MINUTES OF THE CLIMATE ACTION COUNCIL MEETING HELD ON DECEMBER 5, 2022

Pursuant to Notice and Agenda, a copy of which is annexed hereto, a meeting of the Climate Action Council ("Council") was convened at 1:00 pm on Monday, December 5, 2022 at Meeting Rooms 2-4, Empire State Plaza, Albany, New York 12203. The following Members attended, and a quorum was present throughout the meeting:

Council Co-Chairs

- Doreen Harris, President and CEO, New York State Energy Research and Development Authority
- Basil Seggos, Commissioner, New York State Department of Environmental Conservation

Council Members

- Richard Ball, Commissioner, New York State Department of Agriculture and Markets
- Mary T. Bassett, Commissioner, New York State Department of Health (Gary Ginsburg, Designee)
- Rory Christian, Chair and CEO, New York State Public Service Commission (by videoconference)
- Mario Cilento, President, New York State AFL-CIO
- Donna L. DeCarolis, President, National Fuel Gas Distribution Corporation
- Marie Therese Dominguez, Commissioner, New York State Department of Transportation
- Gavin Donohue, President and CEO, Independent Power Producers of New York
- Justin Driscoll, Interim President and Chief Executive Officer, New York Power Authority (by videoconference)
- Dennis Elsenbeck, Head of Energy and Sustainability, Phillips Lytle
- Thomas Falcone, CEO, Long Island Power Authority
- Rose Harvey, Senior Fellow for Parks and Open Space, Regional Plan Association
- Dr. Bob Howarth, Professor, Ecology and Environmental Biology at Cornell University
- Peter Iwanowicz, Executive Director, Environmental Advocates of NY
- Hope Knight, President and CEO-designate and Acting Commissioner, Empire State Development (by videoconference)
- Roberta Reardon, Commissioner, New York State Department of Labor
- Anne Reynolds, Executive Director, Alliance for Clean Energy New York
- Robert Rodriguez, Secretary of State, New York State Department of State (Kisha Santiago-Martinez, Designee)
- Raya Salter
- Dr. Paul Shepson, Dean, School of Marine and Atmospheric Sciences at Stony Brook University

• RuthAnne Visnauskas, Commissioner and CEO, New York State Homes and Community Renewal (Samantha Pearce, Designee)

Also present were Climate Action Council Executive Director Sarah Osgood, various State agency staff and members of the public. Mr. Seggos and Ms. Harris, Co-Chairs of the Council, welcomed all in attendance.

Consideration of November 7, 2022, Minutes

This Agenda item was to advance the minutes from the November 7, 2022 meeting. Upon a motion duly made and seconded, the minutes were adopted.

Co-Chair Remarks

Co-Chair Seggos announced that Governor Hochul signed a two-year moratorium on cryptocurrency mining in New York State. He also announced upcoming NYS Department of Environmental Conservation community air monitoring quarterly meetings to address disproportionate impacts of air pollution across the State.

Co-Chair Harris reported on the start of construction on a 339-mile Champlain Hudson Power Express Transmission Line to bring energy from Hydro Quebec Canada directly to New York City. She also reported on Governor Hochul's announcement that the state reached a record level of 165,000 clean energy workers by the end of 2021, recouping clean energy jobs lost in 2020 and exceeding pre-pandemic levels by 1,900 jobs, with growth in solar and advanced transportation.

Discussion of Potential Edits to Draft Scoping Plan Chapters

Co-Chair Harris reviewed the process that will be used to finalize the Scoping Plan, along with the associated schedule. She announced that the Executive Summary would be circulated to Members next week, which will match the substance of the Chapters.

Chapter 2. The Time is Now to Decarbonize Our Economy

Co-Chair Seggos presented the summary of changes for Chapter 2, The Time is Now to Decarbonize Our Economy, which included editorial changes to improve chapter flow, removing the "Global Climate Projections" Section to increase focus on New York, and adding a definition for hydrogen based on an output from the Alternative Fuels Subgroup. Green hydrogen is defined as hydrogen formed through electrolysis powered by renewable electricity with a preference for its creation when it is from a surplus of renewable generation. Low carbon-intensity hydrogen is hydrogen produced with a carbon intensity equal to or less than 2 kilograms of carbon dioxide equivalent produced at the site of production per kilogram of hydrogen produced, calculated pursuant to the Climate Act.

In response to an inquiry from Dr. Shepson requesting background on why the Global Climate Projections section was removed, Maureen Leddy, Director of the Office of Climate Change, NYS Department of Environmental Conservation, responded that it was to focus more closely on New York. No Council Member expressed opposition to a suggestion by Co-Chair Seggos to adding the section back into the Scoping Plan.

Dr. Howarth expressed his concern with the inclusion of low carbon-intensity hydrogen throughout the Scoping Plan, with its approximately 90 individual mentions. He stated that this language is entirely new and should be stricken, explaining that he felt it was previously referred to as "blue hydrogen" and marketed by the fossil industry as being low- or zero- carbon intensity for which there is no scientific basis for this definition Dr. Howarth believes defining low-carbon intensity hydrogen production this way is deceptive to the general public. While this definition is the same used in the bipartisan infrastructure bill and Federal Inflation Reduction Act, which could be an argument for using it but the federal definition does not require a full lifecycle analysis. The Climate Act. Under a Climate Act analysis, which would require a lifecycle analysis for use of fossil fuels to create hydrogen and the methodology in the NYS Department of Environmental Conservation Annual inventory, Dr. Howarth stated hydrogen made from natural gas would far exceed the threshold in the definition of low-carbon intensity hydrogen.

In response to an inquiry from Co-Chair Harris, Dr. Howarth clarified that the accounting mechanisms used by various agencies are different, so in some instances the production of low-carbon intensity hydrogen would meet the requirements under the federal definition. The U.S. Environmental Protection Agency uses a 100-year time frame for emissions analysis, while the Climate Act requires a 20-year time frame. Dr. Howarth stated the emissions related to methane alone would be ten times higher and with full lifecycle would be thirty to forty times higher, making it impossible to produce hydrogen from natural gas in a Climate Act compliant manner. His preference would be to refer to green hydrogen produced through electrolysis with renewable electricity, and believes including low carbon intensity hydrogen, produced through steam methane reformation, introduces confusion. In response to an inquiry from Co-Chair Harris if the language were intended to demonstrate the calculation would be different from that of the Federal calculation, Dr. Howarth responded it should be clarified so the public understands the difference between a federal calculation and the New York State calculation.

