commentary:

Again, another encouraging passage, of what is potentially coming down the pike, “expanding the universe of facilities that are required to report emissions to the DEC.” Another benefit results from those required to report emissions “would be responsible for the costs involved in generating the data and reporting it.” But such reporting would not be expected, “to increase administrative costs significantly.” Does this appear to be believable to industries that have historically complied with DEC dictates?

At best Chapter 14 is confusing and at worst it will encourage industry to make plans to leave the State. Either way the Chapter needs additional work before becoming part of a meaningful scoping plan.

Agriculture and Forestry

Chapter 15 on Agriculture and Forestry from an implementation and timing standpoint is more balanced than other chapters in this draft scoping plan. There are a number of references throughout the chapter that demonstrate balance, for example: “seeking feedback from groups”, “continue and enhance training,” “Dairy and crop farmers will need additional applied research and aid to deploy effective tools to reduce GHG emissions”, “allow private forest landowners to manage for multiple benefits”, “longer time frames will be required for other components”, “would take several years to set up and implement” etc.

In addition, the chapter provides recommendations for funding resources to assist the farmers in adapting to emission reductions or sequestering of carbon. Examples of such funding resources to be applied are:

- Expand the funding for cost share programs (bottom of page 204)
- Enact legislation to create a new real property tax incentive (top of page 204)
- Invest in financing options for upgrades and best practices (bottom of page 202)
- Invest in carbon research (top of page 202)
- Expand funding to local communities to plan and implement forest maintenance projects and help communities adapt to climate change (top of page 206)
- Expand funding for current programs (top of page 210)
- Expand funding and technical assistance (top of page 215)
- Expand funding is listed again and again for several other programs throughout the chapter

Similar balance in implementation, timing, and funding to support emissions reductions would do well to be applied in other sectors which will be required to make emission reductions. Buildings including residential homes, generating facilities, electric vehicles, electrification, could all use some TLC including funding like what is the case to be applied for Agriculture and Forestry.

Waste

Chapter 16 of the Draft Scoping Plan is dedicated to the issue of waste in the State. The State generates approximately 1,850 pounds of waste per person in the State which amounts to approximately 18 million tons of waste being generated by the State every year. Of the 18 million tons of waste generated every year, the State in proximate terms recycles 3.3 million tons or 18%, sends 5 million tons out of State or 27%, combusts 2.8 million tons some 15%, and landfills within the State 7.2 million tons or 40%. As listed on page 234 of the Draft Plan some 66% of the waste generated in the state is biomass or organics, paper, textiles, and wood. The remaining portion of the waste, some 22% consisting of metals, glass, and plastics may be recycled.

Dutchess County is concerned with the handling and proper disposal of waste and has a waste resource recovery facility which burns municipal solid waste and creates energy. As more restrictions are being placed on waste to energy plants, Dutchess has looked to what might be done in the future to handle waste in a fashion which is least cost and an improvement over past technology. Dutchess County investigated an emerging waste- to- energy technology from across

the Hudson River in Orange County to potentially enhance the Dutchess Resource Recovery Agency's operation. The history of that emerging technology which immediately follows, has a direct bearing on this Chapter and is used as an example of making progress to reduce, reuse, recycle waste in Dutchess County and all of New York State.

As part of the Renewable Portfolio Standard developed by the State at the turn of the 21st century the Public Service Commission in its proceeding 03-E-0188 through the work of NYSERDA developed a Renewable Portfolio Standard Biomass Power Guide. The federal government, New York, every State government in the Union which has a renewable energy standard considers qualified biomass as renewable.

After biomass was qualified as renewable, one construction and demolition recycler in the State, Taylor Recycling located in Montgomery, New York, worked with NYSERDA on two research projects to use biomass to generate renewable energy. NYSERDA incorporated the two research projects into its Biomass Power Guide. The Power Guide allowed adulterated biomass sorted and separated from municipal solid waste to be used in a gasification project under very strict sorting and separating criteria.

Taylor took the criteria in the Power Guide and designed a state-of-the-art waste processing and electric generating facility which would use the sorted and separated biomass from municipal solid waste streams as a source of fuel. The design which included a pyrolytic gasifier and combined cycle power island, progressed with permitting of the facility by the Town of Montgomery, the DEC, and the acquisition of an interconnection agreement with the NYISO and the interconnecting utility Central Hudson being obtained in the 2015-time frame. Taylor, to more appropriately reflect the business at hand, changed the name of the firm building the biomass facility to Taylor Biomass Energy. In 2015, the project was ready to begin, except for financing.

The financing dilemma was created by a requirement in the Power Guide that to qualify the output of the generating facility, the facility needed to be constructed and the adulterated biomass emissions from the facility had to be compared to the emissions of the same plant using virgin wood or biomass. The two sets of comparative emissions tests had to be equally clean for the facility to qualify as renewable and to sell RECs into the NYSERDA renewable portfolio standard auction place. Essentially the financial community wanted certification prior to the comparative emissions testing that the facility was a renewable generator and would qualify in New York under the CES as renewable.

Taylor again worked with the PSC as part of the RPS proceeding and NYSERDA to modify the Biomass Power Guide to allow for an alternative protocol to qualify the facility prior to construction taking place. In a PSC Order on July 14th in the Clean Energy Standard Case 15-E-0302, the successor case to the original Renewable Portfolio Standard case, the Commission Ordered a revision to the Biomass Power Guide as follows:

- 1. The recommendations in An Alternative Compliance Protocol to the Comparative Emission Testing Requirements for Gasification of Adulterated Biomass, prepared by the ANTARES Group and filed by Staff on March 31, 2017, are adopted (Report).*

2. *The New York State Energy and Research Development Authority (NYSERDA), after consultation with Department of Public Service Staff, shall file a revised Biomass Power Guide within 60 days of the issuance of this Order, to incorporate the recommendations in the Report.*

Taylor filed an application under the Alternative Compliance Protocol with NYSERDA as required under the revised Biomass Power Guide and on December 6th, 2018, received the following notice, signed by Doreen M. Harris who was Director of Large-Scale Renewables at NYSERDA:

This notice is to inform you that your application for Tier 1 Renewable Energy Standard (RES) Provisional Certification for the Facility with NYGATS ID PRO36790 has been approved. The New York State Energy Research and Development Authority (NYSERDA) has found the Facility provisionally meets the requirements for eligibility pursuant to the New York State Public Service Commission (Commission) Order Adopting a Clean Energy Standard, issued August 1, 2016, in Case 15-E-0302 and Clean Energy Standard Final Phase 1 Implementation Plan, filed March 24, 2017 in Case 15-E-0302.

Financing could now take place with all permits in hand for the Taylor project, which also had a Power Purchase Agreement with the New York Power Authority. High paying jobs would be created, and the Tesla of the waste world would find its home in New York. Taylor's investment of millions of dollars over a 20-year period would be time and money well spent.

The project would keep up to 350 tons per day of biomass out of landfills, recycle useable materials, reduce unwanted methane emissions, and produce 20 Mw of renewable energy to be fed into the NYISO energy marketplace. Even though the generation released CO₂ the elimination of biomass methane from landfills with its 84 times the GWP of CO₂, to say nothing of the long-term hazards of landfill contents, was addressed. Thus ended a saga of working closely with the PSC, NYSERDA, the DEC, NYPA, Central Hudson, the NYISO and others to bring forward a very clean technology.

Taylor had traveled all over the world, to Jamaica, the Bahamas, the Dominican Republic, Germany, Uganda, to speak with governments, waste handlers, electric utilities about its technology and the leadership provided by the State of New York to address a waste problem in the State. However, all parties wanted to see a facility up and running. The effort took approximately 20 years but on December 6th, 2018, financing was secured and with the first plant constructed (a process that took 28 months) the business could be expanded. The China State Railway Group Company that travelled to Montgomery to discuss the emerging technology indicated they would like at least 50 such facilities built in China, once they could see an operational plant. Thus, greenhouse gases would be reduced all over the world by a technology which had been developed and headquartered in New York State.

Approximately 6 months later, in July 2019, the CLCPA was enacted. The act provided a definition of renewable as follows:

systems that generate electricity or thermal energy through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.

The CLCPA went on to provide:

g. The following types of projects shall be prohibited:

- i. waste-to-energy projects, including incineration and pyrolysis; and*
- ii. biofuels used for energy or transportation purposes.*

The Act eliminated biomass as a renewable fuel and eliminated the use of waste as a resource for a power production facility. The Taylor technology was back at ground zero with the only possibility of moving forward being moving the proposed plant to another State and starting over. For many who followed the technology and saw it as a possible solution to emissions concerns, the CLCPA turned out to be a significant disappointment.

The example above is provided as an indication of how the State of New York works when it comes to issues dealing with waste. On one hand promoting innovative businesses and RD&D is encouraged and on the other hand actions by the State are business and innovation killers. Chapter 16 is a litany of recommendations, regulations, and legislation that is a repeat of existing sectoral mitigation strategies put in place with the Solid Waste Management Act of 1988. There are no solutions provided to the waste issues in New York absent emissions considerations. **The suggested strategies - more funding, monitoring, maintenance, research, workforce development - are simply a continuation of the same policies that continue to place waste in landfills and the chapter is not very encouraging that that process will end soon.**

A prophetic view of the future is contained on page 250 under the heading of Biogas Use:

During the implementation of aggressive waste reuse, reduction, and recycling techniques, it is recognized that some amount of waste generation will be unavoidable. Biogas generation from landfills and from anaerobic digestion will continue and a viable use for the biogas is needed. Determining limited and strategic best uses for energy produced from biogas derived from organic waste is needed. Assessing use in the waste transportation sector, electric co-location, or cogeneration opportunities for energy and heat intensive industries and hard to electrify users is an avenue for biogas use. End use should be focused on applications where no new gas transmission infrastructure will be needed. Alternative revenues at organics recycling facilities, such as biogas revenue, will allow lower tip fees to attract organics at competitive levels. Stable, enhanced energy revenue will attract investment to aggressively manage methane in existing disposal facilities and existing and new organics recycling facilities.

The description of emissions from landfills, after the aggressive implementation statement, is one of business as usual. The waste area in New York is one that is begging for cost-effective innovation, but this part of the draft Scoping Plan does not leave the impression that such innovation is likely to take place. Waste management options are being taken away with no implementable solutions.

Future of Gas System Infrastructure in New York State

In Chapter 18 Gas System Transition of the Draft Scoping Plan presented is a compendium of thoughts which lack any practical substance. Essentially the chapter documents a series of opinions on the gas infrastructure of New York State which appear to be written at an understanding level of approximately 10,000 feet, not close enough to terra firma to be helpful. In addition, the written presentation in the chapter leaves an experienced reader with an impression of deceit, not with what is said but with how things are arranged in the chapter or how pertinent information is omitted. The chapter is in dire need of a dialectical approach to fully inform interested readers.

What follows are a series of examples pulled from the chapter followed by commentary as to how short the chapter analysis falls, from what would be needed in a realistic scoping plan.

