

MINUTES OF THE CLIMATE ACTION COUNCIL MEETING

HELD ON NOVEMBER 7, 2022

Pursuant to Notice and Agenda, a copy of which is annexed hereto, a meeting of the Climate Action Council (“Council”) was convened at 2:00 pm on Monday, November 7, 2022 at Meeting Room 6, 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 (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 (Carley Hume, Designee)
- 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 (Ian Wells, Designee)
- Roberta Reardon, Commissioner, New York State Department of Labor
- Anne Reynolds, Executive Director, Alliance for Clean Energy New York (by videoconference)
- Robert Rodriguez, Secretary of State, New York State Department of State (Kisha Santiago-Martinez, Designee)
- Dr. Paul Shepson, Dean, School of Marine and Atmospheric Sciences at Stony Brook University (by videoconference)
- RuthAnne Visnauskas, Commissioner and CEO, New York State Homes and Community Renewal

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.

Co-Chair Remarks

Co-Chair Seggos announced the release of \$53 million in federal funding for air monitoring projects, including \$4 million for projects within New York State, \$600,000 of which will be administered by the NYS Department of Environmental Conservation. Governor Hochul announced \$176 million for investments in clean water projects across eleven State counties resulting from federal Bipartisan Infrastructure Law funding. Co-Chair Seggos and Co-Chair Harris attended the announcement ceremony celebrating a \$100 billion investment by Micron, anticipated to result in 50,000 new jobs. Coinciding with the tenth anniversary of Superstorm Sandy, Co-Chair Seggos highlighted the announcement by Governor Hochul of the creation of the State Office of Resilient Homes and Communities to further protect New Yorkers from the effects of climate change.

Co-Chair Harris stated that Edwards Vacuum, a major semiconductor supply chain manufacturer intends to invest \$319 million and to create 600 jobs in Genesee County at its facility. Also, NYSERDA selected a team to design, build, and operate the State's Integrated Energy Data Resource platform to expand access to data and support new, innovative business models for the benefit of energy consumers.

Co-Chair Harris also reviewed the process and timeline that will be used to revise the draft Scoping Plan, including a timeline for review, incorporating feedback from public comments and subgroup work products, as well as feedback on potential revisions from the Council, all leading toward a December 2022 vote to approve the final Scoping Plan. Given the schedule, emphasis will be on resolving open issues identified in previous meetings. Co-Chair Harris reminded all that the Climate Act requires the final Scoping Plan to be updated every five years to ensure the included strategies are updated to reflect the rapidly changing world with regard to science, technology, and generally.

Co-Chair Seggos reviewed the Council decision-making process, which includes a preference for consensus on the final Scoping Plan and that there has been a good faith effort to produce a Scoping Plan that meets the most important interests of members of the Council. While the goal is to produce a consensus document, in the absence of complete consensus, decisions that are consistent with the Climate Law and representative of feedback received will also be included. The categories of feedback to be addressed during the remaining meetings include items for Council discussion, items for Staff follow-up, and noncontroversial and grammatical edits.

Integration Analysis Update

Carl Mas, Director, Energy and Environmental Analysis, NYSERDA presented information from the Integration Analysis on the potential for additional nuclear energy. Mr. Mas stated that, in 2021, the State's current nuclear fleet contributed approximately 25% of in-State generation, 31 terawatt hours of zero-emission power. The Integration Analysis mitigation scenarios include 20-year license extensions for upstate nuclear facilities and prior analysis presented showed that without this extension (and assuming retirements after 60-year lifetimes), electric system costs would increase by about \$9 billion (net present value) for infrastructure investments needed to replace that energy source.