Dr. Shepson stated that the plan reads that the Council has reviewed the use of low carbon intensity hydrogen which is not the case, and he believes that including it in the Scoping Plan does not reflect agreement by the Members.

Raya Salter stated that it was troubling to see the references to low-carbon intensity hydrogen which contradicted the discussions of the Council, the Climate Justice Working Group, and the Environmental Justice groups who have stated their lack of support for such technologies.

Mario Cilento stated his support for the inclusion of low-carbon intensity hydrogen as an alternative fuel as it may minimize job loss.

Chair Christian disagreed with some characterizations of hydrogen discussed, noting the term "blue hydrogen" does not appear in the document. He also noted the rapidly changing technology in hydrogen production and stated that the definition of low carbon intensity hydrogen was reflective of the discussions held by the Council over the past months. He added that hydrogen production emissions must be calculated according to the Climate Act requirements which will ensure that hydrogen production that does not meet the strict standards will not be produced.

Mr. Iwanowicz stated that he does not believe that the full Council has fully discussed how hydrogen would be sourced. In response to another clarifying question from Mr. Iwanowicz regarding where additional jobs may come from in hydrogen production, Mr. Cilento stated his belief that all options for job creation should be left open. In response to a general inquiry from Mr. Iwanowicz asking if the Members objected to Dr. Howarth's analysis of low-carbon intensity hydrogen, Mr. Christian clarified that he does not disagree that the production of hydrogen using

fossil fuels would produce more greenhouse gas emissions, rather that the language included in the Scoping Plan does not, in his mind, envision the use of natural gas for the production of hydrogen in any measurable or meaningful way as hydrogen must be produced calculated pursuant to the Climate Act. Mr. Iwanowicz expressed his desire that this issue be absolutely unambiguous in the text of the Scoping Plan.

Dennis Elsenbeck noted that if the language in the Scoping Plan on this topic is consistent with a consortium that New York is engaged with, then it makes sense to support the current characterization. Co-Chair Harris stated that close attention is being paid to this issue as the State, along with its partners, applies for funding from the U.S. Department of Energy to become one of the Nation's hydrogen hubs. She also noted that there is not a practical way, given the status of the State and federal efforts, to rectify the language particularly given that New York's accounting does not line up with the federal accounting.

Tom Falcone noted he does not believe the text to be ambiguous.

Dr. Shepson clarified that he does not have an issue with the definitions in the document, rather he believes "green" hydrogen and low-carbon intensity hydrogen should be considered separately. He objects to the idea that the State has a need for hydrogen, and that, specifically, the State needs energy storage, for which electrolytic hydrogen is an option.

Ms. Salter suggested that the discussion of exploring low-carbon intensity hydrogen be separated out into its own discussion. Ms. Salter and Dr. Howarth expressed concern that references to low carbon intensity hydrogen would encourage fossil fuel industries to continue burning fossil fuels.

In response to an inquiry from Donna DeCarolis asking how the State would measure and identify various types of hydrogen production, Co-Chair Harris stated the intent was to identify that such a measuring process would be required.

Gavin Donohue noted there is an open petition before the NYS Public Service Commission to identify which technologies would meet the Climate Act standards to answer exactly the types of questions being asked by Members and he urged the State to address the petition.

In response to an inquiry from Mr. Iwanowicz as to whether language would be presented during the meeting for the Council to discuss on this topic, Co-Chair Harris stated that she is not hearing disagreement among the members around the approach, but that clarity of language is needed and that the Co-Chairs would consider the feedback today and provide draft language that meets the concerns expressed.

Chapter 3. New York's Climate Leadership

Co-Chair Seggos presented the summary of changes for Chapter 3, New York's Climate Leadership, which included changes to reflect policy actions taken since the Draft Scoping Plan was released, including Executive Order 22, the Extreme Heat Action Plan, Advanced Clean Cars and Trucks regulations, Utility Thermal Energy Network and Jobs Act, Advanced Building Codes, Low Carbon Concrete, and others.

Dr. Howarth asked to include the 40 percent greenhouse gas reduction by 2030, as well as reference to the cryptocurrency legislation recently signed by Governor Hochul.

Mr. Iwanowicz requested the Scoping Plan reference the vote margin by which the Environmental Bond Act recently passed, and noted the statutory reference to the electric vehicle statute needed to be updated.

Chapter 4. Current Emissions

Co-Chair Seggos presented the summary of changes for Chapter 4, Current Emissions, which included contextual edits surrounding the anomalous 2020 emissions data resulting from the economic impact of the COVID-19 pandemic and that this data is expected to normalize by 2021.

Dr. Howarth stated that it is factually incorrect to state that New York is the only government in the world to use the greenhouse gas accounting system as presented in the Climate Act given that Maryland has recently adopted a similar system, and other states and governments are also considering the approach.

Chapter 5. Overarching Purpose and Objectives of the Scoping Plan

Co-Chair Seggos presented the summary of changes for Chapter 5, Overarching Purpose and Objectives of the Scoping Plan which included edits to improve chapter flow and clarity, updates to the Process for Development including results of the public comment period, adding a text box defining fossil natural gas, adding a text box describing the difference between RNG and biogas, and additional text on economic development opportunities for New York associated with Plan strategies.

Dr. Howarth stated the differences between renewable natural gas and biogas is not clear throughout the Plan, and the definition provided on page 35 which states that renewable natural gas can reduce greenhouse gas emissions is not fully supported by peer reviewed literature or the discussions had by the Members. Additionally, Dr. Howarth noted that biogas is approximately a 50/50 mix of methane and carbon dioxide, and the removal of the carbon dioxide to make renewable natural gas is currently very energy intensive. Dr. Howarth requested that the text box include not only the methane leakage but also the methane that slips out when the carbon dioxide is removed from biogas. Dr. Howarth believes it is misleading to state that the State intends to eliminate these emissions, as he believes there will always be emissions regardless of the strides made towards reducing them.

Ms. Salter requested clarification on the word "creation" used in the definition of renewable natural gas as this was not part of the Gas System Transition Subgroup discussions.

