MINUTES OF THE CLIMATE ACTION COUNCIL MEETING

HELD ON SEPTEMBER 29, 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 Thursday, September 29, 2022. The following Council Members attended either in the Albany or New York City locations which were accessible by the public, one Council Member attended by videoconference, and a quorum was present throughout the meeting. Unless otherwise indicated, the following Council Members attended in person:

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 (Jared Snyder, Designee)

Council Members

- Richard Ball, Commissioner, New York State Department of Agriculture and Markets (Brian Steinmuller, Designee)
- Mary T. Bassett, Commissioner, New York State Department of Health (Henry Spliethoff, Designee)
- Rory Christian, Chair and CEO, New York State Public Service Commission
- 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
- Dennis Elsenbeck, Head of Energy and Sustainability, Phillips Lytle
- Thomas Falcone, CEO, Long Island Power Authority (Rick Shansky, Designee)
- Dr. Bob Howarth, Professor, Ecology and Environmental Biology at Cornell University
- Peter Iwanowicz, Executive Director, Environmental Advocates of NY
- Hope Knight, President, CEO and Commissioner, Empire State Development (Ian Wells, Designee)
- 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 (attended by videoconference)

- 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 (Rebecca Koepnick, Designee)

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

Consideration of August 23 and September 13 Meeting Minutes

This Agenda item was to advance the minutes from the August 23, 2022 and September 13, 2022 meetings. Upon motions duly made and seconded, the minutes were adopted.

Consideration of the By-Laws Amendments

Co-Chair Harris presented this item and described the amendments as necessary to incorporate recent changes to the NYS Public Officers Law, specifically the Open Meetings Law, pertaining to how and when videoconferencing can be used to conduct Council meetings. Peter Costello, Counsel to the Council, provided additional detail regarding the proposed modifications to the Council Bylaws. Mr. Costello also reported that Co-Chair Harris presided over a required public hearing regarding the proposed changes that was held on September, 24, 2022. No public comments were proffered at the hearing. Upon a motion duly made and seconded, Climate Action Council Resolution No. 5, approving the Bylaw amendments, was unanimously adopted.

Resolution No. 5

> RESOLVED, that the Climate Action Council Amendment to the Bylaws, to effectuate certain provisions of the NYS Public Officers Law allowing for the adoption of (1) written procedures governing member and public attendance and (2) the use of videoconferencing for meetings by the Council, as presented to the Members for consideration at this September 29, 2022 meeting, with such non-substantive, editorial changes at the Co-Chairs in their discretion, may deem necessary or appropriate, are adopted and approved.

Co-Chair Remarks

Jared Snyder, Deputy Commissioner, Climate, Air, and Energy, NYS Department of Environmental Conservation, reported on an announcement of Governor Hochul regarding the State's adoption of the Advanced Clean Car rulemaking, requiring all sales of light duty cars and trucks to be zero emission by 2035. This aligns State policy with data demonstrating the necessary steps New York must undertake to meet the emissions reduction goals of the Climate Act. Two interim requirements of this rulemaking are that 35% of sales must be zero emission by 2025 (model year 2026), and 68% must be zero emission by 2030. The rulemaking also allows compliant vehicles to use battery, electricity, and fuel cell technologies and the effort will be undertaken in coordination with the New York Power Authority's planned installation of one hundred Evolve EV chargers across the State.

Brian Steinmuller, Assistant Director of Land and Water Resources, NYS Department of Agriculture and Markets, reported on a $60 million award to the State through a United States Department of Agriculture Request for Proposals issued earlier in 2022 for Climate Smart Commodities. This award, based on efforts coordinated with the NYS Department of Environmental Conservation, will advance climate smart agricultural and forestry practices through existing State programs. He also announced an additional round of funding for the Climate Resilient Farming program, assisting farmers in reducing emissions while increasing capacity, resiliency, and adaptation to climate change. Mr. Steinmuller stated an estimated 80,000 metric tons of greenhouse gas emissions reductions will result from this additional round of funding.

Mr. Snyder noted the signing of an Executive Order to accelerate efforts to make State operations more sustainable, building on progress by the GreenNY Council to continue streamlining the lead-by-example sustainability and climate directives. It sets new goals for environmental performance of State agencies, new green purchasing specifications, and operational directives. Mr. Snyder reported that Lieutenant Governor Delgado announced that the State has surpassed 100 certified Climate Smart Communities and also highlighted recent legislation to study extreme heat conditions in Disadvantaged Communities across the State.

Co-Chair Harris noted the joint presentation of Governor Hochul and New Jersey Governor Philip Murphy on September 28, 2022 to discuss the collective commitment to the Climate Week principles. Governor Hochul announced NYSERDA has released its sixth annual Renewable Energy Standard Solicitation for onshore renewable energy, seeking 2,000 megawatts or more of renewable energy projects and other notable goals related to distributed solar. Co-Chair Harris acknowledged the landfall of Hurricane Ian in Florida, and the continuing effect climate change has on the severity and frequency of extreme weather events.