Mr. Mas presented information on the significant improvements of advanced nuclear reactors over traditional reactors, including inherent safety features, lower waste yields, greater fuel utilization, superior reliability or resilience, resistance to proliferation, increased thermal efficiency, and the ability to integrate into electric and nonelectric applications. Potential use cases under the Climate Act could include zero-emission electricity, industrial process heat and hydrogen production. In providing a current “state of the market” analysis, Mr. Mas stated that several companies are pursuing advanced nuclear reactors, including a small modular reactor design, and the U.S. Department of Energy has been a driver for market development and project demonstration. Several utilities, such as the Tennessee Valley Authority, Utah public utilities and Energy Northwest in Washington State are also pursuing advanced nuclear development. The Federal policy landscape includes the Nuclear Energy Innovation Capabilities Act of 2018, Nuclear Energy Innovation and Modernization Act of 2019, the CHIPS and Science Act of 2022, and the Inflation Reduction Act.

The objective of the nuclear sensitivity was to explore how introducing new nuclear capability (with Inflation Reduction Act incentives) as a resource could impact electric capacity build and system costs, and to explore the impact of both high and low technology cost sensitivities. Mr. Mas also explained, in detail, the assumptions used in the economic analysis screening employed.

The key findings of the analysis were that, under a high-cost nuclear sensitivity, no nuclear capacity was selected, and under a low-cost sensitivity, 4 gigawatts of new capacity were added by 2050. Both scenarios included a majority of the energy and installed capacity are wind and solar by 2050. With a 90 percent capacity factor, the new nuclear displaces nearly 12 gigawatts of intermittent renewable energy and 5 gigawatts of firm resources and battery storage. The nuclear units can provide about 33 terawatt hours of carbon-free electricity generation in 2050. The availability of the Inflation Reduction Act and lower cost trajectories are essential for the potential economic competitiveness of nuclear. Adding new nuclear capacity and displacing renewables and firm generation could reduce electric system costs by \$1.1 billion. However, transmission costs and the lack of operational flexibility inhibit a larger nuclear buildout and significant construction and permitting challenges remain.

In response to an inquiry by CEO Falcone as to when any new nuclear units were assumed to become operational, Mr. Mas stated that it would be approximately in the years 2040 to 2050 timeframe, reinforcing the benefits of a more flexible policy framework that can adapt over time.

In response to an inquiry by Dr. Howarth regarding whether there are current subsidy implications by the early retirement of any existing units that would have an impact on the \$9 billion in anticipated costs of early unit retirements, Mr. Mas stated that the \$9 billion estimate assumed the cost of replacing existing unit capacity for units that do not continue to operate under current licenses for about 20 more years. As for the subsidy inquiry, he stated that is a dynamic answer depending on currently provided subsidies and current energy market conditions.

In response to an inquiry by Dr. Howarth regarding the accuracy of the 90 percent capacity factor estimates, Mr. Mas explained that post-deregulation, there has been an increase in utilization rates and capacity factors of the New York nuclear fleet. He added that a lower capacity factor could potentially reflect the flexibility of new systems that have built-in storage, indicating an increased ability for nuclear units to ramp up and down and, therefore, demonstrate more value.

Dennis Elsenbeck suggested that the private companies highlighted at the beginning of the meeting have need for consistent power and power quality and there may not be as much lead time for making such decisions. He added that many of these manufacturing operations run 24 hours a day and seven days a week and this analysis should focus on intermittency and strength of system. He favors the smaller, more standardized nuclear modules, rather than custom modules, suggesting that research dollars may become available to some of the State's flagship universities, which should be addressed. He also suggested that the final Scoping Plan language be revisited to ensure these technologies are addressed.

In response to an inquiry by Chair Christian as to the nuclear development timeline from initial proposal to production of power and to what degree transmission costs and needs factor into the \$9 billion replacement estimate, Mr. Mas explained that the capacity expansion model co-optimizes between generation, transmission and storage, so transmission was not a dominant part of the estimate. He added that, as was done for the Power Grid Study, to answer the question of congestion value and the true value of more transmission, one would need to iterate with the New York Independent System Operator using both the capacity expansion and the production cost models. The best estimate as to a development timeframe is at least a decade, given the infancy of the new modular designs.