Mr. Iwanowicz recommended the addition of qualifying text in references to renewable natural gas and biogas that these are potential or possible solutions and further analysis is needed.

Ms. DeCarolis noted that the carbon intensity scorecard discussed in previous meetings would be beneficial as calculating benefits and emissions reductions to Disadvantaged Communities, and she encouraged viewing the entire lifecycle of any avoided emissions to ensure correct calculations.

Dr. Howarth stated his agreement with Ms. DeCarolis, but added that avoided emissions calculations are complicated, and avoided emissions using anerobic digesters actually produces more methane than would be generated without them, so it is not a straightforward calculation.

Mr. Iwanowicz added that in addition to avoided carbon emissions, the calculation should include avoided co-pollutants, ensuring that there are not disproportionate impacts to Disadvantaged Communities as a result of emission avoidance technologies.

Chapter 6. Achieving Climate Justice

Co-Chair Seggos presented the summary of changes for Chapter 6, Achieving Climate Justice which included edits to clarify the Climate Act requirement to not disproportionally burden Disadvantaged Communities when issuing administrative decisions; reinstating language that references agency decision-making, and the addition of references to economic development and jobs as important benefits from investments in Disadvantaged Communities.

Mr. Elsenbeck requested the Scoping Plan be clearer about the responsibility for creating the jobs the Scoping Plan states will be created, where the jobs will be located, and what types of jobs they will be. Mr. Elsenbeck expressed disappointment that there is no clear definition of what benefits Disadvantaged Communities may receive as a result of the Scoping Plan and how the benefits will be calculated, as he is concerned that a spending program will be created, rather than actual jobs. Adriana Espinosa, Deputy Commissioner for Equity and Justice, NYS Department of Environmental Conservation stated the Climate Justice Working Group has been working to finalize the criteria for identifying Disadvantaged Communities, and that NYSERDA and NYS Department of Environmental Conservation staff are developing a framework for accounting for investments and benefits in Disadvantaged Communities. Ms. Espinosa also noted an update will be provided to the Climate Justice Working Group on December 14, 2022.

Chapter 7. Just Transition

Co-Chair Harris presented the summary of changes for Chapter 7, Just Transition which included a number of changes due to substantive feedback from Members that served to strengthen this chapter. Language was added on maximizing assistance from the federal government for new technology and grid infrastructure investments; detail added on specific support benefits the State should provide and coordinate for displaced workers; language was added to state "the State should enact measures to ensure any worker who loses their job be reemployed with the same or better wages," and to recommend jobs created through the Scoping Plan be 'good, family-sustaining, union" jobs.

Continuing with labor adjustments, language was added noting the State should apply robust labor standards across all sectors and projects; during implementation, public entities should consider sector- and project-specific characteristics; detail was added to the "Ensuring Labor Standards" section to reference requirements that should apply broadly across work categories and with regard to training curricula and programming to recommend that programming draw from collaboration between NYSERDA, the NYS Department of Labor, and existing apprenticeship programs in addition to local contractor networks. Reference to the NYS Department of Civil Service was added to ensure it is directly involved in collaboration and engagement, and detail was added to the section on recommendation for an Office of Just Transition including that it works to actively track displaced workers, conduct skills assessments, and facilitate training to equip workers and help provide transitional employment benefits. A recommendation was added to leverage Buy American and New York State preferences to mitigate economic leakage and drive high-road job growth.

In response to a clarifying question from Dr. Shepson on the phrase "good, family-sustaining union jobs", Mario Cilento stated the phrase referred to the excellent benefits and thorough skills training union workers receive which are typically greater than those of non-union workers, and that union jobs often provide the stability and benefits for the worker to comfortably sustain a family. Co-Chair Harris also noted the Jobs Study reviewed by the Council in previous meetings highlighted the goal of establishing the types of jobs Mr. Cilento described.

Ms. Salter recommended text referencing the use of biofuels, such as renewable natural gas, to be used when needed for safety, reliability, resilience or affordability when its use demonstrates air quality, health and greenhouse gas benefits, should reference other chapters, such as the Gas System Transition Chapter, as this type of evaluation is not appropriate to this chapter.

Mr. Cilento recommended a clarification regarding project labor agreements for construction projects to avoid confusion.

Mr. Elsenbeck recommended clarifying the language regarding union jobs where the Scoping Plan notes aligning with federal support on local infrastructure, suggesting that the utilities be directed to collect data on exactly what is needed for local infrastructure. He also recommended that State University of New York flagship schools be used not only as testing centers, but should also be focused on research and development to fully use the tools, intellect, and capabilities and to serve as microcosms of their communities.

Mr. Donohue noted his disagreement with text that suggests the one option of a cost-sharing obligation of power plant owners to manage the just transition of their displaced workers, explaining that there are many things plant owners can do beyond cost sharing and that the additional costs these owners will face will already be overly burdensome.

In response to an inquiry from Rose Harvey as to what type of entity the Office of Just Transition is intended to be, Co-Chair Harris and Commissioner Reardon explained that it is envisioned to be a governmental entity, but decisions have not yet been made as to under which State entity it will reside within the State agency infrastructure.

In response to a suggestion from Mr. Elsenbeck that coal-fired power plants that are ceasing operations and the communities in which they are located continue to receive support, Co-Chair Harris confirmed that the intent is to continue to provide support and there are existing programs that could likely be built upon as well.

Mr. Iwanowicz disagrees with the inclusion of references to decarbonization of the gas delivery system with alternative fuels section and suggested the inclusion of a qualifier. He also recommended reinsertion of the qualifying text "where electrification is difficult.

Mr. Iwanowicz also requested a broader discussion on the specifics of the formation of the Office of Just Transition, as he considers just transition efforts as broader than simply a labor component. Mr. Iwanowicz inquired as to whether funding to continue to close power plants and support surrounding communities would continue to be available from the Regional Greenhouse Gas Initiative, or if a different funding source was contemplated, such as part of a potential cap and invest effort. Chair Harris responded that the role of the Office of Just Transition as it has been discussed thus far, in addition to worker training, will also facilitate support for workers who have exhausted all other employment options, training for non-fossil fuel plant workers, and other work that may be necessary including coordination with the NYS Public Service Commission or the Workforce Development office led by Empire State Development. To clarify, Mr. Iwanowicz

inquired as to whether community self-transformation and self-reliance were contemplated, and Co-Chair Harris agreed that could certainly be contemplated and coordination with other offices could provide additional resources.