Integration Analysis Update

Carl Mas, Director of Energy and Environmental Analysis, NYSERDA, presented the results of the Inflation Reduction Act (IRA) analysis conducted, including fuel price and high technology cost sensitivities, with a key focus on the impact of new benefits to New York. Mr. Mas stated the modeling approach estimates IRA funding available to offset the costs to achieve Climate Act requirements and the impact of potential funding on the benefit-cost analysis of the different Scenarios. It focuses on the largest "buckets" of Federal funding with the clearest implementation and climate and energy provisions. The modeling accounts for a range of outcomes to reflect uncertainty of some of the key impacts and focuses on overall societal impacts, but it does not model the distribution of the funding.

Mr. Mas provided key modeling assumptions, showing both a lower and higher anticipated benefit level for the electric sector, buildings, transportation, and alternative fuels. He noted that both the higher and lower levels were modeled conservatively. For example, the lower benefit assumption for the electric sector assumes the earliest possible phase out of electric sector tax credits in 2023 and projects would only qualify for a prevailing wage bonus, while the higher benefit assumes tax credits would be available through 2024 and include some additional benefits for low-income and domestic content. The lower and higher benefits for the buildings sector assume credits and grants available through 2032 for energy efficiency projects and heat pumps, with a difference in benefits in the level of uptake. The lower benefit for transportation sector assumes credits for electric vehicles and chargers, but a lower uptake, less compliance with sourcing provision, and fewer chargers in low-income and non-urban tracts. The higher benefit for transportation assumes the same

credits but a higher uptake, more compliance with sourcing provisions, and more chargers in low-income or non-urban tracts. The lower and higher benefits for alternative fuels assume a production tax credit for hydrogen, and in-state renewable diesel production, with the difference in benefits in the level of uptake.

Key Findings estimate IRA grants and funding opportunities will reduce the costs to New York to meet the requirements of the Climate Act by $43-$68 billion through 2050. In modeling the high benefits values for Scenario 2, approximately $27 billion would benefit the electricity sector, $15 billion for the transportation sector, $10 billion for the buildings sector, and $17 billion for other sectors. In general, IRA funding will increase demand for in-State wind production (versus imported) and offshore wind, reduce electric vehicle charger costs by $3-$19 billion, although significant uncertainty surrounding the supply chain remains, reduce the cost to transition to an electrified building stock by $7-$11 billion, and lower the cost of procuring hydrogen and other advanced renewable fuels in hard to electrify end uses by $4-$16 billion. Mr. Mas added that because the State's policies are already fairly aggressive, the IRA benefits will not necessarily accelerate the transition but, rather, would more serve to lessen the financial needs necessary to realize goals.

In response to an inquiry from Anne Reynolds as to the impacts of incentives on the State's energy portfolio mix, Mr. Mas expects a tip in the balance between imports and in-State renewable development and the preference for offshore wind resources. As to her inquiry regarding levels of incentives earmarked for the transmission system, Mr. Mas responded that the State will likely receive a portion of a late-added mechanism in the legislation that would provide $2.5 billion nationally for infrastructure, although the overall value the State is expected to receive would be small.

In response to an inquiry from Donna DeCarolis as to whether the clean fuel production credit was included in the model, Mr. Mas responded that the model includes approximately $10 billion for clean fuels, including hydrogen and other fuels. Mr. Mas agreed to provide a prepared backup slide that depicts a further breakdown, in response to a request by Raya Salter.

In response to an inquiry from Dennis Elsenbeck as to how to approach the distribution side of electricity in transportation and building decarbonization to ensure the State achieves its greenhouse gas reductions, Mr. Mas stated that the point of sensitivity analyses is to draw attention to the need for infrastructure investment and suggested the Council discuss this issue when finalizing the Scoping Plan to ensure the issue is addressed.

Mr. Mas presented key findings and noted the IRA incentives could increase the overall net benefits of the mitigation Scenarios by up to $50 billion, compared to the core 2022 vintage presented at the August 23, 2022 meeting, with incentives higher in the mitigation cases than the reference case due to greater adoption of clean technologies eligible for incentives.

In response to a clarifying question from Dr. Shepson as to the revised total net benefits, Mr. Mas confirmed that the total net benefits with IRA funding ranged from $110 billion to $160 billion.