- In the first paragraph of the chapter under overview on page 264 the following assertions are provided:

All the information before the Council indicates that achievement of the emission limits will entail a downsizing of the fossil gas system. The Integration Analysis scenarios and Advisory Panel recommendations show a greatly diminished use of fossil gas. However, the Council is still considering the scenarios presented in the draft Plan, which has a direct relationship to how to decarbonize the fossil gas system. Under all scenarios, the vast majority of current fossil gas customers (residential, commercial, and industrial) will transition to electricity by 2050. The current gas distribution system was developed to meet current demand for fossil gas and will need to be downsized substantially as this transition proceeds. A well-planned and strategic transition of the system, requiring coordination across multiple sectors, is needed to ensure the transition is equitable and cost effective for consumers without compromising reliability and safety.

Commentary:

A distinction needs to be made between a downsizing of the “fossil gas system” and gas systems in general. Certainly, throughout the draft scoping document various types of decarbonization are suggested. However, there are numerous other areas in the draft plan which suggest that an appropriate replacement for natural gas is hydrogen using the existing natural gas infrastructure as a foundation. A 2020 analysis by Siemens Energy entitled, “Hydrogen infrastructure-the pillar of energy transition -The practical conversion of long-distance gas networks to hydrogen operation”, concluded with the following statement:

“The conversion of existing gas infrastructures to hydrogen operation has the potential to achieve a breakthrough for the hydrogen industry.

Using existing storage and transport capacities, hydrogen, as the main pillar of energy transition, can reliably ensure security of supply during the change to renewable energy sources. In this way, energy transition – and sector integration specifically – can be promoted comparatively quickly and inexpensively along with the expansion of the power grids.

At the same time, the long-distance gas networks open up the prospect of a European and global hydrogen market – and therefore the opportunity to consider the expansion of the regenerative energies increasing globally: linking generation capacities in countries that are rich in renewable energy sources with markets and customers in different regions of the world, reliably and on competitive terms.

The technical challenges of hydrogen technology can largely already be addressed today. The anticipated progress and the use of digital solutions will lead to continuous improvements of the overall system. The utilization and interactions of gas and electricity grids can increasingly and more effectively be controlled to compensate for discrepancies between the generation of renewable energy and individual needs in national and international operations.

Politics, industry, and the energy industry are widely committed to hydrogen as one of the central energy sources of energy transition. Two things must now follow: the consistent expansion of capacities for renewable electricity generation; and the appropriate regulatory framework showing the route to an efficient German, European, and global hydrogen economy.”

The discussion of converting the national natural gas infrastructure to hydrogen has been ongoing for years and was especially prevalent when the US thought it was running out of fossil fuels in the 1970s. Much work at the time was done at IGT in Chicago, but the country lost interest when oil embargos waned after the 1970s.

The gas infrastructure in New York is extremely valuable and any consideration of eliminating the system based upon inexperienced opinion is simply reckless. Hydrogen as a carbon free fuel is a viable option for the future use of the existing gas systems across the State.

- Further down on page 264 more opinion is provided in the text of the chapter:

Unlike other sectors, such as electricity generation, transportation and energy efficiency, the gas system does not have a long history of analysis and policy development on emissions reductions to inform the strategies in this draft Plan. New York State will need to implement an ongoing effort to plan for and manage the strategic decommissioning of much of the fossil gas distribution system as the transition to electrification proceeds. That ongoing effort would include identification of opportunities to retire existing pipelines as demand declines explore the safest, most reliable, and least expensive approaches for an orderly transition.

Commentary:

On the contrary, the gas system does have a long history of analysis and policy development on emissions reductions and for years natural gas was touted within the State as a saving fuel to ween the State away from coal fired generation, reducing carbon in the production of electric supply. What has changed in New York is the State has flip flopped away from what was considered a very clean burning fuel, to eradicating “analysis and policy development”,

replacing a seasoned rational approach with State autocratic mandates. There is no analysis supporting a policy for eliminating the natural gas infrastructure and decommissioning the fossil gas distribution system in the State. Natural gas has been a very beneficial fuel for the State keeping energy prices down while at the same time improving the carbon and criteria emissions for the State. The State needs to utilize natural gas PSC jurisdictional infrastructure depreciated investments and progress to a utilization which reduces carbon, saving customers on energy purchases as well as costly retrofits of residential heating systems. In addition, the State does not need to take a reckless approach by having one exclusive source of energy for the state. **Diversity of energy supply must be maintained especially as the world becomes more dangerous and renewable sources of generation with ocean siting vulnerability becomes more and more prevalent.**

- On page 265 first paragraph the following material is presented:

While the managed transition away from fossil gas proceeds, it will be essential to quickly mitigate methane emissions from this sector, which have been relatively flat since 2005. This need is amplified because of the Climate Act's use of a 20-year GWP and the inclusion of upstream emissions in the accounting methods. Current reporting indicates higher fugitive emissions from certain downstate utilities that also have very high inventories of leak prone pipe yet to be replaced.

Commentary:

As pointed out previously DEC accounting for carbon is out of sync with the rest of the reporting world including other states, the EPA, and even more importantly the UNFCCC (United National Framework Convention on Climate Change). From the DEC 2021 Statewide GHG Emissions Report, UNFCCC reports 4.35 mmtCO₂e for fugitive natural gas emissions whereas New York State reports 14.05. New York State reports 102.85 mmtCO₂e for out of State emissions whereas UNFCCC reports 0.

The statement that the “need is amplified” is a characterization which only supports a tendency by the DEC and the State of New York to exaggerate what the impacts of methane emissions really are from a GWP world view standpoint.

- On pages 266 and 267 under the heading of Transition Away from Gas, statements below are made:

The transition away from fossil gas should be carefully managed, phased, and conducted with a focus on just transition principles while maintaining safety and reliability for those who still depend on the energy being delivered. However, the transition should take place as quickly as possible and to the maximum extent possible and include the production, transmission, and distribution components of the system.

The State has already taken action toward this transition. The PSC has initiated the Gas Planning Proceeding (Case 20-G-0131) to ensure safe and reliable long-term fossil gas planning, which will also require consideration of GHG emission limits in the Climate Act.

Furthermore, utility rate case proceedings that appear before the PSC are now required to incorporate a demonstration of how the cases comply with the requirements of the Climate Act, including some of the emerging strategies contained within this draft Scoping Plan, such as no marketing of natural gas and positive marketing of electrification. Additional regulatory actions by PSC will likely be necessary to effectuate the required transition away from gas.

There are, however, limits to the action the PSC as regulator of fossil gas utilities can take toward this transition under current law. For instance, existing Public Service Law states that it is “policy of this state that the continued provision of all or any part of such gas, electric and steam service to all residential customers without unreasonable qualifications or lengthy delays is necessary for the preservation of the health and general welfare and is in the public interest.” Transportation Corporations Law section 12 also requires that gas and electricity service be supplied on application of a building owner or occupant. Laws such as these that seem to be in conflict with the requirements of the Climate Act must be updated and brought into alignment with the Climate Act as soon as possible to ensure that regulators do not have conflicting directives from the Legislature, and have the authority required to take action consistent with the State’s climate goals and requirements.

Commentary:

“No marketing on natural gas” is problematic. How in the world are customers to know about natural gas, benefits, safety, uses if not through marketing? In a free society that is how information is disseminated.

The last paragraph is unusually problematic, where it is suggested that the responsibilities of the Public Service Commission are now becoming subservient to climate mandates. The quoted policy of the State requiring the PSC to be focused on “gas, electric and steam service to all residential customers” must be maintained in the State of New York. If such policies may be truncated at the whim of the Legislature, then the “public service” responsibilities of the Commission will become suspect, and the public will lose confidence in the Commission.

Note in the quote that “all residential customers,” should receive the same service under public service law. As opposed to the contents of the CLCPA which picks customer winners and losers under the Act, and terms it equity and justice, the PSC needs to avoid such discrimination.

For those who have participated in gas and electric rate cases before the PSC it is apparent, that the DPS Staff which represents the Commission has conducted itself with caution, diligence, knowledge, and professionalism, balancing multiple competing objectives one of which is the CLCPA.

- On page 268 continuing onto page 269 under the title Inclusion of LMI and gas industry workforce, the following is noted:

The State should develop a comprehensive equity strategy to prioritize the needs of LMI households and Disadvantaged Communities in the transition, ensuring they are not left behind. This will require meaningful engagement of LMI households and residents of Disadvantaged Communities in the transition process and prioritizing technical and financial assistance to enable these households to make energy efficiency upgrades and electrify affordably. Create an equitable transition plan for the gas industry workforce, including protections, retraining and training that leverages transferrable skills, and job transition opportunities with attention to opportunities at dual-commodity utilities. This requires both a comprehensive system-wide equity strategy and utility-level equity strategies that include adequate accountability and oversight.

Special consideration will need to occur for the workforce at gas only utilities. Since transitioning away from fossil gas will likely result in consolidation and the ultimate close of fossil gas utilities, the existing workforce will need a path to transition careers. Electric utilities benefitting from the increased revenue of electrification of heating load should absorb some of the potential burden of the stranded costs. Bankruptcy of gas utilities should be avoided. Amending the Public Service Law to allow gas-only utilities to become holistic energy providers rather than gas only thermal energy providers may provide a path to their exit from the fossil gas business, including new businesses models such as community-scale geothermal systems.

Commentary:

These two paragraphs are simply unbelievable. Who believes that the State can “develop a comprehensive equity strategy” so that Disadvantaged Communities and LMI households are not “left behind” in transition? The State is then going to prioritize technical and financial assistance so that these two targeted groups, will “make energy efficiency upgrades and electrify affordably.”

Who believes that the State can “create an equitable transition plan for the gas industry workforce, including protections, retraining and training that leverages transferrable skills and job transition opportunities?”

Regarding the gas-only utilities, doesn't equity dictate that accommodations be made to the industry to purchase stranded assets that the State created? A Draft Scoping Plan should not make a statement that “Bankruptcy of gas utilities should be avoided” while at the same time acknowledging that the CLCPA created the bankruptcy.

Again, the chapter cannot realistically be viewed as a scoping plan. Many “shoulds” and opinions are provided which do not add to an understanding of what needs to take place to accomplish a plan involving the natural gas business and the transition to a green hydrogen business to better serve a customer and provide services that customers desire.

Land Use

Chapter 19 of the draft Scoping Plan deals with the way New York State uses land. The chapter starts out by stating in the first paragraph on page 272:

The way we use land, whether for development, conservation, or a mix of uses, directly affects the State's carbon emissions, sequestration, and storage. Smart growth land use patterns reduce transportation based GHG emissions by reducing automobile use and thus reducing VMT; sustainable land use planning and zoning can facilitate optimal siting of renewable energy; and protection of forests, cropland, and wetlands is critical for natural carbon sequestration. Deciding where to conserve land, where to develop and how to arrange and design that development constitutes the critical first steps in addressing climate change in land use. These decisions directly impact the ability to achieve carbon mitigation, sequestration and adaptation and resilience goals.

This paragraph is followed by a third paragraph on page 272 listed below:

Land use and land management decisions that seek to maximize carbon sequestration in our natural and working lands is a key component to realizing the Climate Act goal of net zero emission across all sectors of the economy. Not only are natural and working lands critical for carbon sequestration, avoiding conversion of such lands eliminates the prospect of additional GHG release.

The rest of the chapter flip flops between the word “goal(s)” and “requirements” and even “mandates”, as noted below:

On page 291 under LU8, stated is:

The Climate Act contains significant requirements for clean energy development, such as the distributed solar and energy storage targets. Local land use decisions are an important part of meeting these requirements in ways that revitalize communities and grow the economy.