Gavin Donohue stated his preference for a state policy that is flexible and open to innovation, regardless of the technology. He added that he believes there to be a tremendous amount of job and tax benefits associated with these types of nuclear reactors, and supporting them would be a positive message for businesses that may be willing to invest in the State.

In response to an inquiry by Peter Iwanowicz, Mr. Mas clarified that the zero-emissions reference associated with the reactors means zero carbon (or greenhouse gas) emissions; the same premise of the State's current zero emission credit program. He confirmed that co-pollutants were not addressed in the analysis.

In response to an inquiry by Dr. Shepson as to whether the environmental costs, such as the cost of spent fuel or high-level waste disposal might change the cost estimates if made part of the equation, Mr. Mas stated that the analysis includes end of life decommissioning costs. Given that there is currently no federal central disposal site, any waste would have to remain in place as it does for current nuclear fleets.

As to the overall presentation of the nuclear technology information, Dr. Howarth suggested revisiting how this information may be referenced, or cross-referenced, in the Electricity and Just Transition Chapters of the Scoping Plan language.

Discussion of Potential Edits to Draft Scoping Plan Chapters

Alternative Fuels

Maureen Leddy, Director, Office of Climate Change, NYS Department of Environmental Conservation, presented the discussion items on the use of alternative fuels in the Agriculture and Forestry and Waste Chapters, which included suggestions to:

- Clarify that the use of biogas onsite, where feasible and practical, is preferred before refinement of biogas into renewable natural gas for onsite use, with excess renewable natural gas used locally

- Clarify that the recommendation to avoid “significant” new gas infrastructure in the Waste and Agriculture and Forestry Chapters is specific to needs at farm-based digesters, waste resource recovery facilities, or landfills. It was suggested that the use of the descriptor “significant” could be revised to align with the recommendation that gas infrastructure investments should not create a continued reliance on gas or impede the pace of electrification required by the Scoping Plan
- Review the Waste and Agriculture and Forestry Chapters to ensure the treatment of alternative fuels are aligned
- Clarify that the State’s Biomass Action Plan is evaluating applications for alternative fuels not as a substitute for electrification, but as a way to meet strategic needs in order to more effectively advance the wide-scale electrification needed to meet the emission limits; and
- Clarify that sequestration benefits in the Biomass Action Plan are related to opportunities to improve forest management by creating markets for low-grade wood and forest residues.

Dr. Howarth suggested that it is important to state the definitions of biogas (the mixture of methane, carbon dioxide and other gases from anaerobic digesters and landfills) and renewable natural gas (which requires additional refining and results in higher carbon dioxide and methane emissions).

Donna DeCarolis suggested that it be clarified that biogas or renewable natural gas be used in difficult to electrify, strategic uses, and Ms. Leddy agreed to ensure that clarification is made. Ms. DeCarolis also stated that, in some instances, methane emissions are being released into the atmosphere, absent any intervention or opportunity to capture them. Given that, she suggested that capture may help with decarbonization and should be considered in ways that minimize leakage. She pointed out that some other states have a renewable fuel standards or low carbon fuel standards to provide incentives for investing in methane capture and reducing emissions that might otherwise be released.

Mr. Iwanowicz stated his belief that it was generally agreed that this waste stream should be captured and if it cannot be captured, it should be regulated going forward.

Clean Transportation Standard

Adam Ruder, Assistant Director, Clean Transportation, NYSERDA presented the discussion items on the Clean Transportation Standard in the Transportation Chapter which included:

- Whether a Clean Transportation Standard is narrower in terms of allowable options than a clean fuel standard, which would preclude the use of fuels with higher co-pollutant emissions than the fuel being replaced. Also, as the carbon intensity target declines over time and nears closer to zero in year 2050, fewer alternative fuels would generate credits.
- To include a clear direction to advance the policy if the viability, need for, and efficacy supports the policy and the design elements highlighted are incorporated
- Whether it is appropriate to caveat the “organizational capacity given other policies” in the Clean Transportation Standard, and if so, consider whether more specificity be added. The caveat was added to acknowledge the number of needed resources for developing an both an economywide program and a Clean Transportation Standard and that the value added justifies the commitment of resources
- Generally replacing the word “could” instead of “will” or “would” in many instances.