The high fuel price sensitivity analysis (which posed the question: What if clean technology prices do not decrease as anticipated in the near-term?), demonstrated elevated near-term fuel prices, that were below the 2022 reference peak experienced over Summer 2022, for both natural gas and petroleum. Higher fuel prices increased the cost of all Scenarios, but most acutely the Reference Case where a higher share of consumption remains fossil fuels. Increasing the adoption of renewable zero emission energy sources or alternative fuels may be an unanticipated upside of persistently high fossil fuel prices. Overall, the sensitivity shows an increase in the net benefit of the Scenarios of $32-$38 billion when compared to original core scenarios.

In response to an inquiry from Chair Christian as to whether this sensitivity analysis is based upon current fuel prices or future forecasting, Mr. Mas clarified it is based on annual averaging over time of past prices and current, with structurally persistent factors such as global exports to create an annual average price in the future. Regarding price instability, or volatility, Mr. Mas responded that price stability as another sensitivity, and potentially another benefit, could be further explored. Another issue to consider in the transition is that customers who remain in the fossil fuel market will be more exposed to the higher prices of those fuels.

In response to an inquiry from Raya Salter as to whether the IRA funding will be disbursed differently among certain societal segments, such as funding to low-income or historically marginalized communities and reducing them in high income areas, Mr. Mas stated the IRA includes explicit provisions for investment in low-income areas, and the modeling done of the higher benefit scenarios assumes a higher portion of funding to low-income communities. Ms. Salter stated that reviews of the exact level of funding to low-to-moderate income communities differ, but believes IRA investments will be insufficient to ensure New York is meeting the real needs of those communities. Mr. Mas agreed to provide an additional break down of the materials provided, but noted that, while IRA investments include a meaningful amount of investment in New York, the State will need to continue investing beyond the federal funding to meet its goals.

In response to an inquiry from President Cilento as to whether any funding is directed toward workers most likely to be impacted by the decarbonization transition, Mr. Mas responded he was not aware of any specific provisions, but would follow up. Co-Chair Harris noted the IRA does include specific provisions for facilities to be decommissioned, but is unaware if workforce provisions were addressed in this manner.

In response to an inquiry from Dennis Elsenbeck regarding the direction of fossil fuel prices and whether they are likely to decrease during the transition, Mr. Mas clarified despite a decrease in demand for fossil fuels, they would still remain present in the system for some time, and thus, supply would simply decrease slower than it does currently. Mr. Elsenbeck recommended a discussion in the Scoping Plan premised on refraining from purchasing key energy products from countries creating the highest pollution levels to receive a return on investment from those purchases.

In response to an inquiry from Anne Reynolds, Mr. Mas confirmed that the Reference Case includes reaching 70% renewable energy by 2030, and the modeling shows that without any additional programs New York can realize goals beyond 70% by 2030 if fuel prices continue to increase. However, this will still be insufficient to get to 100% by 2040 absent additional policies and the costs associated with them.

In response to Ms. Salter's earlier comment, Anne Reynolds offered that, regarding the federal Production and Investment tax credits included in the IRA for grid production, these benefits would be realized more equitably across the societal segments of New York due to the manner in which New York approaches grid-scale renewable development. This differs from other states that use other renewable implementation strategies.

Dr. Bob Howarth stated that the State's imported natural gas is now entirely produced through hydraulic fracking processes, an inherently expensive process, and he believes the price for natural gas will be increasingly problematic.

Mr. Mas provided an overview of the High-Tech Cost Sensitivity, which explored the effects of potentially higher prices for cleaner alternatives from near-term supply chain issues that could persist. The key assumptions made for the transportation sector were that battery electric vehicles would have higher costs that stagnate through 2024 and take longer to achieve the upfront cost parity. For buildings, the key assumption was that heat pump and shell improvement prices will increase approximately 15%, which aligns with recent industry announcements, and take until 2035 to revert to core case assumptions. For the electricity sector there were no key assumption modifications. Core cases reflect a conservative cost trajectory and storage cost disruptions, and near-term contracts mitigate exposure to near-term supply chain issues.

Key findings of this sensitivity analysis showed that higher technology costs would particularly increase the cost of the Scenarios which have a higher adoption of heat pumps and electric vehicles, reducing the net benefits of the mitigation scenarios compared to the Reference Case. IRA funding will help mitigate some of the higher costs that could materialize, necessitating grant funding for low-income communities where the cost of low carbon alternatives could remain elevated. Mr. Mas emphasized this effect is one that will be faced many times during decarbonization, underscoring the need for measures to mitigate potential supply chain disruptions, such as worker training and local production.

Dennis Elsenbeck commented on the importance of supply chain issues and encouraged the integration of local production and manufacturing in Disadvantaged Communities as a method of reviving once thriving industrial communities with clean energy jobs created as a result of the Climate Act and the IRA. Mr. Mas believes this is reflected in the State's offshore wind policies.