On page 293 at the end of the partial paragraph on the top of the page, is an example of the use of mandates:

Continuing and expanding upon the implementation of municipal, county, and regional smart growth plans, policies, zoning, and projects will play a critical role in continuing to achieve the mandates of the Climate Act through reduced VMT.

Why are these words pointed out? Goals are anticipatory desires to move in a direction, while requirements and mandates have no equivocation as to direction. Net zero in the CLCPA is no goal and based upon the repeatedly stated urgency in this Draft Scoping Plan to move expeditiously to be at net zero by 2050, net zero is mandated and required in New York State by legislation.

On page 276 under, the LU1 heading, at the end of the first paragraph and the beginning of the succeeding paragraph the following statements are made:

To maintain the State's carbon storage and sequestration levels, additional protection is needed, which can be accomplished through land acquisition and conservation easements.

The State should implement the following tactics that keep forests as forests to maintain New York's Forest carbon sequestration and storage levels and prevent emissions from development.

So, it seems the plan is to have the State start acquiring land from private parties if easements cannot be acquired and the best way to accomplish these acquisitions is by employing various tactics. And what are those tactics? Laws that immediately keep forests as forests, support local acquisitions by trusts and municipalities, the DEC making more land acquisitions, and other State laws for establishing a "forest carbon market."

Under the heading LU2 "Afforestation and Reforestation" on page 277, history is provided on the level of forestation in New York during the industrial revolution in 1880 wherein only 20% of New York was forested. Today that percentage has gone up to 63% today. This appears to give relevance to the fact that New Yorkers believe in environmental benefits if the benefits are instituted in a voluntary marketplace without legislation being imposed to mandate outcomes.

The section in the chapter on wetlands starting on page 283 is very narrowly focused. For anyone who has been involved in project permitting within the State, there is no central issue which receives more attention than the maintenance and preservation of wetlands. Certainly, any Article VII proceeding before the Public Service Commission has a section of the Application devoted to wetland preservation before, during, and after the construction of a gas or electric transmission system.

In addition, when it comes to wetlands, aside from methane, wetlands are generators of the most prevalent greenhouse gas in the environment i.e., water vapor. Water vapor constitutes approximately 80% of the greenhouse gases in the atmosphere. However, to quote the USEIA, "Water vapor is the most abundant greenhouse gas, but most scientists believe that water vapor produced directly by human activity contributes very little to the amount of water vapor in the atmosphere. Therefore, the U.S. Energy Information Administration (EIA) does not estimate emissions of water vapor."

If the intent of the chapter is to account for manmade greenhouse gases, then water vapor from wetlands should be included to the extent that the actions of the State of New York are contributing to such generation.

On page 284 at the top of the page, continuing the theme of wetlands, "Restoration and monitoring can further expand the role of wetlands and our understanding of their sequestration potential and opportunities. Estimates suggest that more than half of New York's historic wetlands were lost due to activities like filling, draining, and dredging; preventing similar trends is critical in the face of climate change and continuing pressure from development and incompatible land-use change."

The basis for the statement is not given in the chapter and at least in the Hudson Valley wetlands have been expanding significantly based upon the actions of beaver colonies. If anything prior to moving on the expansion of wetlands resulting from the CLCPA Scoping Plan a proper accounting of all wetland impacts needs to take place.

Local Government

Chapter 20 of the Draft Scoping Document is devoted to local government.

On page 302 there are several passages that serve as an introduction to the chapter which are listed serially below:

Local governments in every region of the State—small and large, urban, rural, and suburban—are taking significant action in ways that contribute directly to meeting the requirements of the Climate Act. Local governments are well positioned to have a far-reaching impact on community action. State programs that partner with communities and local governments are helping drive rapid adoption, widespread participation, and big impact. (First paragraph page 302)

Partnership with local governments is a keystone of the State’s clean energy, adaptation and resilience, and GHG mitigation strategies, and support for local efforts will help ensure access to the benefits of these actions for all New Yorkers. Local governments have an important role to play in meeting Climate Act mandates. (In second paragraph on page 302)

State programs, including Clean Energy Communities and Climate Smart Communities, were identified as providing value to local governments, whether through grants, free technical assistance, or recognition for local leadership. NYSERDA’s Clean Energy Communities program creates a clear path forward for communities to implement clean energy actions that have the greatest potential for impact. To date, 639 communities, representing more than 18 million New Yorkers, have completed more than 2,200 high- impact actions. (Bottom of page 302)

The passages above are a mischaracterization of local government to whitewash the Climate Act. Local government indeed has been very supportive of reducing carbon generation, but those supportive actions were motivated by a desire to do good work, to give back, and contribute to a community or local. The local government efforts are voluntary. In addition, local government knew that if other community requirements such as responding to a pandemic, a hurricane, or for a more recent example gathering food and supplies for those in need in the war-torn Ukraine beckoned, carbon reduction would take a back seat to more pressing needs. The State is now dictating Climate Act hegemony to take precedence over what might be felt by local government to be more beneficial, to the community local government serves.

Climate Smart Communities are made up of volunteers who are not working on “meeting the requirements of the Climate Act.” The belief is that actions will lead to an improvement in the environment that the volunteers believe adds more value than other actions they might engage in.

Local governments have gravitated to partnerships with the State when they could choose what was most beneficial for the communities they serve. First comes being a good public servant and then comes the partnership.

NYSERDA has historically been viewed by local government as a friendly resource that gave an assist when needed and provided insights and technical skills to address energy related issues. The role of NYSERDA is changing under the CLCPA and partnerships with local government will move from participatory to command and control. For example, a call from NYSERDA that historically asked what your building code specifies, will be replaced in the future with an admonishment, this is what NYSERDA, as an arm of the State, requires that your building code specifies. The friendly discussions that have been a characteristic of the NYSERDA organizational personality will gravitate toward meeting legislated schedules with little available time for user-friendly discussion. NYSERDA might even end up with enforcement responsibilities under the CLCPA creating another barrier to productive partnerships.

With the mandates in the CLCPA and even more importantly the implementation of those mandates in a time frame which has little regard for the public service needs of local communities, the voluntary local government partnership relationships with various State agencies will certainly change. When elderly members of the local community start complaining to their local government representatives that there are no plumbers available to repair a fossil fueled heating system and they cannot afford a heat pump replacement, historically mutually beneficial working partnerships will suffer.

On page 304 under the title **Form a community GHG working group** first bullet, the following strategy is listed:

Review existing guidance including the International Council for Local Environmental Initiative's U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions to identify methods.

Such components as listed above of a proposed strategy in this CLCPA Draft Scoping Plan are just out of sync with the world of local government or community reality. Of the thousands of things which local government is tasked to do to serve a constituency, where would reviewing existing International Council guidance rank in that hierarchy?

On page 303 under LG1 the statement is made:

The strategy for supporting local climate action is to develop a statewide dashboard of community GHG emissions inventories to promote local climate action planning, monitor equity considerations, measure progress, and ensure data consistency at the county and municipal levels.

Prior to making local climate action consistent with State based data it would certainly make sense for the State to make its data consistent with the data on CO₂e, used by the EPA, the IPCC, and by and large the rest of the civilized world.

On page 304, at the bottom, under **Local Energy Policies** stated is:

This strategy is intended to encourage local governments to demonstrate leadership in energy efficiency by developing model above-minimum energy conservation codes and construction policies. This includes adopting the NYStretch Energy Code and promoting its adoption, enhanced code enforcement including streamlined permitting, third party inspections, and shared enforcement, and Property Assessed Clean Energy financing.

The above passage is again out of sync with the world of local government reality. Local government does not desire to have the State tell them how to demonstrate local leadership especially when that local leadership requires enforcement of codes it has created.

Suffice it say that the disconnect emerging between local government and the dictates of the Draft Scoping Plan as proposed are numerous in Chapter 20. The disconnects all stem back to the timing mandates and restrictions in the CLCPA which established an atmosphere of oppression and “meeting the requirements of the Climate Act”, versus one of an open and voluntary effort for serving a local community.

Adaptation and Resilience to Climate Change

Chapter 21 is devoted to adapting and becoming hardier to Climate Change in the State. When it comes to Climate Change there is nothing more important than adaptation and resilience because if in fact the levels of CO₂e in the atmosphere are causing the climate to change in New York State, which is the basis of concern dealing with climate, then the State needs to adapt and become more resilient. Right now, the level of CO₂e in the environment is around 412 ppm as previously discussed with a projected level around 500 ppm in 2050. No matter what New York State does to reduced its yearly CO₂e emissions, the levels of CO₂e in the atmosphere will continue to go up absent some world-wide miracle to reduce carbon generation in China, India, and the rest of the nations in the developing world. CO₂e levels are essentially the same on average around the globe and the level in Texas will be essentially the same as the level in New York State in 2050.

Suggested in the chapter are academic exercises such as those listed under **Communities and Infrastructure** on page 308:

Enhancing resilience of communities and infrastructure includes strategies to assist municipalities to prepare for and react to increasingly severe climate hazards. The strategies include recommendations to expand State support for regional and local planning, assist municipalities in their efforts to incorporate future conditions into local planning and regulatory decisions, recommendations to address risks due to flooding and extreme heat, and recommendations to ensure resilience of the energy system.

The recommendations above are business as usual and the rest of the chapter gives no additional insight into protecting the State and making it more resilient.

Measuring Success

Chapter 22 deals with measuring success. The chapter essentially suggests that partnerships, obtaining federal action to assist with the CLCPA implementation, regional collaboration, supporting local governments, education, outreach, and workforce development will in some fashion be measures of success.

It will take much more than partnerships to affect the mandates especially in the time allotted. Speaking of which the CLCPA legislation was signed by the governor at the middle of 2019, became effective at the beginning of 2020 and after two years the State is still working on a scoping plan which will not be put in place until the beginning of 2023 some 3 years later. Looking exclusively at the renewable energy portion of the CLCPA, the State is currently at 27% renewable generation and needs to get up to 70% renewable generation by 2030. So, some 30% of the time frame to accomplish the 70% will be expended prior to the completion of the scoping plan a part of which calls for the 70% supply of renewable energy.

Reporting

The Draft Scoping Plan, in Chapter 23, calls for the following reporting:

1. An annual inventory of GHG emissions developed by the DEC and issued at the beginning of every year.
2. Every 4 years an implementation report issued by the DEC on how implementation is progressing with the first report to be issued on January 1, 2028.
3. A renewable energy progress report issued every 2 years with the first report issued on July 1, 2024, by the Public Service Commission.
4. By October 1, 2022, the DEC will develop an air monitoring program in disadvantaged communities and the results of that monitoring will be shared to inform the public by June 1, 2024.

Now if you were going to put a successful operation in place using a plan that took 3 years to develop would you wait 5 years to find out whether it was working. Essentially no one is in charge and for the next number of years after 2022 other than reporting on what is happening with the natural gas and electric systems in the State the rest of the plan is on free spool.

Future Work

Chapter 24 is the concluding chapter and speaks to the issue of what happens next with the Draft Scoping Plan developed.

1. The CAC will hold 6 regional public hearing three upstate and three down State after the release of this draft plan.
2. Comments on the draft plan should be submitted by interested parties by April 30, 2022.
3. The final version of the scoping plan will be issued by January 1, 2023.
4. Subsequent to plan release new regulations, laws, policies will be promulgated to implement the scoping plan.
5. State Energy Plan revised to incorporate the approved Scoping Plan.
6. The Scoping Plan will be updated every five years.