Chair Christian responded to a statement by Mr. Donohue regarding a cost-sharing recommendation involving power plant owners for the transition of their work force, stating the suggestion is a result of past successful transitions of a workforce where cost-sharing was not only beneficial, but sometimes necessary.

Dr. Shepson stated that the phrase "good, family-sustaining union jobs" could be interpreted as asserting that only union jobs support a just transition and is concerned that is too definitively stated. President Cilento responded that much of the Scoping Plan is aspirational, and if the intent is toward a forward moving economy, even though it is presently unclear what that may look like in the future, the data shows that the best way to progress is to ensure workers have better benefits, pay, and job conditions in the future. He added that union jobs provide those types of increased benefits, but certainly are not the only jobs which can do so. Data also supports the idea that unionized workers are better able to sustain themselves and a family on union versus non-union jobs and is the underlying reason that the Scoping Plan specifically refers to union jobs in this manner.

Ms. Salter recommended a sentence be added that reflects the point made by Mr. Iwanowicz that just transition is a larger concept than only labor issues.

Ms. DeCarolis suggested maintaining the clause related to decarbonization of the gas delivery system that was suggested to be deleted by Mr. Iwanowicz as she believes it is consistent with the framework in the Gas Transition Chapter. She also expressed support for the inclusion of references to the State university system.

Ms. Harvey expressed support for the comments of both Dr. Shepson and Mario Cilento on the characterization of union jobs and believes a common ground can be reached.

Chapter 8. Public Health

Co-Chair Harris presented the summary of changes for Chapter 8, Public Health which included the addition of reducing worker injury and illness as a goal of the Prevention Agenda; adding text on the effect of climate change on workers; clarifying the work of the NYS Department of Health Office of Health Equity and Human Rights; adding comments on health concerns associated with renewable energy components; adding text to describe the difference between biodiesel and renewable diesel; adding context around potential harms from combustion of natural gas in stoves in homes, as well as indoor air quality concerns from cooking in general; and adding more detail on particulate matter emissions from wood smoke associated with fireplaces and fireplace inserts.

Mr. Elsenbeck prefers the Council not advocate that ratepayer money be expended on technologies, materials, or products manufactured in countries that contribute heavily to greenhouse gas emissions, such as China, that are then used to decarbonize New York. Rather, he suggested that emphasis should be placed on purchasing those items from New York manufacturers directly, or where that is not possible, from places that support New York's goals and have similar goals.

Ms. Salter sought clarification on text that seems to both state that stove hood ventilation removes particulate matter while cooking but also does not remove dangers associated with leaking natural gas when stoves are not in use. Maureen Leddy stated the language is intended to highlight exactly that issue; that hood ventilation helps with removing particulate and aerosolized matter

during the cooking process, but that it cannot help with the other hazards associated with having natural gas in the home, such as leakage when the stove is off. In response to a clarifying question from Ms. Salter regarding studies, Ms. Leddy responded that while the Chapter leans heavily on studies for its information, it is also intended to relay that additional studies are needed.

Gary Ginsberg, Director for the Center for Environmental Health, NYS Department of Health, noted that as homes become more airtight the concern over leakage in the home increases, and recommended adding additional context.

In response to an inquiry from Mr. Iwanowicz about references that New York State has not yet studied the trace gas content and why the Scoping Plan does not recommend New York perform a similar study, Mr. Ginsberg responded there is very little data for which to study the issue. Henry Spliethoff, Research Scientist, Center for Environmental Health, NYS Department of Health responded that the reference was intended to demonstrate the lack of available data. Mr. Ginsberg suggested that additional language to address the concern could be inserted for clarity. Mr. Iwanowicz recommended the issue be studied in New York.

Chapter 9. Analysis of the Plan

Co-Chair Harris presented the summary of changes for Chapter 9, Analysis of the Plan which included updates to align with the latest information available, such as the Statewide Greenhouse Gas Emissions Report and key technology and fuel price forecasts.

Dr. Howarth stated his preference for Scenario 3 and recommended the Scoping Plan make a specific recommendation for one scenario over the others. Carl Mas, Director, Energy and Environmental Analysis, NYSERDA noted that throughout the work, it was recognized just how similar each of the Scenarios were while also recognizing the nuances. He invited additional feedback and additional observations.

Ms. Salter expressed her preference for Scenario 3 and believes that Scenario should be the vision of the Council, as it moves away from fossil fuels in the shortest timeframe.

Ms. DeCarolis recommended against supporting one scenario over another as the public comment expressed differing views on the various scenario. She also recommended a dual-heat pathway.

Mr. Elsenbeck also recommended not supporting one scenario over another and believes the public and industry will engage on this issue during the implementation phase.

Co-Chair Harris reminded Members that additional statements are welcomed to support their votes on the final Scoping Plan and encouraged any Members who wished to do so to include their scenario preferences in those statements. She also noted the similarity of the Scenarios and believes each of them sets New York on the path toward decarbonization.

Mr. Iwanowicz noted his support for Scenario 3 and stated many members of the public who commented directly on the scenarios support Scenario 3.

Dr. Shepson noted Scenario 3 appears to return the greatest health benefits and would like it to be emphasized in the Scoping Plan.

Co-Chair Harris reminded the Council that the various scenarios are essentially the same. The Council has triangulated around the common themes in the scenarios and differences between scenarios have been subject of Council discussions reflected in the Scoping Plan recommendations.

In response to an inquiry from Ms. Reynolds if the Council recommendations in the Scoping Plan would change if one scenario were highlighted over another, Mr. Mas responded that the recommendations of the Council are what is most important and that the scenarios exist to inform those recommendations. Additionally, Mr. Mas stated it would be difficult to recommend one scenario over another as one cannot forecast what will happen in thirty years, but the importance was to extract the key points of the analysis and incorporate them into the recommendations which is what the Council has done.

Chapter 10. Benefits of the Plan

Co-Chair Harris presented the summary of changes for Chapter 10, Benefits of the Plan which included updates to key cost and benefit findings, including that the estimated impact of the federal Inflation Reduction Act will be a reduction in net direct costs of up to \$70 billion through 2050 and reduced incremental costs to New Yorkers by up to 19 percent. The health effects section was updated to reflect changes in energy consumption in the Integration Analysis Scenarios, which provided a relatively minor change in health benefits.