Brian Steinmuller pointed out that the IRA also includes $19.5 billion in funding directed toward U.S. Department of Agriculture conservation programs, some of which will go toward implementing the programs discussed.

Mr. Mas concluded the presentation with a summary of key takeaways and next steps. He stated that the IRA will increase net benefits to New York up to $50 billion; the sensitivities explored reinforce prior findings that demonstrate even under a variety of price conditions, net benefits of decarbonization greatly exceed net costs. The IRA is expected to provide important benefits that can alleviate societal costs, help achieve rapid adoption required, and insulate from potential price increases; and adopting renewables can insulate consumers from higher fossil fuel prices. The Team will explore the impacts of the building sector assumptions and distribution system uncertainties on key output metrics.

Dr. Howarth emphasized the importance of not only addressing increased prices, but also the importance of capturing the impacts of price volatility and stability in the sensitivities.

In response to an inquiry from Gavin Donohue as to the implications under the sensitivity modeling and costs if the State does not identify the zero emission dispatchable technologies that comply with the Climate Act goals, Mr. Mas noted that the Team examined the effects of narrowing the definition of 100% clean technology. For example, if only hydrogen fuel cells qualified under the definition, the result would be billions of dollars of additional costs. Mr. Donohue expressed his belief that the options should be expanded, not retracted. Dennis Elsenbeck added the same issue was raised by the New York Independent System Operator in its efforts.

In response to an inquiry from Donna DeCarolis regarding whether distribution system uncertainties would be analyzed, Mr. Mas responded that, although some work has been undertaken on distribution system upgrade costs, more work is necessary to determine what a different peak may look like, how it may affect the scaling of the distribution system, and which technologies would be the best options.

In response to an inquiry from Dr. Shepson asking if Mr. Mas can produce a table or figure that depicts the upper and lower bounds of fuel costs through 2050, and that expresses the range of uncertainty of the final net benefits calculation, Mr. Mas stated that a chart will be included in the final Scoping Plan.

In response to an inquiry from Rick Shansky as to whether system peak and system costs go hand-in-hand or are separate measurements, Mr. Mas responded there will be one set of analyses that examine the implications of different system peaks on the net cost, by utility service territory. In response to a follow up as to whether there are any particular areas of concern and if the effort was coordinated with the utilities, Mr. Mas stated that input was received from the Utility Consultation Group and the Team will further explore the range of uncertainty and distribution system cost variation on a more granular level.

Subgroup Progress Reports

Gas System Transition

Jessica Waldorf, Chief of Staff and Director of Policy Implementation, Department of Public Service, presented the report out for the Gas System Transition Subgroup, noting that an additional meeting where the public comment feedback received on the Gas System Transition Chapter will be incorporated into the final recommendations of the Subgroup.

The key considerations of the Gas System Transition Subgroup were presented as:

- Striving to ensure that the gas system transition plan meets the greenhouse gas emissions reduction targets in the Climate Act and have been refined to ensure that individual gas utilities and local distribution companies will reduce emissions by 2030 and 2050 to achieve Statewide emissions limits.

- Reducing energy burdens and ensuring affordability, particularly for low-income residents as the cost of fossil fuel for remaining customers increases as others transition to alternative heating technologies. It was noted that the Subgroup had a particularly lengthy conversation to ensure the review conducted focuses on both the electric grid and related electric

transmission distribution system, build-out and avoided costs, gas system investments, appliance modifications to enable alternative fuels, fuel production costs, and costs to the homeowner and business customer.

- Prioritizing and targeting public financial support of energy, includes upgrades and electrification initiatives, currently included, in part, in the Scoping Plan. However, the Subgroup endeavored to specifically ensure targeted support for cleaner alternatives for the most energy vulnerable consumers, including low-to-moderate income consumers and those located within Disadvantaged Communities. The Subgroup also recommended "energy affordability" receive a more specific definition within the Scoping Plan to encompass references to the Statewide gas transition plan.

- Prioritizing continued and improved safety and reliability, with a focus on analyzing what technologies may be necessary to maintain the safety and reliability of both the electric and gas systems as the transition to cleaner heating fuels is undertaken and that the transition to meet consumer demand and the build out of the system must be thought of hand-in-hand.

- Considering the role of alternative fuels and technologies in future gas system planning, recently considered in coordination with the Alternative Fuels subgroup, for the strategic use of alternative fuels aligned with the Integration Analysis Scenarios. A specific recommendation that the technical, environmental, and financial feasibility of any pilot program that includes an alternative fuel is also recommended to be considered.

- Including a comprehensive timeline for the gas system transition to ensure it aligns with the Scoping Plan recommendations and that electric system grid and energy reliability needs are met. Any timeline should include information for labor, local governments, utilities, power producers, community groups, the Climate Justice Working Group, and Disadvantaged Communities on what the transition means and to adequately allow for future planning.

