

June 8, 2022

Climate Action Council Draft Scoping Plan Comments

Gentlemen:

Thank you for the opportunity to provide written comments on the Climate Action Council's Draft Scoping Plan, "Scoping Plan", dated December 30, 2021. My comments, general in nature, are presented by subject matter are not directed to a specific Chapter, section and/or page number. I am commenting on the lack of details that one might consider inappropriate for a Scoping Plan but given the timelines contained within the plan are in the immediate future, adjustments the to the Scoping Plan will be difficult or impossible to achieve.

Severe Strom Frequency:

The Scoping Plan begins by offering examples major storms that caused widespread disruptions. The impression given is that these examples are scientific evidence of climate change. If one were to examine Section 9.2 of the 2017 National Climate Assessment, one would see that the report states there is low confidence in any long-term increases in Tropical Cyclones activity Most, if not all, climate studies that support climate change use a small dataset spanning 50 years or less. To be able to discern climate trends, longer datasets should be studied. Climate is the average of weather over decades.

Additionally, all current climate reports that predict future temperature or sea level rises are dependent on climate models that take into account numerous factors. These mathematical models are powerful but are limited. Small changes to any part of the model's mathematical algorithm, i.e., in the model's starting point or a minor change in any variable used within the model to can lead to exponentially unpredictable model results. The model should be calibrated, i.e., start sometime in the past and apply actual data to see that the model's prediction for the present day is accurate. I do not believe that has been done for the models currently being used.

Don't get me wrong, I do believe that mankind is having an impact on climate. I do not believe it is the crises that is being portrayed by some and by the media. Headlines are generated for publication by cherry picking data in climate reports cited in the Scoping Plan. The total climate picture has not been presented in channels normally used by the general public.

Transition Plan:

The Scoping Plan lacks a *detailed* transition plan that shows how and when changes should be made so as to minimized disruptions to energy supply, not simply a Just

Transition plan. A good transition plan needs show how the increased electrical demand from heat pumps, electric cars, residential use, etc. will be addressed and when natural gas, diesel and gasoline can be gradually reduced, etc., so energy black-outs do not occur. The transition plan needs to include a timeline with the various changes in electrical demand and supply by sources are identified. This type of plan enables management of the transition. Why wasn't a transition plan like the one mention above developed and presented as a part of the Scoping Plan? How and when is such an energy transition plan going to be developed?

Grid Reliability:

The move to increased dependence on renewable energy sources; solar, wind, and hydro, requires a secure and reliable electrical grid, something I think is currently lacking within areas of the state. It is noted in the Scoping Plan that a plan will be developed to address both security and reliability. Government mandates and actions to increase grid reliability has had little to no impact in the past. Many areas of the state currently experience electrical outages following thunder and wind storms that often extend into days. The new electrical transmission line from Canada to New York City will help move renewable electricity to lower New York State but it will also become a liability. If the transmission line were to fail for any reason, there would be a shortage of electrical supply causing blackouts. How will this be addressed?

Classification of Natural Gas and Nuclear Power:

I fail to understand why the Council does not include nuclear power and natural gas with renewables such as wind and solar power. Both nuclear power and natural gas classifications are being reviewed by the European regulators as they realize that there will not be enough electrical power to meet the desired goals in the given timeframe. Both natural gas and nuclear power will, in my opinion, be vital as the state transitions from our current energy mix and will be needed to support dramatic increased electricity demands without major energy disruptions

Natural Gas Usage:

As already noted, the European Union are considering natural gas inclusion in a select group of energy sources, alongside wind and solar power, to reduce greenhouse gas emissions. I believe a complete ban on natural gas appliances on a set date may be a too drastic step to take. There are many gas appliances that already are and/or probably will become much more energy efficient. Natural gas will need to use as an electric heat pump's supplemental heat source in cold climate locations, areas that are much of the state. You should not enact a law of put regulations in place that stops natural gas supply to homes, existing and new, until there is an economical system available to heat the home. There are programs that a homeowner can use to get a partial rebate for the added cost of that appliance but this is not well advertised. A plan that transitions the homeowner from an inefficient gas appliance to an energy efficient gas appliance is better than running the old appliance until it can no longer be repaired.

I think the natural gas's increased energy efficiency potential with resulting reduction in greenhouse gas reduction has not been fully tapped.

Nuclear:

Large nuclear plants currently provide the electrical system's baseload with little or no emissions. These plants are ageing and their continued operation for the long term, longer than 2050, is not guaranteed. The Scoping Plan needs to address this by supporting the development and installation of small modular nuclear reactors in rural areas. Strategic placement of small modular nuclear reactors will increase the overall grid's reliability and prevent widespread major electrical outages due to electrical grid issues. When the solar and wind generation is sufficient to meet the electrical demand, nuclear power can be used to generate green hydrogen for storage and/or manufacturing use while providing a base electrical supply to the grid that is needed to maintain a stable electrical system.

Hydrogen:

Hydrogen, both blue hydrogen and green hydrogen, need to play a bigger role in Scoping Plan. For example, testing is underway to determine how much hydrogen can be used in turbines currently using natural gas. This will reduce greenhouse gas emissions. Hydrogen can be a reliable way to store energy so it can be used to generate electricity when renewable energy generation is not available. Green hydrogen, when coupled with small nuclear reactors, is a carbon free way to power industrial furnaces, heavy transportation, aviation, farm equipment, and, possibly, home heating demands. The Scoping Plan needs to show strong detailed support for the development and use of hydrogen and not limit its use just one or two sectors.

Agriculture:

The Scoping Plan's agriculture sector addresses sustainable forest management, livestock management, etc. I did not see anything regarding how a farmer is supposed to manage his farm without diesel / gasoline powered equipment. This equipment is usually operated for extended hours. I don't batteries can power that equipment on a continuous basis and I didn't see how was addressed in the Scoping Plan. Granted the greenhouse gas emissions may not be all that large, but unless the matter is addressed, the unforeseen consequences of regulations proposed may have ramification far larger than greenhouse gases emission, namely no food or an adverse economic impact.

Home Improvements:

Chapter 12 details the need for changes in the home, including but not limited to heat pumps, insulation, better windows, etc. I do not see the need to upgrade the home's electrical system, from the electrical meter to the breaker box and though the house to be able to charge the electrical car's battery, to run the heat pump, to run the new electrical hot water tank, etc. What sort of incentive will be given to the existing homeowner to make these home electrical upgrades?

New Technology:

There are many references in the Scoping Plan for new technology to fill gaps not addressed by current technology. I believe the way new technology is incorporated into the Scoping Plan needs to be refined. The only new technology that appears to be welcomed is that technology that has already been identified. The Scoping Plan needs to support all technology that reduces or eliminates greenhouse emissions, i.e., green hydrogen generation, small nuclear reactors, upgraded opposed piston engines, and other things not yet identified. Hard dates contained within the Scoping Plan that require residents and industry behavior changes that support the goal is inefficient and will limit development of new technologies.

Emergency Generators:

While emergency generators may be a small greenhouse gas generator in the whole scheme of things, many of the actions proposed within the Scoping Plan will impact the emergency generators located at hospitals, government buildings, power plants, schools, communication facilities, transportation facilities, waste water and water treatment facilities, refrigeration equipment, fueling stations, etc. While batteries may be acceptable for short periods of time, electrical service can be lost for days and weeks, remember March 1991 in Northern New York. How does the Scoping Plan address this issue?

Respectfully submitted,

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