**Comments on CAC Draft Report**

Thank you for this opportunity as a NY resident and longtime decarbonization advocate to provide comments on the CAC Draft Report. New York State and the CAC panel should be commended on their extraordinary efforts to define the scope of study needed to move forward with NY’s ambitious plans for combating climate change.

My comments follow:

* The Draft Scoping Plan does not communicate the specific scope of CAC study/analysis or deliverables that will result from that study. Despite a comprehensive discussion of the urgency for climate change, NY’s proactive efforts, and discussion of decarbonization options, the aim and scope of the proposed CAC study itself remains unclear. In (currently blank) Section 1 or another logical location, the CAC should make clear the scope and schedule of their intended analysis work and the responsibility and authority the CAC will maintain. As written, this draft communicates the complexity of the situation and necessary analysis but does not provide a clear definition of CAC’s responsibility, authority, or work scope in the decarbonization effort.
* The report rightly emphasizes the need for new technology solutions in specific areas like agriculture and innovative long-term energy storage. New York has great universities with bright students anxious to work in that space, but past NYSERDA opportunities have focused on solutions that can be readily monetized rather than on innovation or new ideas. The return to real research (which requires funding) is paramount to solving these challenges. The CAC could play an important role in helping to promote funding and focus to technologies that need development by recommending specific research efforts (and how to pay for that research), or otherwise by providing clear direction to help resolve these deficiencies.
* Some content suggests that the State’s decarbonization goals are all reasonably achievable as long as we spend enough money. This economically focused vision posits that sustainability requires only wealth rather than personal choices, sacrifices, or significant changes in consuming behavior. Business-as-usual approaches will not solve climate change nor the myriad of other environmental issues associated with overconsuming. I urge the CAC in their analysis to consider and communicate the need for changes in behavior outside technology choices. Many viable solutions may not directly lead to job growth or financial windfall but are still necessary to meet our environmental emergency. Here are some examples:
* Our existing electrical grid provides more than half of our annual energy through non-emitting nuclear and water resources, and that energy production is steady and predictable. A logical conclusion is that based on present load (before considering electrification), NY could substantially eliminate grid emissions by simply meeting our present needs using ~60% of current electricity demand if we “lived within our energy means”. This pathway may be least impactful to the economically disadvantaged as well as the State budget – and much less of an overall challenge than “high tech” or “intensive development” solutions. While conservation is discussed, it is not sufficiently emphasized.
* To meet our overall decarbonization goals, it is critically important to not only move to electric vehicles but also to choose smaller, energy-efficient electric vehicles (or avoid single-owner purchase altogether) and to avoid excess single-passenger vehicle miles. Those strategies have environmental, health, and community benefits beyond GHG reduction. If we electrify but choose vehicles with more weight and horsepower than we need and continue to use them for frequent single-passenger trips, we may well end with little or no improvement at all to our overall Statewide emissions once we add the *marginal* (natural gas grid) emissions associated with those choices. Public transportation, walk/bike options, vehicle-sharing, carpooling, and similar “old” sustainability options can reap GHG reductions and are more supportive of the economically-disadvantaged.
* Like electrification of transportation, electrification of heat is a needed, but not a sufficient, step. Heating innovations (higher efficiency systems that include water-to-water heat pumps, hot water storage in district systems, etc.), can support significant overall reductions in carbon emissions which ensuring a stable electrical grid., whereas mass-market heat pumps might have little or no positive impact overall.

Thank you again for this chance to provide public comments, and best of success in this important endeavor!

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