- Ensuring close coordination with the electric system expansion to ensure the transitions are in parallel to avoid reliability and service need challenges, including in parallel with the New York Independent System Operator Reliability Needs Assessment. This should include a detailed strategic and coordinated approach to optimize both systems and to ensure readiness at the wholesale power generation, transmission, and distribution levels for electrification efforts. The Subgroup also recommends looking at the planning process from a local or regional perspective, so the individual needs of those areas are appropriately met.

- Ensuring equitable access to alternative heating options in Disadvantaged Communities through technical and financial assistance to enable those households to make energy efficiency upgrades and decarbonize electrification affordably. The Subgroup also recommends prioritizing energy efficiency and funding opportunities for these communities and mitigating any impacts of electrification on the cost of rental housing.

- Considering health benefits and cumulative impacts by specifically coordinating with the NYS Department of Health for local health data to help inform the implications of those burdens within the gas system transition and to determine the feasibility, climate impacts, and health impacts of current and new infrastructure and alternative fuels prior to making investments.

- Including a clear plan for the just transition of the workforce, including what the industry can anticipate as part of the transition such as jobs in district thermal and leveraging the current gas system expertise during the gas system transition. The Subgroup also recommends a future operation of the system where current gas system knowledge and skill sets will be valuable and transferrable. Two particular recommendations are prioritizing the re-employment of displaced workers and bridging the gap for retirement eligibility and funding sources for those workers.

- Developing health and safety standards and protocols both for the decarbonization of the existing system and new technologies.

- Prioritizing co-pollutant and emissions reductions in Disadvantaged Communities to ensure no disproportionate burden, including consideration of infrastructure project locations, associated emissions co-pollutant impacts, and using data on emissions and co-pollutants reductions along with air monitoring data and any other research that will assist in tracking progress toward Climate Act targets.

- Identifying needed changes to laws and regulations to be consistent with the Climate Act, specifically by reviewing the creation of new or modification of existing statutory provisions and regulations that may be needed to accomplish the deep decarbonization of the gas system and potential alternative fuels.

- Requiring greater scrutiny of investments in the current gas infrastructure to ensure they are necessary to maintain reliability and safety and do not result in stranded assets making it more expensive to decarbonize the gas system. Specific points of suggested scrutiny include determining safety, reliability, cost impacts of additional investments, and stranded asset costs.

- Identifying the need for additional analysis and developing a communications strategy and consumer education plan.

Rick Shansky offered two points of clarification. On the issue of grid reliability, he noted that there are two paths: one through the New York Independent System Operator and the other through the distribution utilities for local systems, and his belief that they need to be considered together. Another clarification was regarding the coordination of electric and gas system planning and ensuring that pipeline gas remains available to power generating plants to the extent it is relied upon.

In response to an inquiry by Peter Iwanowicz regarding the Alternative Fuels Subgroup recommendation to capture waste methane and whether there are inconsistencies between the Subgroups on that issue, Ms. Waldorf stated that this led to the recommendation that any alternative fuel use would be subject to a number of reviews before being considered and that the two Subgroups are generally aligned on the issue. Dr. Howarth added that there is a strong priority for using any alternative fuels on site, given the issues of overall efficiency and emissions. Dennis Elsenbeck cautioned against being too narrow in the consideration of local use when it may be difficult to predict or define, to which Ms. Waldorf explained the recommendation is to keep options on the table. Donna DeCarolis agreed with keeping options open and added that best practices or new assets should be considered and that there may be some opportunities presented that are clearly preferred over taking no action at all. Chair Christian added that there was also discussion regarding

the consideration of the life cycle of emissions resulting from the use of the alternative fuel that would be required before considering their use.

In response to concerns by Peter Iwanowicz as to how one might justify, given the Climate Act requirements, the construction of a new building that relies on fossil fuels, Ms. Waldorf stated that although the Subgroup did not discuss the hypothetical specifically, it did discuss a recommendation to examine other statutes and regulations that may conflict with the Climate Act and that it may naturally occur during the implementation phase of the gas transition.

In response to an inquiry by Peter Iwanowicz as to whether the potential for improved health impacts were considered during the discussions, Ms. Waldorf stated that the discussions were broad and did not necessarily focus on the costs, but agreed that coordinated discussions with the NYS Department of Health are likely to explore these issues more fully.

In response to an inquiry by Peter Iwanowicz as to the data available on the amount of alternative fuel potential, Ms. Waldorf stated that inherent in the recommendations is one that calls for independent analysis of the availability of these fuels. Dennis Elsenbeck added that this is an interesting issue when discussing it in conjunction with the electric system, believing the two cannot be realistically discussed independently.