Mr. Elsenbeck restated his desire to include State universities in the research and development of the energy sector and implementation of the Scoping Plan, as this is a state initiative.

Chapter 11. Transportation

Co-Chair Seggos presented the changes to Chapter 11, Transportation, which included adding a sector-spotlight table including key job impact findings based on data from the Jobs Study; updated statistics on New York State funding for transit, adding "affected workers and unions" to the list of key stakeholders for transportation strategies; acknowledgement that the labor standards discussed in Chapter 7 apply to the entire Scoping Plan; the addition of "on-street charging" as a focus of the recommendation to invest in zero-emission vehicle charging and infrastructure; the addition of shared mobility, micro-mobility and micro-transit to the recommendation related to community-based service enhancements; clarifications that, at least in the early years, a clean transportation standard would support alternative fuels that can demonstrate reductions in greenhouse gas and co-pollutant emissions, and clarifying aspects of the clean transportation standard, including a recommendation to ensure the program prioritizes co-pollutant reductions in Disadvantaged Communities.

Dr. Howarth recommended that the language that states renewable fuels can have lower particulate matter emissions than current petroleum-based fuels be removed as factually incorrect and inconsistent with the Health Chapter. He also suggested references to peer-reviewed literature be added.

President Cilento recommended the NYS Department of Labor and the Office of Just Transition be added to the list of agencies to collaborate on the mobility-oriented development investment.

Ms. Salter recommended the removal of the newly added sentence stating that in the early years of a clean transportation standard, alternative fuels can demonstrate reductions in greenhouse gases and co-pollutant emissions, as she feels it directly conflicts with the recommendations of the Climate Justice Working Group.

Mr. Iwanowicz agreed with Ms. Salter's recommendation and noted his belief that it is a false assumption and that there will be no job losses in the retail gasoline sector. Co-Chair Harris noted it was a major finding of the Jobs Study that one of the sectors that will see the most job losses will be the retail gas sector, and the Council should be part of that solution.

Mr. Elsenbeck recommended inserting references to micro grid and community ownership to any study on public rights of way to encourage local control, ownership, and resiliency, as well as making the process of crossing public rights of way much more holistic for communities. He also recommended including the State University of New York and community colleges in the strategic partnerships discussed to assist with workforce development to ensure efficiency and success, as well to include more union jobs in the communities that so chose. Co-Chair Seggos acknowledged these comments as pertaining to the Buildings Chapter, to be discussed next on the agenda.

Ms. DeCarolis believes the description relative to alternative fuels, such as biofuels, is consistent with the description discussed in previous meetings. Mr. Snyder noted that the current language was not intended to represent the full discussion expressed later in the Chapter.

Chapter 12. Buildings

Co-Chair Harris presented the summary of changes for Chapter 12, Buildings, which included edits to more closely align the role of heat pumps with the Integration Analysis as well as clarifying language around the coldest regions of the State for their use; added information on key job impact findings based on the Jobs Study; added emphasis on State Agency collaboration; added consideration of the ability of the electric system to meet demand with widespread electrification; clarified the need for building envelope sealing and weatherization; clarified the meaning of "clean" thermal energy networks; added support for innovation with regard to economic development; added references to labor unions and registered apprenticeships in the Target Workforce Segment table; further addressed leakage from existing equipment; and noted the applicability of the labor standards to this Chapter.

Donna DeCarolis suggested an additional references to a transition that ensures reliability, resiliency, and affordability and is concerned with hard dates for heating mandates, particularly given the recent New York Independent System Operator reports and to perhaps tie it to the New York Reliability Council work.

Dr. Howarth believes the current text discussion on the installation of heat pumps does not capture the urgency of climate change and emphasized that moving toward heat pumps before the zero-emission electricity sector will still produce immediate environmental benefits. Regarding mandating changes toward electrification in new construction, he expressed his preference for a more aggressive timeline, similar to that which was in the Draft Scoping Plan, despite the difficulty in implementing building code changes. He also expressed that moving away from natural gas hookups should also be pursued more aggressively.

Mario Cilento suggested removal of the reference to the expansion of "design build" as it requires privatization of public work which is in direct conflict to the Just Transition principles. He also suggested an editorial change to soften a recommendation regarding curricula development in deference to the role of the NYS Department of Education.

Rose Harvey voiced her support for design build as a necessary component and expressed skepticism about associated job losses attributable to it.

Gary Ginsberg raised issues of indoor air quality in the context of weatherization and cautioned that this issue should be addressed more comprehensively throughout.

Peter Iwanowicz suggested clarifying that clean energy systems means "zero emissions" energy systems. He suggested that by 2025 the law should be changed regarding mandatory natural gas hook ups, given the approval of new developments by local governments. Mr. Iwanowicz raised an issue of timing regarding the requirement that NYS Department of Environmental Conservation set emission target regulations in the context of some of the recommendations. He suggested that the Scoping Plan should definitively call for the abolition of the 100-foot rule for natural gas hook ups. He also suggested that the Scoping Plan go beyond the statute and state that thermal energy networks should be supported by zero emission energy sources to avoid off-site emissions profiles. He suggested adding qualifying language regarding research, development, and demonstration of alternative fuels to apply to harder to electrify sectors.

Regarding the suggestion about thermal energy networks, Vanessa Ulmer suggested that in the absence of other preferences expressed, Staff relied on references to the existing statute and the ongoing regulatory process and Donna DeCarolis agreed.

In cautioning against overemphasizing the need for reliability, Dr. Shepson emphasized the underlying purpose of the Climate Act is to mitigate greenhouse gas emissions, and that reliability is thoroughly addressed throughout the document.

Donna DeCarolis suggested that suggestions to stop the 100-foot rule should be fully evaluated.

With regard to the earlier reference to the NYS Public Service Commission and the use of thermal energy networks, Peter Iwanowicz inquired as to whether there is consideration that only zero emission sources would be the pathway forward as he would not want to see emissions shifts, Chair Christian stated that this is an open regulatory proceeding, and the proposed pilots will be evaluated and prioritized over the coming weeks and that information will be publicly available.

In response to comments raised by Dr. Shepson regarding reliability, Chair Christian believes reliability is the pillar upon which all of the called for changes in the Scoping Plan should rely.