Anne Reynolds clarified her contributions to this input, one of which was to further the distinction between the two standards in the final text, which was the result of much discussion. She added that text regarding resources devoted to implementing new policies should be based on the actual need, rather than the organizational capacity.

Peter Iwanowicz suggested that the Council wait for the full analyses of alternative fuels before decisions are made on their use and suggested continuing this discussion during the next meeting as part of the economywide discussion. He does not believe sufficient feedback has been received from the Climate Justice Working Group, particularly with regard to policies that could be considered regressive or could inadvertently create hot spots.

Dennis Elsenbeck suggested that electrical distribution network needs be accounted for in studies and plans to install electric vehicle charging stations as the current distribution cannot currently support the electric vehicle goals of the Scoping Plan. He suggested this may be a more appropriate discussion for the Electricity Chapter. Mr. Ruder acknowledged the challenges for electric vehicle infrastructure build-out, but clarified that the analysis includes the cost to install sufficient electric vehicle chargers across the State as well as infrastructure updates that will need to occur in the near and long term.

Gavin Donohue stated the Scoping Plan should not seek to identify any specific alternative fuel, but rather to provide the NYS Department of Environmental Conservation the latitude to study the options in the coming years and then make a determination based on data and performance, rather than purely on technology type.

Waste Combustion

Dereth Glance, Deputy Commissioner, Environmental Remediation and Materials Management, NYS Department of Environmental Conservation, presented the discussion items on waste combustion in the Waste Chapter which included:

- that existing capacity for combustion of municipal solid waste is retained to manage some waste
- even with the goal of 85% reduction in waste, a disposal process for waste that cannot be recycled, reused, composted, or otherwise diverted from landfills must be established
- a need to clarify the definition of “high environmental standards” as it pertains to combustors
- to discuss the continued operation of combustors in the context of facilities meeting all permitting requirements, including in the requirements of Section 7 of the Climate Act and examining consistency with the Statewide greenhouse gas emission limits and burdens on disadvantaged communities; and
- deferring to the NYS Public Service Commission as to whether waste combustion for electricity generation will continue beyond 2040

Dr. Howarth suggested the State to do as much as possible to decrease the amount of waste created that cannot be recycled, reused, or composted, and recommended a revision of the waste management strategies at least every five years, as well as working to achieve the goal of reducing waste by 85% before the 2050 goal. Ms. Glance noted the NYS Department of Environmental Conservation updates its solid waste management plan regularly and strives to exceed the goals set. She believes the plan currently in place will reduce waste by 85 percent by 2050, and in the need to include producers in the plan to mitigate waste at the source.

Peter Iwanowicz believes that deferring to the NYS Public Service Commission to make a determination on electricity generated by waste incineration is a misreading of the Climate Act, as the waste incineration permitting, and emissions determinations falls within the authority of the NYS Department of Conservation. Ms. Glance clarified that the deference referred to distributing that energy and that the NYS Department of Environmental Conservation has rigorous air emission monitoring standards. Mr. Iwanowicz stated he believes generation of municipal solid waste and conforming to the zero-emission standard set forth in the Climate Act are intertwined and noted that six of the ten garbage burning facilities in New York are located in Disadvantaged Communities, with one located in an Environmental Justice community.

General Comments

Dennis Elsenbeck applauded the hard work of the Staff, noting the length and complexity of the process to draft the Scoping Plan and that public participation is important and an acknowledgement of the sheer magnitude of the process. This sentiment was echoed by Dr. Howarth, Dr. Shepson, and Peter Iwanowicz.

In response to inquiries from several Members as to if and when other topics on drafting changes would be discussed during the meeting, Sarah Osgood responded that the more straightforward edits, such as grammatical or word changes, were included in the appendix materials, although all issues were welcomed for discussion.