What happens to the CAC after the Scoping Plan is implemented is a question, but that may be added to many other unanswered questions moving forward.

Outreach to New Yorkers

Throughout the Draft Scoping Plan reference is made to “the public”, to “stakeholders”, “engagement from all New Yorkers”, “90 public meeting,” “six public hearings”, “feedback from the public”, etc. Unquestionably there is no enacted legislation which will have a larger impact on the lives and wellbeing of New Yorkers than implementing the CLCPA.

The references above to stakeholders, public meetings, public hearings, are all listed to insinuate that New Yorkers in some fashion know what is going to hit them in the future. Nothing could be further from the truth. At random select a typical resident of Poughkeepsie and ask them whether they have heard of the CLCPA, or the actions the State will be taking in the future to address climate change, and you get a blank stare. It does not matter what the status of the individual is. This topic which is one of the most important topics in their future lives is not on their radar screens.

The outreach which has taken place to date will only inform those who are deeply involved in environmental issues or are typically followers of what is going on in the State of New York associated with various State proceedings. There is no Chapter or Section of a chapter devoted to New Yorkers and the impact of the Scoping on their lives. Nowhere does it let the typical New Yorker know that they will no longer be able to purchase a gasoline driven vehicle, purchase a propane fired outdoor grill, gas up at a filling station, turn up the heat from their gas furnace in the future, repair a gas furnace in the future, sell their home without providing data on air emissions from heating systems, retain gasoline driven power tools or equipment, adjust the flame on their kitchen stove, use their emergency generator when the lights go out, and on and on and on.

Worst of all, the New Yorkers, who have planned their lives so that they can comfortably retire in a beautiful State with the resources they have worked hard to acquire, and use those well-maintained resources into the future, will have that future eroded due to the inflation these CLCPA programs will cause. When you shut down depreciated generating assets that continue to have a long and useful life and replace them with assets which are significantly more costly and unreliable, the result is obvious. The rising cost of energy will peculate throughout the State, raising prices in general. The population the CLCPA looks to protect is the population most adversely impacted by the mandates.

The Scoping Plan needs to identify the personal impacts on all New Yorkers and how best to address those impacts.

What is addressed in the Draft Scoping Plan are disadvantaged communities and LMI New Yorkers. The recently released Disadvantaged Community criteria by the CJWG calls for comments on the criteria to be filed by July 7th. The criteria issued will not be discussed herein. Suffice it to say that the entire concept of picking New York winning and losing communities is a pejorative exercise which certainly does not build confidence in the State of New York.

Part II: Understanding the New York Approach to Address Climate Change

Overview of the CLCPA Draft Scoping Plan Issued at the End of 2021

The availability of energy on demand forms the basis for human freedom. The State of New York currently has one of the most diverse, reliable, affordable energy systems ever produced by man. As used in this context that energy system also includes its sources and end users. The New York State energy system is the culmination of hundreds of years of human development to structure. All human existence in the State is intimately dependent upon that energy system in ways far too encompassing to define in words. Take away that energy system in New York and life in the State as we enjoy it today is unsustainable.

Thus, if the State of New York is going to substantially change that energy system removing diversity of supply and creating heightened levels of energy uncertainty, that change must be well-organized and clear as to what is planned. The Draft Scoping Plan issued by the Climate Action Council has not identified or suggested any oversight or management organization responsible for long term or more importantly day-to-day Plan implementation. The Plan lists many issues where additional legislation, regulation, modified policies, intelligent direction is needed and put in place before a new energy system can replace the current energy system.

What is presented as a draft plan is no plan at all, but rather a compendium of ideas, studies, opinions, placed under headings with one central theme of focus, the elimination of greenhouse gases. The central element of focus is completing whatever needs to be done to get to net zero carbon equivalent emissions by the year 2050. Setting net zero as a planning goal for the State in the State Energy Plan makes sense and would be a motivational tool that New Yorkers could get behind. Making net zero the law by a date certain is an autocratic approach that takes away from the human need, especially within a democracy, to contribute to the betterment of the environment and society in general.

Aside from the fact that there is no coherent plan presented, no single entity is tasked with implementing what needs to be done or has been presented in the draft. If in fact, a coherent plan was drafted, a committed organization would need to be enlisted to implement the plan especially against a schedule as tight as the one legislated in the CLCPA.

Society does not change according to a stipulated schedule. Society improves to the benefit of citizens, especially in democratic countries. Progress is an evolutionary process. The Climate Action Council needs to recommend the elimination of hard coded CLCPA implementation dates. Leadership in the State needs to consider the voluntary beneficial behavior of the citizens of New York to get to net zero carbon on a societal glide path free of deleterious unintended consequences.

First and foremost, it must be stressed that the State of New York has some very good industrious people. Those people are why New York is in fact the Empire State. Any comments on what is presented herein should not take away from the EXTRAORDINARY accomplishment of all the people who volunteered their time and put the Draft Scoping Plan together. All the

people involved had to sacrifice otherwise gainfully committed time to putting the Draft together, and nothing should take away from that awesome contribution.

The development of the Draft Scoping Plan was assigned to an inexperienced politically appointed committee, the Climate Action Council. The CAC in turn enlisted the support of additional inexperienced volunteers to staff supporting advisory panels. Oversight for the CAC was assigned to two State Agency heads who were also inexperienced. As used herein the experience, is in planning for a new energy system in New York State completely dependent upon electricity. Why was there no experience? The answer is because such a system has never existed and essentially as contemplated the system is a dream. Could such a system be engineered into existence? Yes, such a system could be engineered into existence but a democratic society that has choice of energy supply would never allow it. How can such a statement of denial be made? The basis for the statement is that democracy always comes back to the balance that allows choice between competing needs. In regard to the Draft Scoping Plan proposed, it is terribly out of balance. Choice of energy source has been eliminated in the Draft Plan, which will create an unsustainable energy system for the State.

Not only is the Draft Scoping Plan devoid of a management structure to implement a plan but also the Draft Scoping Plan is devoid of addressing the overall societal impacts of implementing such a plan. Those societal impacts will be distributed upon all New Yorkers some of whom will not have the capability to accommodate those impacts. Disadvantaged Communities and low to moderate income families are referred to in the draft but a reference will not keep families warm on a cold winter night or put bread on the table.

What follows is a synopsis of what is proposed in the Draft Scoping Plan taken in part from the content specific review and investigation as previously listed herein under Part I Areas of Concern in the Draft Scoping Plan. This synopsis is an analysis leading to what may be inferred or concluded from the proposed plan.

Synopsis of the Draft Scoping Plan Presentation Informed by Impacts, Clarifications and/or Previously Listed Areas of Concern

Defining Weather versus Climate

In the plan, it is stated that there is “Scientific Evidence of Our Changing Climate.” That statement is followed by weather examples that had significant societal impacts, such as recent hurricanes that caused significant structural damage or torrential rainstorms that caused flooding. Weather is what we experience today, and climate is what the averages of those weather experiences turn out to be, over typically a 30- to 100-year period of time.

The Draft Scoping Plan, in Chapter 2 titled “The Time is Now to Decarbonize Our Economy,” provides a compendium of issues to support the “Scientific Evidence,” but the compendium falls short of being evidence and gives a one-sided view of the Science. A more balanced view is taken from the recent accounting in the book *Unsettled* by Steven E. Koonin, former Undersecretary of Science, U.S. Department of Energy under the Obama Administration. Koonin is an internationally known expert, currently a professor at NYU, on climate, climate change, the

IPCC, and climate change modelling. Koonin discusses how to respond to climate change in *Unsettled* on page 24 of his text:

The earth has warmed during the past century, partly because of natural phenomena and partly in response to growing human influences. These human influences (most importantly the accumulation of CO₂ from burning fossil fuels) exert a physically small effect on the complex climate system. Unfortunately, our limited observations and understanding are insufficient to usefully quantify either how the climate will respond to human influences or how it varies naturally. However even as human influences have increased almost fivefold since 1950 and the globe has warmed moderately, most severe weather phenomena remain within past variability. Projections of future climate weather events rely on models demonstrably unfit for the purpose.

It is undisputable that man has caused changes in the climate but using weather occurrences as scientific evidence that such is the case is simply unsupportable by sheer definition alone.

There is no place in a Scoping Plan moving forward, especially one with such an immense societal change imperative, to say nothing of the dollars to be spent to effectuate, for histrionic accounting that lacks definitional accuracy. If society is going to be transformed as the Draft Scoping Plan manifests than foundations supporting that gross societal change must be able to stand up to scrutiny.

Changing Attributes of the Electric Grid in New York

As suggested in Chapter 2, will the electric grid under an implemented CLCPA, be cleaner, more affordable, and more reliable?

As New York becomes more reliant on intermittent sources of generation, in order to retain the same level of reliability experienced today, New York will purposefully grow in its interconnection reliance on Canada, NEPOOL, and PJM. If anything with increasing sources of intermittent electric supply in the State, and even storage is intermittent if reliant upon intermittent sources of supply for charging, at best the New York reliability will remain the same, but most likely will decline as base load fossil and nuclear generation is eliminated in the State.

The assumption is that electric supply in New York will eventually be carbon free from a source of fossil fuel generation standpoint. Now New York wants to trade off the GHGs emitted in any imports of electric supply with an equivalent reduction in those greenhouse gases to offset the imports. That imported electric supply from other states, particularly Pennsylvania, will come in part from coal fired generation since Pennsylvania still retains the use of coal to support power production. As New York becomes more and more dependent upon intermittent generation, it is likely that more power will be imported from other states. When it comes to the interconnected electric transmission systems especially free-flowing systems, whatever the sources of generation supply at the time, is what flows on the NY transmission system. Thus, the cleanliness of the system in New York will not substantially improve until the entire eastern interconnect improves.

How the electric grid will become more affordable is really a curious statement. More and more transmission will be required in the future to support increasing demand forecasted under the implemented CLCPA. New transmission built, will be priced and billed to the customer using the transmission on a per kwh and kw basis to pay off the investments made to construct the new transmission. These costs will all get added into what a customer using the grid pays for their electric service. So, costs will go up. The cost for those new investments to some extent will be socialized so all customers in the state will end up paying for those new investments. On a per unit basis prices for new transmission will be higher than the prices paid for using the transmission system built in the past which is priced at its historic depreciated cost. So, will the grid be more affordable? Well, it all depends upon your current financial status and what you can afford, certainly the poor and lower income New Yorkers would not think so.

This Draft Scoping Plan statement on reliability, affordability, and cleanliness is a statement which is typically termed puffery, in marketing terms. The Draft Scoping Plan has a good deal of puffery throughout.

Accelerating Regulation

The plan calls for “innovative solutions through technology advancement”. However, in PSC rate cases and DEC permitting currently taking place in the State the focus is upon dates in the CLCPA when fossil fuels must be eliminated. Such regulatory actions are taking place prior to the issue of a final Scoping Plan under the CLCPA. In the rejection of the Danskammer air permit by the DEC, the basis for that rejection was that the innovative use of “RNG or hydrogen” as a potential compliance pathway was “uncertain and speculative in nature.”