Anne Reynolds agrees with Peter Iwanowicz about calling for the elimination of the 100-foot rule. With regard to concerns expressed about delays to updates to the building codes, she stated that she was swayed by the presentation explaining the reasoning behind it, Vanessa Ulmer provided clarification on certain references to requirements that could be triggered as early as 2025.

Chapter 13. Electricity

Co-Chair Harris presented the summary of changes for Chapter 13, Electricity, which included: adding key job impact findings based on the Jobs Study; adding text on protecting the renewable fleet and text on Section 7(3) of the Climate Act, updated references to the State's resource planning, strengthened text on assessing the impact on the current workforce when retiring fossil fuel-fired facilities, clarifications that micro-grids should be zero-emission and their role in resiliency, and emphasized the need to evaluate the potential of non-infrastructure or non-wire alternatives that could delay or eliminate the need for conventional infrastructure investments; addressed carport solar, economic development, modeling for better demand-side management of electricity, added that benefit cost analysis consider Integration Analysis scenarios for building improvements and for back-up heat sources, added more details regarding the forecasted need in electric generation capacity in 2040, aligned text with other Chapters regarding alternative fuels,

added the need to consider the time needed for potential federal and State relicensing when evaluating nuclear generation and added text on investing in training and retraining the workforce and other workforce needs such as applicable labor standards.

Dennis Elsenbeck applauded the changes in this Chapter to make it more market-focused and stated that this Chapter represents another example of the importance of economic development planning, particularly in Disadvantaged Communities. He questioned the effectiveness of requiring coal plant owners to be responsible for remediation. He suggested that the Regional Economic Development Councils should be required to be involved in economic development and site readiness planning for transmission and distribution on a year-round basis to avoid additional costs. Co-Chair Harris thanked Mr. Elsenbeck for his insights that led to improvements to this Chapter.

Mr. Iwanowicz suggested several text amendments, language consistency changes, and to reject a suggested deletion. He noted that the many expectations for the use of renewable natural gas and hydrogen across several sectors, given its limited capacity. Ms. Leddy stated that some of the references are reflective of the fact that there is much that is unknown and are intended to provide flexibility.

Raya Salter agreed with the comments of both Mr. Iwanowicz and Mr. Elsenbeck, noting that there is a lot of great language regarding planning, protections for Disadvantaged Communities, and credited the NYS Department of Public Service for much of it.

Dennis Elsenbeck cautioned about limiting strategy options based on what exists today when market forces, when given the right signals, may address the needs.

Dr. Howarth agreed with the assessment of Mr. Elsenbeck and stated that the resource base for renewable natural gas is inherently limited absent the import of crops from out of the State and that research to date shows an unacceptably high greenhouse gas footprint pursuant to the Climate Act but maybe market forces will address that.

Donna DeCarolis believes that the Scoping Plan does a good job of balancing by including it as an option, exploring how to do it well, and evaluating how much of an impact it can have. She also noted how other jurisdictions, such as Washington and California, are addressing this issue.

Raya Salter strongly opposed including references that appear to be aspirational about efforts that she believes should not be taken.

Anne Reynolds acknowledged the need to build a large amount of electric generation and the predicted net job creation that will be associated with it by 2030, but that the electric generation projects will need to make it to construction for those jobs to materialize.

In response to comments made by Donna DeCarolis regarding activity in other jurisdictions, Peter Iwanowicz commented that those jurisdictions do not have the statutory limitations provided for in the Climate Act, which he believes sets New York ahead of the others.

Chapter 14. Industry

Co-Chair Seggos presented the summary of changes for Chapter 14, Industry, which included adding new detail and information defining energy-and emission-intensive industries and trade-exposed industries, clarified the role of alternative fuels in the industry sector; added "affected workers and unions" to the list of key stakeholders, as well as the NYS Department of Labor and the Office of Just Transition, referenced that the labor standards discussed in Chapter 7 apply throughout

the Scoping Plan, added consideration of displaced workers when expanding training capacity and added coordination with the Regional Economic Development Councils to identify sites within Disadvantaged and legacy cities with strong potential for revitalization and attracting green economy business investment in those areas.

Peter Iwanowicz inquired as to whether the Scoping Plan should be clearer with respect to an alternative compliance mechanism, should the NYS Department of Environmental Conservation exert its authority under the Climate Act to establish such a mechanism for energy-intensive and trade-exposed industries, given the 15 percent emissions set-aside for them under the Climate Act. He questioned whether what is presented currently in the Scoping Plan is consistent with what the Climate Act intended, and noted that the emission limit and the requirement of four-year reviews associated with the alternative compliance mechanism provided comfort to the Environmental Justice community. Jonathan Binder, Chief, Bureau of Climate, Air, and Energy, Office of General Counsel, NYS Department of Environmental Conservation referenced existing language within the draft Scoping Plan that states if the NYS Department of Environmental Conservation were to adopt the alternative compliance mechanism the stringent requirements alluded to by Mr. Iwanowicz would need to be followed.

Mr. Iwanowicz expressed concerns with the characterization of the types of items and issues that NYS Department of Environmental Conservation would be required to consider under a rulemaking and suggested not prioritizing any particular consideration.

Mr. Iwanowicz disagreed with the deletion of a reference to nitrogen oxide emissions from hydrogen combustion that the Climate Justice Working Group specifically brought to the Council's attention.

Chapter 15. Agriculture and Forestry

Co-Chair Seggos presented the summary of changes for Chapter 15, Agriculture and Forestry, which included expanding the list of stakeholders to include affected workers and unions; added context around carbon sequestration by forests and the importance of protection and restoration of small land parcels and the pressure landowners face to convert forests to other uses; and that additional monitoring efforts for forest carbon are ongoing. Regarding agriculture, additional context was added on climate change impacts on nutrient losses in farmland soils and watersheds, the importance of the AEM program in improving downstream water quality, and increased outreach on the benefits of nutrient management. Text was also added to support that research and trials to determine the efficacy of perennial grain systems should continue and language was clarified to align with the Subgroups on manure management and the recommendation to develop a Sustainable Biomass Feedstock Action Plan. Text was modified to clarify that bioenergy resources are to be used to complement aggressive electrification rather than be a substitute for it; and text was further added on the importance of demonstrating greenhouse gas emissions control.