Economy-Wide

Jared Snyder, Deputy Commissioner, Climate Change, Air Resources, and Energy, NYS Department of Environmental Conservation, presented an update on behalf of the Economywide Policy Subgroup. He explained that the Subgroup further developed and evaluated the three economy-wide approaches identified in the Draft Scoping Plan against the criteria and what role they may play in meeting the goals of the Climate Act and how they might be structured. He also thanked all of the participants of the Subgroup over the eight meetings, finding their input very valuable. The key take-aways from the Subgroup included:

- Agreement on the rationale for implementing an economy-wide strategy
- Agreement on two recommendations for the Council to consider
    - Design elements of a carbon tax
    - Design elements of a cap-and-invest policy
- Agreement to defer consideration of a Clean Energy Supply Standard to sectoral deliberations
- Majority support for a cap-and-invest policy as it places a cap on emissions that could be designed to meet the emission limits required to be achieved under the Climate Act.

Mr. Snyder described the rationale for adopting an economy-wide strategy as,

> ….an appropriately designed economywide strategy would help ensure that the State advance its goals. Such an economywide strategy would serve an economic signal to market participants and provide a regulatory backstop to ensure economywide emissions limits are met, while mitigating leakage. It would serve as a mechanism to generate revenue that can support strategies advanced in the Scoping Plan, including clean energy activities in Disadvantaged Communities. Equity should be integrated into the design of any

advanced economywide strategy, accounting for emissions impacts in Disadvantaged Communities and costs realized by low- and moderate-income New Yorkers. Finally, an economywide strategy would be implemented as a complement to, not as a replacement for, other strategies in the Scoping Plan.

Mr. Snyder presented additions to the initial set of criteria that were considered in developing the economy-wide policy recommendation. Prioritized criteria under the Emissions category includes "certainty of emission reductions to comply with the State limit"; under the Economic category, "price certainty", "mitigating risk of leakage", "supporting economic development and innovation", and "maintaining affordability for consumers/businesses"; and under the Equity category, "prioritizing emissions and pollutant reductions in Disadvantaged Communities/avoiding hotspots" and "affordability and avoiding regressive impacts".

Vlad Gutman-Britten, Assistant Director, Energy and Environmental Analysis, NYSERDA, presented the two potential approaches developed by the Subgroup. He began with the Carbon Tax Proposal, which would establish a price on emissions of greenhouse gases that, with few exceptions, would cover energy use across all sectors. Application to the electricity sector is an open issue given existing regulation under the Regional Greenhouse Gas Initiative and some sectors, such as aviation, are outside of the State's jurisdiction.

A Carbon Tax Proposal could be designed to increase the certainty of emission reductions by adjusting prices based on progress toward meeting Statewide emission limits. It would provide price certainty, in that a price escalation would occur annually, subject to adjustments based on progress toward meeting Statewide emission limits. The price could be based upon the projected price level needed to stimulate technology development and deployment necessary to meet emission limits. These criteria provide some measure of price predictability, yet also allow for responsiveness in year-to-year changes to ensure the emission trajectory remains on track. Additional design features would address climate justice, affordability, and mitigating emissions and economic leakage through rebates and periodic reviews to inform program adjustments. There is a general understanding that the implementation of this Proposal would require legislation.

Mr. Gutman-Britten presented a Cap and Invest Proposal, which included a novel approach to setting allowance budgets that would set an overall cap on the entire economy, including certain sectors unlikely to be directly regulated for legal or substantive reasons. The State would retire allowances on behalf of those sectors. The remaining allowances would be auctioned or distributed and, thus, all emissions in the State will contribute to achieve the 2030 and 2050 emission limits. Mr. Gutman-Britten stated that the certainty of emissions reductions using a mechanism such as this is very rigorous in that it covers all of the State's emissions. Similar to the Carbon Tax Proposal, this Proposal also considers additional design criteria to address climate justice and affordability, including design features to limit emissions of stationary sources in disadvantaged communities

When compared to the Carbon Tax Proposal, Mr. Gutman-Britten explained that the price aspects of the Cap and Invest Proposal are a little less certain, necessitating the creation of a price floor and reserve mechanisms to mitigate fluctuations. Leakage mitigation would be addressed with no cost allowances proportional to a facility's output and benchmarked against high-performing facilities in the same sector and would be subject to periodic review and adjustments. The proposal

would also provide for some degree of the banking of allowances. Mr. Gutman-Britten clarified that any consideration of linking to similar programs in other jurisdictions would be dependent on a determination that linkage would not adversely impact disadvantaged communities in New York State or the linking jurisdiction, even if outside of New York. For the Cap and Invest Proposal, it is generally understood that it likely can be achieved administratively through regulatory action, with potentially the need for legislative appropriations for some investment categories.

