**To the Climate Action Council:**

Thank you for taking the time to read my comments regarding the Draft Scoping Plan.

First in support of the Plan I can say yes to the following:

* To expanded energy efficiency as STEP ONE.
* To a consumer-focused market-based energy transition.
* To the use of the existing natural gas delivery system and electric system for a reliable, resilient energy system.

I am not in support of:

* The decommissioning of the gas system.
* Gas appliance or wood burning appliance ban.
* Over reliance on intermittent energy production sources like solar and wind.

New York State is north of the 40th parallel. As a result, during the winter months New Yorkers get approx. 9 hours of daylight. Additionally, most areas of the state have on average 121 days of rain annually. Sunlight is unreliable in New York even during the summer months. Solar is a risky investment for energy production purposes in NYS.

In 2017 New York (per NYSERDA) used 145-terawatt hours of electricity. Of the 145-terawatt hours used 2.8 terawatt hours were for transportation. The transportation sector in NYS if one of the biggest consumers of energy. According the NYSERDA 32% of all energy consumed in New York is for transportation. New York is going to require a lot of additional electrical generation and transmission infrastructure if the transportation sector is to be electrified. The biggest challenge facing the electrification of New York’s transportations sector are the energy losses derived from electricity generation and from the combustion of transportation fuel. While electric motors are far more efficient than gasoline powered engines, unless efficient means for generating electricity are developed and employed the losses will be transferred upstream and electrifying New York’s transportation sector will not result in energy savings. The logical choice for additional electric generation is with nuclear power.

New York’s transportation sector consumes approx. 352 terawatt hours. Even with more efficient electric motors and assuming the entire fleet is electrified the required electrical energy would be around 73 terawatt hours. This is a tremendous amount of energy.

I would assert that this council would be remiss to consider that ICE and hybrid and BEV powertrains have their advantages and many consumers in the future will likely have a need for each of these depending on their transportation needs. I would urge that the market is allowed to dictate which power trains are chosen by consumers. There is and will continue to be a market or ICE powertrains (unless it is eliminated by regulatory fiat), while the markets for hybrid and BEV powertrains will continue to grow. Having more energy options rather than fewer would be the logical answer for New York State residents

In my local upstate community, it could potentially cost my family as much as $50,000 to convert and update my home. Our winters are cold and long (56% colder than downstate), our incomes are lower than New York City and Long Island, and our homes are older.

To replace my furnace/boiler with a heat pump would be very expensive and a heat pump may not be suitable for my home. They are more expensive because electricity is more expensive than gas. When the temperature gets below 40 degrees heat pumps become even less efficient. With more modern mini splits heating capability drops off below -5F. Geothermal systems represent the gold standard for zero carbon heating systems in cold climates, however these systems are expensive.

What will the total cost be to me and my family? This has not yet been determined. What happens when the power shuts down like the October Surprise of 2006? Snow took down innumerable power lines. Hundreds of households relied upon gasoline powered generators for upwards of 8-10 days. Many of these same households installed natural gas, whole house generators in the aftermath of that storm.

I would also urge the members to consider that while many wood appliances such as outdoor wood boilers are generally very emission intensive, many newer 2020 EPA certified wood stoves are much cleaner and efficient than their predecessors. The 2020 EPA compliant wood appliances (some are catalytic others are non-catalytic models) are a good alternative in rural areas of the state where dense hardwoods (Maple, Ash, Oak, Cherry, Locust, Beech and Hickory) are readily available as standing dead or dying timber. The key component of efficient wood combustion is seasoned firewood and proper draft. That means that the firewood has a measured moisture content of less than 20%. Ideally the wood would be between 18-12% moisture content. With seasoned hardwood clean combustion in modern wood appliances is easily achieved by following appliance manufacturer recommended burning processes by maintaining hot fires resulting in no visible smoke and very limited creosote deposits in the chimney system over the course of the heating season.

We strongly believe this plan needs retooling. We do not want to experience the rolling blackouts and brownouts that frequent California or experience the tragedy that struck Texas due to unusual frigid temperatures- -temperatures that are a regular occurrence here. New York’s grid must be reliable for NYS residents and businesses. In New York’s climate having reliable energy sources are of paramount importance.

A separate part of the plan is to reduce our reliance on personal automobiles and encourage public transportation, walking, or biking to work. These are not options in many areas of Upstate NY.

We fundamentally do not understand how New York can tackle a significant increase in electric needs with energy that is dependent on wind and weather? Until this question is resolved, it would be irresponsible to move forward with any CAC recommendations.

Sincerely,

Steven Reid