Throughout the Draft Plan there are calls for NYSERDA to perform more R&D to determine an appropriate path forward. As presented, much of the Draft Scoping Plan is uncertain and speculative as to outcome especially as it relates to shutting down the natural gas infrastructure in the State. Prior to destroying the State natural gas supply infrastructure, innovation to move to a hydrogen economy should be fully investigated as a path forward. Such a path forward eliminates much of the concern about the intermittency of solar and wind generation in the State.

From the Draft Plan it is stated “NYSERDA has also launched a climate assessment, New York State Climate Impacts Assessment: Understanding and Preparing for Our Changing Climate ... Draft core projections for the updated climate assessment have been completed, including for average and extreme temperatures and precipitation. These resources will be made publicly available once the assessment is completed, which is expected in early 2023.”

Exclusively based upon the work of NYSERDA which is still under way, it would appear reasonable to wait until the assessment is complete sometime in 2023. From this work ongoing by NYERDA especially dealing with economics, a Scoping Plan at year end 2022 is premature.

What Type of Leadership

The Draft Scoping Plan states on page 6 that “the Climate Act established New York as a leader in the critical effort to maintain a livable planet”. Further on under the Leadership chapter on page 21 stated in regard to the DEC establishing the Value of Carbon guidance, it is noted that, “The Value of Carbon guidance provides metrics that may be broadly applicable to all State agencies’ and authorities’ actions—such as benefit-cost analyses, rulemaking processes, environmental assessments, and demonstrations of the benefits of climate change policies—to demonstrate the global societal value of actions to reduce GHG emissions.”

Herein lies the most significant problem with the Climate Act, the grandiose idea that New York State needs to be a leader “to maintain a livable planet” and that the benefits of the Act need to “demonstrate... global societal value.” All actions in the Draft Scoping Plan have a foundational basis of viewing the costs and benefits of the actions of the State on a global scale. This would make sense if New York was a significant contributor to the ambient levels of CO₂ in the atmosphere but it is not.

Take for example the CO₂e emissions by New York in 2021 using United Nations (UNFCCC) accounting for emissions of 194.56 mmt. Now during 2021 the world-wide emissions for CO₂e were 36,000 mmt. New York emissions are around .5% of this total. With an emissions level of a half of one per cent does it make any sense for New York State to take on emissions levels for the entire globe to prove it is a leader?

Emission levels do not impact climate change, it is the accumulation of CO₂e in the atmosphere on a long-term basis which impacts climate. Currently the CO₂e in the global atmosphere is around 412 ppm and based upon worldwide emissions the total is going up by about 2.175 ppm per year. That means 36,000 mmt produces a 2.175 increase in ppm per year. The NYS contribution to that 2.175 ppm/year is about .011 ppm/year. In relative terms at its current emissions rate, it would take NYS approximately 91 years to add 1 ppm to the ambient level of 412 ppm of CO₂e in the atmosphere.

Within the confines of the United States indeed it is possible for New York to demonstrate leadership which it has already done. Currently on a per capita basis using the most recent EIA data New York produces the lowest amount of CO₂ of any state in the nation except for California with which it is tied. This level is 84% below the national per capita average at 16.6 mt/year. In addition, using recent EIA reporting New York is also one of the most energy efficient states in the Union second only to Rhode Island on a per capita basis.

The State needs to provide balance when it comes to carbon, taking credit for current excellent performance and focusing on other issues equally as critical to the State such as education, suicide rates, a safe living environment and many others.

It is also difficult to understand speaking of leadership, the authoritarian approach to climate change adopted by the State in the Act. Prior to the mandates stipulated in the Act the State took on an ambitious but voluntary approach by establishing goals in its energy planning process. Such planning enlisted the support of New Yorkers to work toward a cleaner environment with

accompanying reductions in carbon. As noted, that approach on a per capita basis produced the best performance of any state in the nation when it comes to carbon emissions and overall energy efficiency. The change from democratic to authoritarian does not engender a sense of inclusiveness within the State and smacks of special interests being given precedence over New Yorkers who would like to voluntarily contribute to the betterment of their environment.

DEC Carbon Accounting Under the CLCPA

The accounting for carbon in New York State is explained in the 2021 Statewide GHG Emissions Report issued by the DEC at the end of 2021. Most of the government agencies in the world including the US EPA and the United Nations Framework Convention on Climate Change (UNFCCC) account for greenhouse gas emissions within a government catchment area and use a standard 100-year time domain to assess global warming impacts. However, in New York State used is a 20-year time domain and a catchment area that extends beyond borders. The New York accounting for natural gas imports and the 20-year time domain versus 100-year time domain turns out to be a significant contributor to GWP in the State.

For the accounting done by New York State, natural gas contributes 133.07 gross mmt to GWP whereas for the UNFCCC accounting, the approximated total is around 37 gross mmt. Using the New York based accounting creates a 360% increase in natural gas GWP for the State.

The total carbon accounting used by the State ends up for the year 2021 with a gross total of 379.43 mmt versus 194.56 mmt using the UNFCCC protocol, a 95% increase using New York accounting.

This accounting is another indication of New York State's tendency to be an outlier going to an extreme as opposed to using balance to calculate State emissions levels. The conclusion which might be drawn is that the State is exaggerating actual emissions to justify taking the steps it is taking in implementing the CLCPA. This is especially true for natural gas which is considered a clean burning fossil fuel. Even the European Union is now characterizing natural gas as a "sustainable" green fuel.

When it comes to an mmt or million metric tons, who bothers to view the protocol used to come up with a total for the year. However, when it comes to comparing the emissions between various governmental entities, it is assumed that all parties are using a standard format for developing total yearly greenhouse gas emissions and global warming potential, GWP.

Gargantuan Implementation Impacts

There is probably no Act in the history of New York which will have a larger impact on New Yorkers than the CLCPA.

A partial listing of some of the long-term impacts of the Act as Drafted, on those in Dutchess County are:

- Restrictions on vehicle ownership
- Difficulty to find experienced craftsmen to install or make repairs
- Increasing queues for repairs of electric or fossil fueled equipment

- Loss of energy choice
- Imposition on otherwise free time to comply with State imposed mandates
- Restrictions on personal property ownership
- Restrictions on sale of personal property
- Restrictions on opening a business
- Restrictions on operating a business
- Restrictions on operating vehicles in the snow
- Restrictions on the sale of real-estate
- Restrictions on appliance ownership
- Restrictions on power tools
- Restrictions on travel
- Restrictions on RVs
- Restrictions on boating
- Increasing cost of electric supply
- Increasing inflation in the State
- Restrictions on developing property
- Restrictions on how you heat your home
- Accounting for energy use
- Requirements for retraining
- Potential for loss of fossil fuel-based employment
- Potential for loss of engine mechanic employment
- Deterioration of choice in energy supply
- Proliferation of the health hazards of electric and magnetic fields
- Increasing dependence upon State mandated programs
- Establishment of queues to charge vehicle
- Charging residential customers for electric demand
- Increasing risk of freezing weather impacts based upon loss of electric supply
- Deterioration of personal sustainability (dependence upon one source of energy supply with no gas-powered emergency generator backup)
- Increasing health impacts from reduced air turn over in residences
- Elimination of home fireplaces
- Restrictions on vehicle miles traveled
- Additional taxes to charge vehicles
- Replacement of home heating systems restrictions
- Restrictions on maintenance and repair of home heating systems
- Additional registration fees for electric vehicles
- Additional residential code requirements
- Requirements on rewiring of home to support new heating and charging
- Penalties for new code violations
- Confusion in navigating new regulations and legislation
- Inequities in property development

- Restrictions on sale of forested property for development
- Restrictions on parking
- Restrictions on driving into metropolitan areas
- Difficulty driving out of state.
- Restrictions on use and disposal of batteries
- Need to replace costly auto batteries
- Confusion on standard charging cords
- Elimination of outdoor barbeques
- Confusion on battery replacement

These impacts will be far-reaching, onerous and costly for every New Yorker.

Carbon Reduction Management Under the Act

The Act put in place a Climate Action Council (CAC) to develop the Scoping Plan, see to the reduction of carbon under the Act's mandates, and provide for regulations for the Act's implementation. Changing the entire fossil fueled energy system in the State, replacing it with an electric system yet to be designed or developed, and moving forward without a hiccup is an impossibility. The complexity of the endeavor to say nothing of the magnitude and societal impacts requires a plan and design that is gargantuan, and which has never been done anywhere in the history of the United States or the developed world. This plan called the Scoping Plan was assigned to a group of part time participants, the CAC, all with no experience in accomplishing such a redesign, simply because no one had ever designed such a new energy delivery system.

Not only was the CAC given an impossible task, but also the mechanism for implementation lay predominately with the DEC providing regulations so that carbon reduction would take place in an orderly fashion. Now has the DEC ever designed or build an entire energy system needed for buildings, businesses, electric generation, transmission and distribution, vehicles? No, the DEC has not and has never been concerned with designing such systems. However, once the CAC has issued a Scoping Plan it turns the plan over to the DEC and other regulators such as the PSC. Upon turn over, the CAC relinquishes all management or oversight of the Plan it put together. Then 5 years later the plan is updated by the CAC. But is the membership of the CAC a continuation of membership from the past? Obviously, that is not the case.

As presented, the Draft Scoping Plan is not a plan at all. It is a compendium of material put together under headings that reflect documented discussions that were conducted with the CAC. These documented discussions resulted from the work and recommendations of advisory panels. In addition to the work product of the advisory panels, there were a myriad of studies, reports, papers supporting positions of the DEC, NYSERDA, the NYISO, and other organizations, that were included if only by reference in the Draft.

The Draft Scoping Plan is a recipe for change. As is obvious, the outcome of change can lead to one of two eventualities, either progress or chaos. As currently structured, the Draft Scoping Plan without an identified structure to manage the change, will likely lead to a considerable amount of chaos in the State.

The DEC's Value of Carbon Guidance

Under the CLCPA a value of carbon must be established by the DEC within one year of the effective date of the legislation. The DEC dutifully performed as required and provided a Guideline for use by State Agencies. The Guideline entitled “Establishing a Value of Carbon” provided background and recommendations for State Agencies to use in performing economic analysis justifying actions, policies, or regulations.

Now the suggested values in monetary terms turned out to be \$121/ton of carbon dioxide, \$2,700/ton for natural gas or methane, and \$42,000/ton for nitrous oxide. These values are based upon a global damage estimate of a ton of the gas in the atmosphere. The values use a 2% discount rate. The higher the discount rate the lower the values.

Based upon New York State's global approach to addressing climate change with a 2% discount rate compared to the global Federal Interagency Working Group's (IWG) approach with a 3% discount rate, using data from the NYSERDA contracted Resources for the Future Report of April 20, 2021, the value for carbon dioxide to be used by the State turns out to be (121/51) 237% higher, natural gas (2700/1500) 180% higher, and nitrous oxide (42000/18000) 233% higher.

These values suggested by the State are extremely fuzzy especially in light of the modelling done and the global scope of the damages considered. As is the case with the assessing of GHG emissions by the State, the values are much higher than a balanced approach would suggest.

Using a global damage model with the understanding that the damages which accrue are based upon the level of CO₂ in the atmosphere which is currently estimated at around 412 ppm. The damages as accounted for result from “net agricultural productivity, property damages from increased flood risk, human health, energy systems costs, and other aspects of the economy” (Guideline page 13).