Dr. Howarth complimented this version of the Chapter, believing that his feedback was well-incorporated.

Gavin Donohue suggested striking the word utilities from the recommendation that the State should identify energy pricing models for waste-generated biogas given that the intent is to create a private market, which would be undertaken by energy market participants.

Rose Harvey also commended the authors on this Chapter and noted that 73 percent of the 13.7 million acres of land are privately owned and she applauds the recommendation to create incentive programs and to work with private landowners.

Peter Iwanowicz suggested that, in response to an issue raised by the Climate Justice Working Group, an assessment of the benefits and costs of adopting a fee on fertilizer should be undertaken, rather than assuming that doing so would impact farmers.

Chapter 16. Waste

Co-Chair Seggos presented the summary of changes for Chapter 16, Waste, which included updated vision statements for a circular economy approach to materials management; clarifying language around permits and renewals for solid waste combustion facilities; the list of stakeholders was expanded to include affected workers and their unions and the labor standards discussed in Chapter 7 were applied in this Chapter along with others, as a means of promoting good, family-sustaining union jobs; language regarding the shift in consumer habits and purchasing practices needed to achieve Climate Act outcomes was added; the language regarding refrigerants was clarified to reflect the need to manage existing refrigerants; and a component was added for regulatory and monitoring enforcement for co-pollutant control for water resource recovery facilities.

In response to an inquiry from Raya Salter regarding whether the intension was to retain existing municipal solid waste capacity despite that it might not fully address environmental justice concerns, Co-Chair Seggos stated that the long-term goal of NYS Department of Environmental Conservation is to move away from waste toward a circular economy, which will be reflected in the forthcoming Solid Waste Management Plan. He explained that the stringency of the Climate Act and other regulatory permits will be applied to future permit applications in fulfillment of the larger vision to minimize and move away from landfilling and combustion, but there may be ways to accentuate and strengthen the vision through textual edits.

Dr. Howarth suggested that references to the U.S. Environmental Protection Agency methodology for greenhouse gas emissions serve no useful purpose. He also believes clarifications are necessary to distinguish renewable natural gas and biogas, that methane monitoring is not as difficult as the text would read, and that septic tanks, while a possible source of emissions, produce very small amounts compared to wastewater treatment plants.

Peter Iwanowicz expressed support for original language regarding the on-site use of biogas with no new transmission infrastructure, as reflecting the consensus of the Alternative Fuels Subgroup. Maureen Leddy explained that the text changes reflect feedback that the discussion of infrastructure should align with the Gas Transition Chapter and to also accommodate situations where on-site use of biogas is not feasible due to limitations of the installed equipment. Mr. Iwanowicz also suggested that timing of potential landfill gas regulations should be consistent with the NYS Department of Environmental Conservation requirements to adopt regulations by the end of the year.

Chapter 17. Economywide Strategies

Co-Chair Seggos presented the summary of changes for Chapter 17, Economywide Strategies, which included input from the Climate Justice Working Group and Council Members. Specific changes include clarity that the various protective measures within the cap and invest proposal would not just avoid new harms to communities, but would also actively address existing

burdens; that rebates for customers would not prevent them from accessing other means of support; that there would be reconciliations with the Regional Greenhouse Gas Initiative to avoid double regulation; and design mechanism must meet high labor standards and would not only consider where pollution happens, but also where it has impacts.

Donna DeCarolis stated that domestic competition, sometimes among multiple plants with similar ownership located within New York that compete for capital to invest in facilities for additional production lines, as well as the issue of leakage, remain concerns.

Gavin Donohue suggested clarifying terminology within this Chapter to better define what is meant by such references as impacting Disadvantaged Communities and other references, some of which have been addressed in other regulatory efforts. In acknowledging the issue, Jared Snyder stated that more concrete definitions would necessarily become part of ensuing regulatory processes that emanate from the Scoping Plan.

Peter Iwanowicz appreciates the acknowledgement that there will be a robust regulatory consultation process moving forward and that this Chapter is honest in stating that offsets will play no role in any future efforts, distinguishing New York's effort from those in other jurisdictions. He also raised concerns regarding the conclusion in the text that the cap and invest approach is best able to meet the Climate Act requirements and goals, suggesting that the language be held prior to finalizing the Scoping Plan and that language regarding the next steps for the NYS Department of Environmental Conservation should also be clarified to state that it will "evaluate and adopt" program design elements.

Raya Salter noted, regarding the language regarding "adjacency", that you can be "proximate" and still have impact, even if not co-located.

Rose Harvey suggested clearer language that cap and invest is a program that is being endorsed by the Council.

Chapter 18. Gas System Transition

Co-Chair Harris presented the summary of changes for Chapter 18, Gas System Transition, which included consistency in language surrounding "strategically downsizing and decarbonizing" the "existing gas system", clarifying the role of renewable natural gas and hydrogen in the gas system transition planning process, edits aligned with the Buildings Chapter, edits regarding workforce retention plans and labor standards consistent with the Just Transition Chapter, examples of positive marketing regarding geothermal heat pumps and other technologies, an additional strategic opportunity to retire existing pipelines as demand declines to the strategy on prioritization of leak prone pipes, adding electric generation owners, the Office of Just Transition and other Council agencies to the list of those whom should be consulted in the development of the gas transition plan, and adding electric system readiness, economic development, and workforce considerations.

Gavin Donohue suggested further clarifying edits that the utilities can upgrade the transmission and distribution systems, rather than the electricity system and that electric generation owners are those who upgrade electric generation.

Raya Salter acknowledged the amount of good work that enhanced this Chapter and reiterated her earlier concerns about the references to the low carbon intensity hydrogen issue, document-wide, that she believes should be struck from the text.

In response to a clarifying question from Peter Iwanowicz regarding the use of alternative fuels and their safety within the gas system, Jessica Waldorf, Chief of Staff and Director of Policy Implementation, NYS Department of Public Service, confirmed that the intention of the edited text was meant to address the concerns about the safety of the use of alternative fuels in gas infrastructure.

Dr. Howarth agreed with Ms. Salter's comments regarding the references to hydrogen to ensure the issue will be addressed and both congratulated the team on the overall efforts for this particular Chapter.