Gavin Donohue stressed his strong opinion that the premise under the Carbon Tax Proposal with regard to electric generators that currently purchase Regional Greenhouse Gas Initiative allowances is that they "should" be provided with credit in the Cap-and-Invest Proposal for their purchase of such allowances, rather than they "could" be provided credits. As indicated above, the inclusion and treatment of sources also covered by RGGI is an open question.

In response to an inquiry by Dr. Shepson regarding the underlying reasoning behind the treatment of the waste and agricultural sectors in each Proposal, Mr. Gutman-Britten confirmed that it largely stems from the difficulty in determining the emissions for those sectors. Mr. Snyder added that some of the recommendations in the Waste Chapter regarding a price on waste generated, plus performance standards also factor into the reasoning. One possibility is starting with the policies recommended in the Waste Chapter, while continuing to track waste emissions and consider adding an allowance requirement for Waste emissions at a later time.

In response to an inquiry by Dr. Shepson regarding how technology development would be factored in over time, given the long runway for some technologies, Mr. Gutman-Britten surmised that over the 30-year life of the program, a number of adjustments would be necessary to reflect advancing knowledge.

Rick Shansky suggested that if the investment options were the same between the two Proposals, perhaps a nomenclature tweak is necessary so as not to imply that one has a different set of options than the other.

In highlighting Dr. Shepson's remarks, Dr. Howarth noted that emissions measurement will be much improved in just a few years. He also noted that wastewater treatment plants are also part of the landfill source and may require a different approach. Mr. Snyder indicated that many of the same issues exist about the certainty of emissions and that it is easier to track emissions sector wide across the waste sector through various technologies rather than from specific sources, at least until better ways of tracking emissions are developed. Mr. Snyder added that emissions are tracked at waste incinerators, which to the extent they are producing electricity, would be covered through the Regional Greenhouse Gas Initiative.

Anne Reynolds stated that the Subgroup did great work and hopes that the Council includes a recommendation for an economy-wide pricing plan in that she believes it provides a good insurance policy that progress is made. She is supportive of both Proposals, but prefers the Cap and Invest Proposal. Ms. Reynolds stated that both Proposals provide the opportunity to be designed in a way that meets other goals, to generate revenue to pay for other initiatives in the Scoping Plan, and to invest revenue in Disadvantaged Communities. However, for her, the Cap and Invest Proposal has a cap, and that is the key difference in assuring that emission goals will be met, and second benefit is

that any influx of federal funds or other external factors could result in a lower cost for New Yorkers. Mr. Snyder acknowledged that the language of the presentation of the Subgroup work is intentionally noncommittal in deference to the Council's decision-making.

Ms. Reynolds also raised the regulatory requirements and implications of implementation and, in weighing the two Proposals, believes the Cap and Invest Proposal provides the more efficient means to implement in an appropriate timeframe because it would enable DEC to meet the statutory requirement to establish regulations in 2023 that ensure the economywide emission limits are met.

Peter Iwanowicz expressed his belief that the Climate Act itself imposes a cap. Mr. Snyder stated that the law itself sets the emission limit, but it does not establish the mechanisms for achieving that limit and that the benefit of the Cap and Invest Proposal is that it would be an enforceable cap that equates with the emission limits under the law and would provide assurance that they would be met. In response to Mr. Iwanowicz's suggestion that this can be achieved by separate regulations as well, Mr. Snyder does not believe that there would be certainty that any combination of regulations would sufficiently add up to meeting the emission limits.

In agreeing with Mr. Iwanowicz, Raya Salter suggested that the State's renewable energy program meet its goals through regulations and is skeptical that the Cap and Invest Proposal would provide any more certainty. She favors a strong regulatory regime to enforce the emission cap and the economy-wide cap is not a substitute for other regulations that certain State agencies will undertake to enforce the Climate Act. She also believes that there has not been enough emphasis on the requirement that all State agencies must be considering Climate Act requirements in all of their decision-making. Mr. Snyder agreed that neither Proposal should not be considered a substitute for any additional regulations that are necessary. Mr. Iwanowicz stated that the general public is likely seeking surety that what the Council is pursuing will actually achieve the end goals on social and racial equity, along with the emissions goals.

In addressing the issue of a clean fuel standard, Mr. Iwanowicz stated that the same principles should apply in that it cannot be regressive or create hotspots and it has to feed into the broader goal. Mr. Snyder recalled that the Transportation staff team is revisiting the issue as to whether a clean fuel standard can be designed in a way that achieves the Climate Justice goals and will report back to the Council.

Mr. Snyder suggested, and Co-Chair Harris agreed, that the Council may want to further discuss an economy-wide approach after hearing the reports from all of the sectors.