As already noted, New York's yearly contribution to this 412-ppm total takes some 91 years to add one ppm to the total. As such, the New York contribution to future damages should only be accounted for because of this extremely limited impact and should not equate to the same levels as China, India, or the entire United States. Requiring New Yorkers to end up paying for damage outside the borders of the State especially considering the overall energy efficiency of the State and the fact that the per capita generation of CO₂ is the lowest in the US, is not a just way of assessing the value of carbon for New York.

Compare New York State's GHG emissions of 195 mmt/year to the yearly emissions of China at 5,380 mmt/year. China's GHG emissions will increase as the country continues to build coal fired generation. Absent any other considerations, with current programs in place, the NYS GHG emissions will continue to decline on a year over year basis from now until the year 2050.

Reliability of Energy Supply in New York

Before the State of New York eliminates fossil fuels on the way to net zero carbon, an equivalent energy system providing energy on demand must be modelled, established, and tested. Currently there is no design for an energy system proposed in the Scoping Plan that demonstrates that a reliable energy system for the State may be established accommodating the elimination of fossil fuels. Such a system needs to be designed, a pilot model based upon the design constructed, and the constructed model needs to be stress tested by users of the system to see if the system will work.

The energy system desired by the year 2050 within the CLCPA currently does not exist and has never existed anywhere in modern times. The electric system contemplated in the CLCPA is inherently unreliable based upon the intermittent nature of wind and solar generation and to the extent that storage relies upon intermittent sources of energy supply, storage also becomes intermittent.

New York has come a long way in areas of health, energy use, and societal well-being based upon a reliable energy system providing all the energy desired upon demand. The CAC in its scoping document must assure that implementation of the CLCPA maintains such energy reliability. From what has been presented in the Draft Scoping document there are no assurances. Prior to destroying existing energy infrastructure and supply such assurances need to be acquired.

New York is in competition with other States to acquire and retain business. Aside from businesses that organically arise and grow within the State there are businesses external to the State which might desire to enter the marketplace in the State. Such a business in doing its due diligence on State location will review the reliability of energy supply, cost, and usage. Uncertainty as to energy availability and usage may be a determining criterion for such a locational business move. In reading the Draft Scoping Plan, no such energy related assurances are provided for businesses. Such assurances need to be pragmatic in nature and identify tangible benefits which immediately add to a business' bottom line.

Energy systems around the world continue to become more and more reliable, where especially for the undeveloped world, energy is a key element for these developing countries. These undeveloped countries know that to ramp up economic activity, the use of energy will be required. Right now, that energy is fossil fuel energy. As New York has showcased its plans for substantially modified energy systems eliminating various aspects of fossil fuel use, the last thing these undeveloped nations need to witness is the establishment of an unreliable system which causes an economic decline within the State. As is the case for individuals and businesses, the Scoping Plan does not provide assurances that the energy systems to be established within the State will be as reliable and cost effective as those which currently exist. That level of assurance needs to be identified and become an integral part of a Scoping Plan.

A Just Transition for Adapting

The CLCPA calls for a just transition from today to 2050. However, the transition will not be just or equitable when New Yorkers are removed from their investments, livelihoods, savings, enjoyable lifestyles simply to meet mandated legislation.

The recommendations in the Draft Scoping Plan to address such dislocations listed as worker support, evaluation of labor standards, financial support of businesses, new training programs, career pathway programs, community engagement, stakeholder input, and general considerations are to say the least window dressing that paper over a real problem that the State of New York has created.

Not only will workers be impacted by losing jobs but so also will businesses that invested in the emerging competitive wholesale electric marketplace of the late 1990s. New York encouraged competition and the acquisition of regulated fossil fueled electric generators in the State which sold at a premium over book, much of the premium being returned to customers in the State. The independent power producers that made the purchases are now being unjustly treated with the State effectively nationalizing the investments made and indicating that shuttered generating sites should be investigated, and the property repurposed. Such hardly constitutes a just transition.

The only real just transition is a revision of the CLCPA to accommodate New Yorkers that will need time to adjust and respond and not be held to time frames which have limited societal value absent the hubris of leadership claims.

New York Health and the Climate

Granted there will certainly be health related benefits in some of the policies mandated in the CLCPA but the description and hyperbole used in the Draft Scoping Plan as examples are misleading and give a false sense of well-being accruing from State policies. Whether the policies are implemented or not it makes sense to take care of personal health and the Climate Act is no cure for the fact, in the Draft that “obesity has reached epidemic proportions with more than half (60.8%) of New York adults reported to be overweight or obese in 2016.” Whether the policies are implemented or not it makes sense to reduce pollutant emissions today under existing regulations and not simply to conform to a schedule mandated in the CLCPA.

An Expensive Business-as-Usual Case

Contained in the Draft Scoping Plan is a Business-as-Usual or Reference Case that “is used for evaluating incremental societal costs and benefits of GHG emissions mitigation.” The Reference Case includes a business-as-usual forecast, plus implemented policies, including but not limited to federal appliance standards, energy efficiency achieved by funded programs (Housing and Community Renewal, New York Power Authority, Department of Public Service, Long Island Power Authority, NYSERDA Clean Energy Fund), funded building electrification, national Corporate Average Fuel Economy standards, a statewide Zero-emission vehicle mandate, and a statewide Clean Energy Standard including technology carveouts.”

The defining elements of the Business-as-Usual (which also includes implemented policies) or Reference Case are as follows:

- *Growth in housing units, population, commercial square footage, and GDP*
- *Federal appliance standards*
- *Economic fuel switching*
- *New York State bioheat mandate*
- *Estimate of New Efficiency, New York Energy Efficiency achieved by funded programs: HCR+NYPA, DPS (IOUs), LIPA, NYSEERDA CEF (assumes market transformation maintains level of efficiency and electrification post-2025)*
- *Funded building electrification (4% HP stock share by 2030)*
- *Corporate Average Fuel Economy (CAFE) standards*
- *Zero-emission vehicle mandate (8% LDV ZEV stock share by 2030)*
- *Clean Energy Standard (70x30), including technology carveouts: (6 GW of behind-the-meter solar by 2025, 3 GW of battery storage by 2030, 9 GW of offshore wind by 2035, 1.25 GW of Tier 4 renewables by 2030)*

By the year 2050, (using the DEC GHG accounting standard) the Business-as-Usual Case drops carbon generation to approximately 311 million metric tons of carbon dioxide equivalent (MMT CO₂e) from 379.43 (MMT CO₂e) in 2020.

Avoided in the Business-as-Usual Case are precipitous reductions in internal combustion engine vehicles; elimination of personal comfort domestic, commercial, and industrial heating and cooling; and the complete banning of all fossil fuels. Preserved will be the life blood of current living conditions, based upon the availability and use of fossil fueled energy.

To fully implement the requirements under the CLCPA arriving at net zero on average by 2050 four other scenarios were investigated in the Draft Scoping Plan with net present value costs in the range of \$290 to \$310 million using a 3.6% discount rate.

With the understanding that climate change damage occurs based upon the levels of CO₂ in the atmosphere, actions taken by New York State to reduce carbon in the atmosphere will prevent no additional climate change damage from taking place in the State. The benefit to cost ratio is close to zero regarding New York State climate change damage affected by reducing GHGs in the State.

The same may be said about public health benefits since the gas levels in the atmosphere, whether CO₂, CH₄, or NO₂, will be virtually the same no matter what actions New York State takes to reduce these emissions. Concentrations may differ based upon location, but on average the levels will remain the same inside or outside the State. Thus, public health benefits in State are de minimis weighed against the additional investments to reach net zero in 2050.

The thirty-year full implementation net present value costs will be over and above the \$2.7 trillion Business-as-Usual or Base Case net present value costs. The Business-as-Usual case drops carbon emissions by approximately 70 mmt/year by 2050 while maintaining the quality of life for New Yorkers, whether homeowners, farmers, industrialists, business owners, or motor

vehicle drivers. In addition, 70% of the renewable energy benefits from the CLCPA are maintained while avoiding the personal pain of all New Yorkers involved with the getting to net zero by 2050.

Even with the Base Case, the State is not scrimping on addressing energy and climate change considerations most of which will in some fashion come out of the pockets of New Yorkers no matter how the dollars are moved around to hide their origins. Assuming 20 million New Yorkers \$2.7 trillion equates to spending in net present value terms \$135,000 per individual in the State. Adding in another \$300 million for full implementation as suggested in the Draft Scoping Plan, brings that net present value per capita total to \$150,000 per individual. For a family of 4 that would equate to over a half a million dollars for the Base Case alone.

Buildings Modified

Proposed in the implementation to arrive at net zero is a lifestyle changing experience, especially if you own a home, a commercial building, or worst of all a factory. For homes, the quiet refuge of your modern cave will now become a public vessel under the microscope of determining your global warming potential. Consequently, heating and cooling will be controlled by State mandate, keeping track of energy use will take on all the beneficial personal aspects of filing a tax return. Rewiring an existing home will probably be required if you would like to drive an electric vehicle, and the fun you once experienced using that outdoor charcoal or propane fired grill will be terminated.

Hopefully, you are not on a fixed income or have an old cast iron hot water home heating system costing you upwards of \$40,000 to replace. Worst yet maybe you are financially disadvantaged. If such is the case your inconveniences mandated by the State could turn into a nightmare. At the end of the day, you come to find out you do not own your own home in New York State, the State owns your home and the State's concern now is on environmental leadership and not on the personal well-being of someone who pays taxes.

As previously noted, the Draft Scoping Plan provided a partial list of some 170 actions required for the State to take for GHG reductions involving buildings. The work required to effectuate the actions will be very hard to complete within the CLCPA mandated timeframes. Rushing the work is likely to be costly and promote New Yorker dissatisfaction with associated unintended deleterious consequences.

Part III: Informed Consideration in Drafting New York State Changing Climate Policy

Overview

Implementing the Climate Leadership and Community Protection Act, as enacted is a gargantuan undertaking. Arguably nothing larger has ever been undertaken in any State of the Union. Every single New Yorker will be impacted by implementation. The implementation is an untested concept to reorder all of energy usage within the State and even outside the State for imports. What makes the implementation a societal nightmare for New Yorkers are the mandated schedules embedded into the Act. What makes the schedules so burdensome is accomplishment requires New Yorkers to change their businesses, lifestyles, how they spend their money. In other words, New Yorkers will be forced to respond to scheduled requirements that will change their lives. The whole of society in New York will change. The change will cause personal hardship in unpredictable ways. Those hardships will be magnified for the old, the sick, the indigent, the unemployed, and other New Yorkers that depend upon energy that is affordable and availability when needed.

The CLCPA must be amended. The legislature in the State of New York has taken on Executive Branch responsibilities. An Act typically indicates what must be done. The Executive Branch of State Government is then assigned the responsibility for implementing what needs to be done. The Executive Branch then follows up on implementation and what is in fact being done. The CLCPA mandates what must be done, when it must be done, who must do it with no follow up. A Climate Action Council is established under the Act to develop a Scoping Plan to implement the Act. The Plan is developed and approved and then State agencies such as the DEC, PSC, NYSERDA are off to the races developing policies, regulations, proceedings, billions of words of text as they see fit to do what is written in the Scoping Plan. To whom do these implementers report? There is no reporting structure, no management structure to assure that what is developed and approved in the Scoping Plan gets done or that it makes sense.