Peter Iwanowicz suggested that the Scoping Plan provide a more direct recommendation for State entities to review and consider statutory changes for certain policies, such as the 100-foot rule for the subsidization of natural gas hook ups, as they appear to be in direct conflict with the Climate Act. Ms. Waldorf explained that the statement was intended to be more generic to encapsulate the recommendation that all statutory provisions should be reviewed and highlighted an additional reference directly referencing the 100-foot rule elsewhere that explicitly calls for a revision.

Chapter 19. Land Use

Co-Chair Seggos presented the summary of changes for Chapter 19, Land Use, which included added context and detail on forestland acquisition and avoided land conversion, on needed workforce expansion for afforestation and reforestation, clarifications on the benefits of avoided forestland and farmland conversions and on coastal wetland strategies, clarifications regarding references to the California Sustainable Communities Law, additional text on revitalizing Disadvantaged Communities, additional cross references to Chapter 13, Electricity and Chapter 15, Agriculture and Forestry.

Mario Cilento expressed his preference that workers and unions should be listed as key stakeholders.

Chapter 20. Local Government

Co-Chair Seggos presented the summary of changes for Chapter 20, Local Government, which included clarifying language regarding the role of local governments in meeting Climate Act directives, the need to address energy efficiency in municipal codes, buildings, and facilities, updated statistics on the Climate Smart Communities Program, clarifications to the community greenhouse gas dashboard recommendation, emphasizing the role of local government in promoting energy efficiency and others.

Chapter 21. Adaptation and Resilience

Co-Chair Seggos presented the summary of changes for Chapter 21, Adaptation and Resilience, which included clarifying the need to establish a public awareness campaign and educate K-12 students about climate change, updates related to the passage of the Environmental Bond Act, and edits to the strategy to ensure reliability, resilience, and safety of the energy system to reference the newly passed legislation that requires utilities to complete vulnerability assessments and submit climate vulnerability and resiliency plans to the NYS Public Service Commission.

Chapter 22. Essential Elements

In addressing the last section of the draft Scoping Plan, "Measuring Success", Co-Chair Harris presented the summary of changes for Chapter 22, Essential Elements Chapter, which included editorial changes, an updated Federal Action section to reflect most recent policies and to elaborate on Federal Resources to support climate action and a just transition in New York that are in the federal Infrastructure Investment and Jobs Act, the Inflation Reduction Act, and the CHIPS and Science Act, as well as adding text on economic development planning.

Chapter 23. Reporting

Co-Chair Harris presented the summary of changes for Chapter 23, Reporting, which included editorial changes, additional text on measuring, tracking, and reporting investments, benefits and positive outcomes for Disadvantaged Communities associated with the Climate Act requirements, and added text on the need to ensure sufficient data collection by investing in information technology solutions for State entities to aid in reporting and quality assurance and ensuring data is accessible and transparent to the public.

Chapter 24. Future Work

Co-Chair Harris presented the summary of changes for Chapter 24, Future Work, which included editorial changes.

Dr. Shepson expressed his appreciation for all of the work that it took to get the Scoping Plan document to this point. He also stated his preference for edits regarding low carbon intensity hydrogen that were discussed earlier and that with those changes, he would be very proud of the document.

Dennis Elsenbeck expressed his appreciation for the additional context of the economic development text added within the chapters and for the team that undertook that task.

Raya Salter agreed with the comments pertaining to the amount of work undertaken. She also expressed her continued concern about advanced nuclear technologies and their viability. Understanding that there is federal funding available, she cautioned that the technology should not be considered a fait accompli in terms of the direction of energy policy in the State, citing previous cost-overruns and lack of community support.

Next Steps

Co-Chair Harris provided information on the next steps and committed to providing the Members with an Executive Summary that reflects the discussion at this meeting and to also provide proposed language to address the hydrogen discussion.

Sarah Osgood presented the schedule for the final Council Meeting, for which the Council will have been provided the final Scoping Plan in anticipation of a vote that will be taken at the December 19, 2022 meeting, with the intention to make the final Scoping Plan public shortly after that meeting.

Co-Chair Harris explained the planned voting process and stated that approval of the Scoping Plan requires a supermajority of at least 15 Council Members voting in favor of adopting the Scoping Plan. Each Member will be afforded the opportunity to provide a brief statement in support of their position, as well as an opportunity to submit a brief written statement on the day of the vote

to reflect on the process and efforts to create the Scoping Plan and their respective voting decision. The written statements will be published on the Climate Act website.

Co-Chair Seggos presented the next steps that will occur after the Council Meeting on December 19, 2022, which, assuming the Scoping Plan is approved, includes submission of the final Scoping Plan to the Governor, Speaker of the Assembly, and Temporary President of the Senate, as well as public posting on the Climate Act website by the end of the calendar year. The NYS Department of Environmental Conservation is required to promulgate enforceable regulations by January 1, 2024 to ensure achievement of the Statewide greenhouse gas emission limits, and upon consultation with the Council, the Climate Justice Working Group and multiple stakeholders, which will include public workshops and hearings. He also noted that if the NYS Department of Environmental Conservation adopts an alternative compliance mechanism, it would be only for purposes of achieving net zero emissions and would do so only through regulation and including a similar consultation process as previously stated, and in accordance with the State Administrative Procedures Act.

Co-Chair Seggos stated that the Scoping Plan is required to be updated on a five-year cycle and, upon consultation with the Council and the Climate Justice Working Group, development of a report on progress toward achieving the emission limits that assesses the costs and benefits of regulations and other measures and evaluates impacts on Disadvantaged Communities. This reporting is required not less than every four years.

In response to an inquiry from Gavin Donohue as to whether edits would be entertained on the forthcoming Executive Summary, Co-Chair Harris stated that editorial comments would be welcome, but it is the expectation that the draft will be consistent with the rest of the document and any suggested changes would be minimal. Sarah Osgood confirmed that Council Members will be provided both a clean and marked up version of the draft final Scoping Plan based on discussion at this meeting and for ease of reference.

With that, the meeting was adjourned.



KATHY HOCHUL GOVERNOR DOREEN M. HARRIS CO-CHAIR BASIL SEGGOS CO-CHAIR

Meeting Agenda

December 5, 2022

- Welcome
- Consideration of November 7, 2022, Minutes
- Discussion of Potential Edits to Draft Scoping Plan Chapters
- Next Steps