Discussion of Feedback by Topic

Just Transition

Jamie Dickerson, Chief of Staff, NYSERDA, presented on the feedback received and staff recommendations related to the Just Transition Chapter. Summary themes included:

- Job loss avoidance, worker protections, and job quality
- The need for additional clarity by workforce on more granular timelines for sectors and technologies

- A more expansive and expanded solution approach to technology and resource mix by labor and worker groups
- A State and agency structure to deliver and fund support for workers and communities
- A strengthened and expanded application of labor standards, such as prevailing wage, project labor agreements, labor peace agreements, and Buy American/Buy New York
- The intersection of Just Transition and Climate Justice
- Inclusive workforce development, education, and training
- Power plant site reuse; and
- Holistic consideration of business impacts

It was noted by the Staff Team that some of the business impacts may have a more direct bearing on the industries addressed in the Energy-Intensive and Trade-Exposed Industry Chapter. However, for purposes of cross-referencing and recognizing that implications may expand beyond those industries, the impacts were included in this presentation.

Mr. Dickerson reported that the Staff Team recommendations were to:

- Provide enhanced clarity on job impacts and opportunities though transition timelines, including a recommendation to directly integrate the Job Study results
- Incorporate targeted references to new Climate Act-aligned technology opportunities, where appropriate
- Advance and further define the concept of a state office or fund for Just Transition and support for a green economy
- Ensure the application of labor standards to all appropriate technology sectors
- Bolster transition-related workforce development, education and training, and community support activities; and
- To spotlight new federal opportunities.

Mario Cilento offered his thanks for the framework presented, noting that it was not easy to pull together such a comprehensive approach this far into the process and that the goal is to make workers as whole as possible as the transition moves forward.

In response to a suggestion from Dennis Elsenbeck that the Council expand beyond the Jobs Study and beyond what has been done at the federal level to better to embark on a market study to define the emerging technologies and to take a more prospective approach, several Council Members, including Commissioner Reardon and Co-Chair Harris agreed with that suggested approach.

In response to an inquiry from Peter Iwanowicz regarding the scope of the proposed Office of Just Transition and whether it is envisioned to encompass equity rather than only labor and workforce issues, Mr. Dickerson responded that many of the comments favored more of a "community assurance fund" rather than strictly a worker support effort. He also noted that different groups and communities may define that measure of support in different ways.

Co-Chair Harris had noted earlier in the meeting that the discussion of the Climate Justice Chapter would be postponed as many of the comments are closely related to strategies in other Chapters and are more appropriately discussed when those Chapters are presented to the Council. She also stated that the discussion of the Adaptation and Resilience, also slated for this meeting, will be taken up at the next scheduled Council meeting.

Next Steps

Sarah Osgood, Executive Director, Climate Action Council reviewed the tentative schedule of Council meetings and topics for the remainder of 2022. The next meeting, scheduled for October 13, 2022, will include an update on the Integration Analysis, as well as a discussion of feedback on the Gas Transition, Building, Health, and Industry Chapters, as well as a discussion on Adaptation and Resilience, originally on the agenda for this meeting.

In response to an inquiry from Dennis Elsenbeck regarding the recently released outlook from the New York Independent System Operator and how to rectify any gaps between that which subject matter experts are projecting against what is in the Scoping Plan, Carl Mas noted that there is an element of uncertainty in forecasting regarding such elements as imports or certain system demands, but was encouraged that at least one load forecast undertaken in the Integration Analysis was adopted by the New York Independent System Operator as one of its scenarios. Mr. Mas stated that the team will consider whether a comparison of commonality and understandable differences can be efficiently undertaken to respond to this inquiry. He also noted that both teams are at the table, iterating together at every cycle and informing each scenario. Mr. Elsenbeck appreciates any opportunity to close the gap on facts being presented before finalizing the Scoping Plan.

In response to an inquiry by Raya Salter in terms of aligning science and the facts and documenting where certain information presented in the Scoping Plan was derived, Ms. Osgood stated that there will be citations and references and can consider additional resources to be posted on the webpage – endeavor to ensure that the Scoping Plan is well documented, and she welcomes additional input on that during the review of the redlined draft document.

In response to an inquiry by Donna DeCarolis regarding receiving suggested edits and redline documents in advance of the meetings, Ms. Osgood confirmed that additional time, as much as 7 to 10 days in advance, will be provided for that portion of the process.

And with that, the meeting was adjourned.

NEW YORK STATE OF OPPORTUNITY. Climate Action Council

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

Meeting Agenda

September 29, 2022

- Welcome
- Consideration of August 23, 2022, Minutes
- Consideration of September 13, 2022, Minutes
- Consideration of By-Laws Amendments
- Integration Analysis Update
- Subgroup Progress Reports
- Discussion of Feedback by Topic:
    - Adaptation & Resilience
    - Climate Justice
    - Just Transition
- Next Steps