The Legislature orders that a Scoping Plan be developed by the CAC to provide policies and actions to meet the directives in the CLCPA. The assignment is indicative of the onerous burdens imposed by CLCPA scheduling. The Draft Scoping Plan accomplished amazingly to fulfill a year end requirement in 2021, is no plan at all and is simply a compendium of many options that might be taken between now and 2050. The Draft Scoping Plan put together is a rushed product to meet a CLCPA mandate and must be revised substantially to address all the societal hardships the CLCPA will produce.

Regarding the Act and the Plan taking on the appearance of an academic exercise, does anyone believe that the State is capable of implementing such a colossal change impacting every element of society within an absolute completion time frame? Reasonable answers are starting implementation yes, creating New Yorker hardship yes, but completion no.

What follows are a series of concerns extracted from the Draft Scoping Plan and discussed in detail in previous parts of the Dutchess County Comments that must be addressed to produce a final Scoping Plan the elements of which will not create New Yorker unwarranted hardships.

The Climate Action Council and a Final Scoping Plan

To accomplish the task of putting a plan in place to implement the mandates under the CLCPA a committee was established called the Climate Action Council. This Council was instructed to put a plan in place to accomplish constructing a highly technical, society altering, energy system which has no historic lineage. In other words, a similar energy system has never existed, or been constructed especially at the scale required to energize New York State. Staffing on the CAC consisted of very busy people who were volunteering time to serve on the Council, with no practical experience, since such practical experience does not exist. Not only were members of the CAC inexperienced but also, they were required to draft a scoping plan by year end 2021 to accommodate an energy system that included 30 years of developmental requirements and impacted the lives and businesses in all of New York State. Think for a moment about serving on this Council. You have full time employment or professional responsibilities. You have limited understanding in many of the areas that the CAC must decide upon so there is a steep learning curve involved. What you are engaged in doing has never been done before. You also have a personal life to live. But what you will decide upon poses an existential threat to the livelihoods and well-being of all New Yorkers. The Draft Scoping Plan developed is again gargantuan especially considering all the additional studies and reports referenced in the Draft. As it turns out the Draft Plan is not a plan at all but only a compendium of analyses, data, appendices, opinions which raises more questions than it answers and provides no management structure for implementation over the course of the next 30 years.

Simply stated as put together the CAC, in the time frame it was allotted, is not equipped to develop a Scoping Plan that will provide direction for 30 years into the future. If the State wants a robust quality Scoping Plan it needs to put together a paid, full-time, unbiased organization with the capability of putting such plans together. The CAC was given a gargantuan, impossible task to complete within an extremely constrained time frame, and as is the case with many New Yorkers, did an unbelievable job in putting the Draft Scoping Plan together. However, based upon the content of the Draft, the onerous societal impacts, the lack of management organization moving forward, a final Plan using the existing content of the Draft Scoping Plan will simply not work in the State of New York as mandated in the CLCPA. Revisions employing a full-time unbiased organization to complete is mandatory at this juncture. In the hiring of such an organization to develop a real-world comprehensive plan, the first question would be how much time do you need to produce a quality product?

The Climate Change Numbers

The CLCPA was developed by a State that is the most energy efficient State per capita in the nation, except for Rhode Island, at an energy usage of 198 mmbtu/capita/year. When it comes to greenhouse gas generation, New York is tied with California as the lowest emitter per capita of any other State in the Union at 9 mt/capita/year some 84% below the national average of 16.6 mt/capita/year. New York uses less energy per capita on transportation than any other state in the union.

The world-wide concentration levels of CO₂e in the environment are currently around 412 ppm. As previously discussed in the Dutchess County comments, using worldwide accounting protocols for GHG emissions New York emissions are at around 195 mmt/year. The total

worldwide CO₂e emissions are around 36,000 mmt per year. This means that New York's contribution to the world-wide total is around .5%.

Climate change damage is caused by the levels of CO₂e in the atmosphere and the levels of NYS yearly emissions are inconsequential in regard to the atmospheric levels in the world. New York State's contribution to those atmospheric levels assuming increasing levels of 2.175 ppm/year is approximately .011 ppm/year. At this rate it would take NYS at its current emissions rate, 91 years to add 1 ppm to the total CO₂e levels in the atmosphere.

What New Yorkers Must Pay Under the Plan

As proposed the Plan will cost the State over the next 28 years approximately \$3 trillion dollars to implement. That is a price tag for every man woman and child in the State of around \$150,000/New Yorker. Thus, for a family of 4 the cost will be around \$600,000. This does not include the personal costs that each individual New Yorker will have to bear as they purchase vehicles, heat their homes, utilize electricity, or invest in home improvements.

And who benefits, the globe or the entire world not the New Yorkers making the \$600,000 investments. Other than the State's claim to providing climate leadership, the State's contribution to reducing the global damage caused by climate change cannot be accounted for but will be de minimis.

Measuring Success

Measuring success is quite simple. Define what you are doing and then measure what gets done or the results. In the case of the CLCPA the State is reducing carbon in the atmosphere (currently at 412 ppm of CO₂e) which causes climate change. At the end of 2050 for all the State efforts and the projected expenditures of some 3 trillion dollars, the level of CO₂e in the atmosphere is projected to be around 500 ppm. Using the 500 ppm CO₂e as a measure of success would indicate that the CLCPA was a colossal failure at a cost of \$3 trillion.

Exiting the State

For retirees who have resources, own homes, heating systems, autos, appliances which have long, cost free useful lives ahead of them, the Draft Scoping Plan provides a wakeup call. The call says leave the State as soon as possible. Sell your home as quickly as possible before you must replace heating systems, rewire to support additional home electric loading, add additional insulation, and start accounting for your energy usage. Move to a State which has no income tax or a much lower income tax.

Take the same retirees living exclusively on Social Security and who cannot afford to exit the State. How many times in the Draft Scoping Plan are the elderly addressed? Only once—to describe the effects of exposures to wood smoke.

Unless you are classified as disadvantaged in the Draft Scoping Plan, you are irrelevant. To quote, "this draft Scoping Plan recognizes that women, femmes, youth, and children are more vulnerable to the climate crisis and acknowledges the need to specifically provide support and opportunities to these populations who are disproportionately impacted by the climate crisis."

The Draft Scoping Plan goes on further to state, “The Climate Act ensures that Disadvantaged Communities will reap the benefits of New York’s transition to a low-carbon economy, including by requiring that certain State investments deliver benefits to these communities. Through the work of the CJWG, the Climate Act ensures that these communities are consulted and will benefit from New York’s climate action. Input from the CJWG will support the development of climate policies and investment programs designed to deliver meaningful and equitable benefits to Disadvantaged Communities. The Climate Act also contains important provisions that ensure agency decision making does not disproportionately burden Disadvantaged Communities and prioritizes reductions of GHG emissions and co-pollutants in these communities. These are priorities that encompass all State agencies and authorities and a coordinated approach to implementation is needed to ensure these provisions of law are integrated into agency actions.”

Regarding businesses in the State, if you are having a hard time keeping revenues above costs you will be in for some exciting times. As stated in the Draft Plan, “Additionally, energy- or emission-intensive and trade-exposed industries are likely to represent a high share of industry sector emissions. These industries are both highly sensitive to increases in the cost of energy or emissions, as well as limited in their ability to pass along higher costs to consumers due to trade competition. As a result, non-incentive-oriented approaches are likely to cause leakage, whereby businesses leave or avoid the State and locate in other jurisdictions where they can emit higher levels of GHGs than they would have had they remained in the State.” Against this backdrop of industry leaving the State offered is this statement, “DEC, as a regulatory agency, reviews air pollutant permit applications for new industrial facilities and significant modifications to existing facilities to ensure that the proposed actions are not inconsistent with and will not interfere with the attainment of the statewide GHG emission limits established under the ECL.”

The Draft Scoping Plan as written provides a detailed road map for other States to market their advantages to people and businesses to leave New York State. As proposed, implementation of this scoping plan, without question, will promote households, businesses, and industries to leave the State.

Business and Industry Coming into the State

The independent power producers in New York State came to New York when the State opened its bulk power marketplace to competition and established the NYISO. Vertically integrated utilities in the State sold their generating assets at a premium in most instances and consumer pricing for electric supply went down. New natural gas pipelines were constructed to import clean burning natural gas replacing coal fired generation with highly efficient combined cycle generation. CO₂ emissions went down in the State.

The Draft Scoping Plan details what will be done with the properties of the independent power producers which are forced out of business based upon the CLCPA. As opposed to proposing compensation to prevent putting generators out of business as was done previously with the PSC jurisdictional electric utilities, the Just Transition Working Group instead states, “In electric power generation, displaced power plant workers should be supported through retraining,

retention, early retirement/pension support, and mutual aid/work agreements. One option might be to require a cost share by plant owners while distinguishing between workers and executives”.

What this says to business interested in coming into the State, is that the State has replaced competition with State mandates. Preemptive changes in State policy may in fact put you out of business with no recourse other than to sell the property upon which you do business. Such State mandates drive up consumer pricing as witnessed in the winter of 2022 with escalating electric supply pricing in Zone G of the NYISO marketplace because of the New York policy to shutter Indian Point Units 2 & 3. (As a result, it is estimated that State CO₂e emissions went up some 6mmt/year.) Unless you are a business the State likes, stay away. Even if you are a business that the State likes be cautious because the State may change its mind, which is now occurring with the natural gas businesses in the State. (Formerly natural gas in the State was considered the quintessential clean fuel.) Government controlled markets are notorious for increasing consumer costs versus the “invisible hand” of a competitive marketplace.

Implementation Staffing

As discuss in the Dutchess comments the requirements imposed upon State agencies under the Scoping Plan will be significant. Unlike the mandates in the CLCPA, most of those requirements do not have stipulated completion due dates. However, the agency requirements being imposed are considerable and implementation will require a ramp up in staffing of the State bureaucracy, if only to administer contractors doing the work. A Scoping Plan needs to identify and detail agency staff implementation requirements.

The same holds for staffing requirements of jurisdictional utilities in the State who have been flat out for the last 10 years, working on State mandated renewable energy issues. Historically the governor would indicate, the PSC would direct, and the utilities would implement. An accounting of the Staffing for New York utilities needs to take place so that personnel are not pulled from delivering utility service, to work on CLCPA mandates.

Because of all the regulations suggested in the Draft Scoping Plan, the State will be awash in new regulatory requirements. The State will not only be a leader in climate but also in regulation.

Such regulation and activities within the State will create a focus by government and business that is obsessed with climate and climate change. Such an obsession is not good for society to progress in a diversified fashion. Longer term this will place the State at a competitive disadvantage to the societies developing in other states or countries.

CO₂e Accounting by the DEC

Determining the global warming potential (GWP) for the various greenhouse gases has variability in the numbers. As discussed in the comments, for methane alone that potential may vary as much as 40%. Compounding the issue is the DEC accounting for greenhouse gases which places yearly emission levels for the State in 2021 at 379.43 mmt/year. This makes the State an outlier when it comes to comparing to other governments including the United States government which places the State yearly emissions level at 194.56 mmt/year for 2021. Adding in out of State emissions and using a 20 year versus 100 year warming period drives up the total

by 95%. The State needs to join the climate change community of world-wide governments so that comparisons of emissions levels have relevance.