Mario Cilento noted that any reference to labor standards should apply to all work and all workers, including displaced workers, regardless of the type of need they may have, and emphasized that the purchasing standards referred to are both, “Buy New York” and “Buy American”.

Ms. Osgood briefly reviewed the appendix material to provide an additional opportunity for Members to comment during the meeting. Although this information includes both follow-up items and editorial notes, Ms. Osgood stated that many of the items were considered to be relatively non-controversial and generally editorial in nature.

CEO Falcone and Commissioner Ball complimented the thorough and detailed nature of the formatting of the materials.

Mr. Iwanowicz noted that the Agriculture and Forestry Chapter updates seem to adequately capture the discussion on biofuels and biomass and the prioritization of capturing these waste streams, while he feels the Waste Chapter fell short in this regard. He suggested additional efforts to harmonize those discussions.

In response to an inquiry by Mr. Iwanowicz as to the language used, which moved away from identifiers such as “Black, Indigenous, People of Color” communities and to the use of “underserved communities”, Ms. Osgood responded that the shift was in response public comments which called to attention the offensive nature of some terminology used and the shift was an attempt to remedy. Mr. Iwanowicz expressed interest in reviewing some of the public comments that address this issue.

In response to an inquiry by Mr. Iwanowicz regarding whether a definition of green hydrogen would be established, Co-Chair Harris noted the discussion of defining green hydrogen had been raised in the Alternative Fuels Subgroup. Maureen Leddy added that the definition of green hydrogen used refers to hydrogen generated with renewable electricity, with an understanding that it would only be generated when there is excess renewable electricity available.

Donna DeCarolis recalled moving away from identifying hydrogen by color and instead by carbon intensity of its production. Ms. Leddy responded that had been discussed, and confirmed that the subgroup agreed that hydrogen created with a carbon intensity as defined by the U.S. Department of Energy that is also compliant with the Climate Act was acceptable.

Mr. Iwanowicz noted a concern with meetings held with some Council Members and the Climate Justice Working Group for purpose of soliciting additional feedback whereby materials were not received in advance of the meeting. This caused some participants to feel ill-prepared to provide comprehensive feedback. Mr. Iwanowicz urged a better effort in the future given that the involvement of the Climate Justice Working Group and community leaders is so paramount. Co-Chair Seggos agreed that process improvements are warranted, although given the rapid pace of Council meetings, providing information to the Climate Justice Working Group before the Council Members could get ahead of the Council Member feedback. Jared Snyder, Deputy Commissioner, Air Resources, Climate Change and Energy, NYS Department of Environmental Conservation, agreed that certain materials could have been provided in advance, that some unplanned topics were raised during the meetings, and requested and received Council approval to provide additional materials now that they have been distributed to the Council. Anne Reynolds agreed with holding a second meeting.

Gavin Donohue raised the issue of defining fossil gas. Dr. Shepson and Dennis Elsenbeck expressed their belief that not many people will know what the definition of fossil gas is (as opposed to the term natural gas), even if provided within the document.

Next Steps

Sarah Osgood presented the schedule for the remainder of the year, noting the continuation of distribution and discussion of potential edits for the remaining Scoping Plan chapters in anticipation of the discussion slated for the November 21, 2022 meeting. Final resolution of any outstanding items will be discussed at the December 5, 2022 meeting, and a final vote on the Scoping Plan is planned for the December 19, 2022 meeting. She reminded everyone that the remaining Council meetings are scheduled for four-hours to accommodate anticipated discussion needs.

With that, the meeting was adjourned.



Climate Action Council

KATHY HOCHUL
GOVERNOR

DOREEN M. HARRIS
CO-CHAIR

BASIL SEGGOS
CO-CHAIR

Meeting Agenda

November 7, 2022

- Welcome
- Integration Analysis Update
- Discussion of Potential Edits to Draft Scoping Plan Chapters
- Next Steps