In addition, the DEC accounts for the costs and benefits of New York State emissions on a global damage basis. Such accounting to a typical New Yorker is irrelevant to the investments being made to combat climate change. A relevant State investment is to prevent damages within the State of New York. Accounting exclusively for intrastate damage results in the benefit to cost ratio approaching zero.

It becomes fairly apparent that the State looks to inflate numbers dealing with warming and damage to justify the steps being taken on CLCPA implementation. That justification becomes even more difficult to support when held up to the fact that on a per capita basis State greenhouse gas emissions are very low especially in comparison to other states in the Union.

Goals Versus Mandates

Throughout the Draft Scoping Plan goals and mandates are used interchangeably. A goal is a voluntary commitment to get something done. A mandate is a law which indicates that there is a requirement to comply. The Scoping Plan must make a clear distinction between goals and mandates.

There needs to be a listing of all goals and all mandates. For the mandates there needs to be an associated listing of accomplishment specified and a listing of who is responsible for seeing the mandate through to completion. If the mandated completion is not met there needs to be a listing of the penalty that results.

If a law is written, then breaking the law needs to be accompanied by a penalty by the party breaking the law. Without such penalty the law is meaningless.

Goals versus mandates also speak to the issue of responsibility and management. Right now, since there is no overall management structure put in place for CLCPA implementation as written, the CLCPA is a statement of goals even though mandates are specified in the text. The CLCPA calls for extraordinary change to take place. There are two change outcomes that are possible, progress or chaos. Management will determine whether the CLCPA produces progress or chaos. Currently the likelihood of outcome weighs in favor of chaos since overall management is lacking.

Local Government in the State

With the mandates in the CLCPA and even more importantly the implementation of those mandates in a time frame which has little regard for the public service needs of local communities, the voluntary local government partnership relationships with various State agencies will certainly change. When elderly members of the local community start complaining to their local government representatives that there are no plumbers available to repair a fossil fueled heating system, when residents call their local government to indicate they cannot afford a heat pump replacement, historically the mutually beneficial working partnerships between local government and State agencies will suffer.

The disconnect emerging between local government and the dictates of the Draft Scoping Plan as proposed are significant. The disconnects all stem back to the timing mandates and restrictions in the CLCPA which establish an atmosphere of oppression and “meeting the requirements of the Climate Act”, versus one of an open and voluntary effort by local government to serve a local community.

Disadvantaged Communities

Disadvantaged communities are treated in the Draft Scoping Plan like a specimen in a petri dish. There are some 37 communities listed in Dutchess as disadvantaged when it comes to spreading the rewards from the CLCPA. The CJWG will determine where funding best goes in Dutchess. Apparently, they do not think the County can make that determination on its own. In Dutchess County, Vassar College is listed as disadvantaged. Vassar is one of the nation’s most expensive colleges, calling into question the definition used for “disadvantaged.”

In the Draft Scoping Plan, disadvantaged communities are “communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate- income households.”

The Draft Scoping Plan goes on further to state, “The Climate Act ensures that Disadvantaged Communities will reap the benefits of New York’s transition to a low-carbon economy, including by requiring that certain State investments deliver benefits to these communities. Through the work of the CJWG, the Climate Act ensures that these communities are consulted and will benefit from New York’s climate action...The Climate Act also contains important provisions that ensure agency decision making does not disproportionately burden Disadvantaged Communities and prioritizes reductions of GHG emissions and co-pollutants in these communities. These are priorities that encompass all State agencies and authorities and a coordinated approach to implementation is needed to ensure these provisions of law are integrated into agency actions.”

Suffice it to say that the entire concept of picking New York winning and losing communities is a pejorative exercise which certainly does not build confidence in the State of New York.

“Disadvantaged Communities” do not belong in an Act which is focused on the environment. To insinuate that a change in the emissions levels of the State, will alleviate issues identified in Disadvantaged Communities is a mischaracterization of what such communities need.

Managing the Transition and Societal Impacts

As noted throughout the Dutchess County comments, the Draft Scoping Plan identifies no management organization to oversee the implementation required against the mandated schedule stipulated in the legislation. Without a competent management organization focused on implementation, the likelihood of a successful outcome is extremely questionable.

One such element of managing the transition is coordination with all the federal programs that are coming with the recent passage of the Infrastructure Investment and Jobs Act. Certainly,

coordination with such programs holds the potential for reducing the anticipated \$3 trillion dollar price for New York State programs.

Not only is the Draft Scoping Plan devoid of a management structure to implement a plan but also the Draft Scoping Plan is devoid of addressing the overall societal impacts of implementing such a plan. Those societal impacts will be distributed upon all New Yorkers some of whom will not have the capability to accommodate those impacts. Disadvantaged Communities and low to moderate income families are referred to in the draft but a reference will not keep families warm on a cold winter night or put bread on the table.

As previously stated, based upon the content of the Draft, the onerous societal impacts, the lack of management organization moving forward, a final Plan using the existing content of the Draft Scoping Plan will simply not work in the State of New York. Revisions employing a full-time unbiased organization to investigate, analyze, recommend, and complete a realistic plan is mandatory at this juncture.

The New York State Electric and Gas Infrastructure

There are two systems that are vital for the well-being of all New Yorkers, the electric system, and the natural gas system. Prior to the State destroying elements of those two systems a functioning alternate and performance tested system must be in place. Otherwise, the State is placing New Yorkers at an existential risk, literally of death. New Yorkers remember the 246 people who perished in Texas due to a short fall in energy supplies during the winter of 2021.

Currently there are no functioning and performance tested energy systems in place which will allow fossil fueled elements or systems to be discontinued while maintaining the same reliability and system security as exists today.

The State does not need to establish a Cortez moment, burning the ships that have brought New York to the enviable energy system that exists today. The State has already, during a very mild 2022 winter season, witnessed the impact of shuttering Indian Point driving retail electric energy supply costs to unprecedented levels in the Hudson Valley. Such actions fly in the face of the stated direction of the CLCPA to provide “community protection”.

As recently as February 2022, the European Union came out with a directive on investing in natural gas fired electric generation calling it green energy. Europe took steps to label nuclear and natural gas as sustainable investments.

Unsupportable is placing New Yorkers at risk in shutting down fossil fueled energy systems by 2040 with no concept of what a new statewide energy system would look like for the State. No such system has been modelled for the State or bench tested or built and pilot tested. The CLCPA needs to be amended to eliminate the draconian scheduling which will place New Yorkers at an existential risk in the future.

It is one thing to have a schedule due date for 9,000 Mw of offshore wind to be in place by 2035 but quite another to shut down the entire fossil fueled electric system by 2040, replacing it with what? It is essential that the CLCPA be amended most specifically to eliminate mandated due dates which will place New Yorkers in harm’s way.

Outreach to New Yorkers on the Gargantuan Impacts of the Act

Unquestionably there is no enacted legislation which will have a larger impact on the lives and wellbeing of New Yorkers than implementing the CLCPA.

The references to stakeholders, public meetings, public hearings, are all listed within the Draft Scoping Plan to insinuate that New Yorkers in some fashion know what is going to hit them in the future. Nothing could be further from the truth. This topic which is one of the most important topics in their future lives is not on their radar screens.

The outreach which has taken place to date only hits those who are deeply involved in environmental issues or are typically followers of what is going on in State government regulatory proceedings. There is no Chapter or Section of a chapter devoted to New Yorkers and the impact of the Scoping on their lives. Nowhere does it let the typical New Yorker know that they will no longer be able to purchase a gasoline driven vehicle, purchase a propane fired outdoor grill, gas up at a filling station, turn up the heat from their gas furnace, repair a gas furnace, sell their home without providing data on air emissions from heating systems, retain gasoline driven power tools or equipment, adjust the flame on their kitchen stove, use their emergency generator when the lights go out, and on and on and on.

Providing outreach is vital for any Plan moving forward and that outreach could best take place through local government.

Addressing Waste in New York

The Draft Scoping Plan, in addressing waste in the State, repeats the simple solution of reduce, reuse, recycle but still looks to retain landfills. The work done by NYSERDA and codified in the Renewable Portfolio Standard Biomass Power Guide was a path forward for waste methane elimination in the State. The State needs to reinstate biomass as renewable and elimination restriction placed upon the Biomass Power Guide for the use of adulterated biomass. Without the use of advanced technologies described in the Biomass Power Guide to address waste in the State, the State will continue down the path of landfill utilization with associated methane generation.

Adapting and Becoming More Resilient

The Draft Scoping Plan provides a chapter devoted to adapting and becoming hardier to climate change in the State.

When it comes to climate change there is nothing more important than adaptation and resilience because if in fact the levels of CO₂e in the atmosphere are causing the climate to change in New York State, which is the basis of concern dealing with climate, then the State needs to adapt and become more resilient.

Regarding adaption and resilience, there is currently no greater risk facing New York State than the implementation of the CLCPA. The implementation will impact every man woman and child in the State. The elimination of a functioning energy system, which has operated reliably for years, replacing it with an untested and unproven energy system, comes with an unusually high level of risk. Compounding the risk is the fact that direction for implementing the CLCPA has been placed in the hands of an inexperienced, overworked set of government employees and/or

volunteers that have never built an energy system let alone designed and created a brand new one. Not only will this new system have to be built to replace a massive system now in place but also it will have to be built in an extreme hurry to fulfill the requirements of legislation based upon what? The unintended consequences of implementation will probably have an exponential rise compounded by the fact that all energy will be electric with no source of diverse energy back up. Such adaptation needs to be accounted for in an amended CLCPA.

A State of Balance

Balance is what is needed in any plan moving forward in the State. The CLCPA and the Draft Scoping Plan are grossly out of balance for the State and will create more poverty, New Yorker dissatisfaction, economic harm, and will accelerate business and personal flight from the State.

And who will be held responsible if the Plan causes mayhem in the State? No one. Who is placed in charge to make sure the mandates in the legislation are fulfilled? the regulator. Who will have to answer the complaints that will begin to manifest themselves as onerous personal regulations are rolled out and enforced? Local government, that is closest to the people, will become the recipient of the anger caused by implementing the CLCPA.

What must be done to implement the plan is gargantuan and State government will need to grow in a gargantuan fashion to accommodate all the Plan implementation requirements. New York will become the most regulated State in the Nation and the most overburdened with Climate commitments.

At the end of the day how much balance is there in a \$3 trillion dollar price tag to reduce carbon in the atmosphere by approximately .3 ppm over the next 30 years costing every New York State man, woman and child approximately \$150,000 in new State costs alone?

As the religious adage goes, “salvation lies in the middle of the road.” So also do the requirements of New York State to enact legislation that demonstrably benefits New Yorkers. The CLCPA is grossly in need of amendment resulting in a more balanced approach to climate change.

Dutchess County's Recommendations

- I. The Climate Action Council needs to tell the State legislature that the Climate Leadership and Community Protection Act needs to be amended and cannot be implemented without placing an extreme, unwarranted burden upon New Yorkers as enacted.
- II. The mandated time frames, or due dates, for accomplishments under the Act need to be removed and replaced with a statement that the accomplishments under the Act are goals and not mandates.
- III. Biomass must be reinstated in the definition of renewable under the Act with all prohibitions on the use of biomass eliminated. (The NYSERDA Clean Energy Standard Biomass Power Guide must be reinstated.)
- IV. The CLCPA needs to be amended, informed by the comments herein provided by Dutchess County throughout.