

Dear Climate Action Council Members,

I'm writing to express my concern about some of the recommendations contained in the draft Scoping Plan released which essentially proposes to eliminate natural gas as an energy option in our state.

After skimming the plan, I must disagree with the calls for the virtual elimination of natural gas from our homes, businesses, schools, industry/manufacturers, and other public facilities. Without question this will be an extremely costly endeavor that will entail tremendous resources. Converting our energy systems to all electricity-based sources will require sizable renewable energy development at an unprecedented scale and massive power grid expansion. And that doesn't include what will be needed for the individual conversion of countless homes and businesses across the state.

Surprising too, the plan – despite being well over 800 pages long – doesn't contain any meaningful consumer cost estimates for the required conversions and expansions I reference above. I didn't see any assurances either that these costs – which experts estimate are \$25,000 to \$50,000 per Upstate New York household – won't be passed along to New York's residents. That works out to \$10 to \$25 billion in expenses for Western New York alone. This doesn't factor in the rising energy costs from the supply and demand issues likely created by the Plan's sole reliance on electricity. And, we Western New Yorkers can't afford additional expenses. Buffalo is already the third poorest city in the nation with many of our residents stretched to capacity. Natural gas is simply more affordable, as electricity prices are approximately 3.5 higher.

Speaking of supply... I question the power grid's ability to cover increased demand for winter heating and electric vehicles, and I am clearly not alone. Recent reports published from the NYISO state the operator's concerns about declining levels of reliability as early as 2023. I have also been reading that existing electric-based clean energy technologies can't meet power demand much less maintain reliability, despite the recommended phasing out of natural gas.

As a Western New Yorker, I noticed too that the Plan doesn't recognize the significant differences between Upstate vs. Downstate New York. Upstate would be impacted far more negatively, due to its colder, harsher weather, older, larger housing stock and comparatively lower incomes – despite the fact that Downstate's emission levels are significantly higher than those of Upstate.

The worst part is, none of this is necessary. As a National Fuel employee, I've seen firsthand how our company leaders have worked to research, through a comprehensive study, numerous strategies and innovations to lower emissions and still provide reliable, affordable energy to residents. By adding dual-heat and blending low and no-carbon fuel alternatives like Renewable Natural Gas and Hydrogen, making system upgrades, and leveraging the underground – and weatherproof – distribution system we already have in place, our Guidehouse Study shows that this pathway will not only meet but actually exceed the 2019 Climate Act's emission requirements. We're not alone in recognizing the importance of natural gas as an energy choice. An April 2021 report from Columbia University states, "... making use of the infrastructure already in place could offer a prime route for speeding up and cost-effectively making the considerable changes needed to fully decarbonize the energy sector."

As an energy industry employee, I know that it's far too early to take any energy source off the table for consideration. An all-of-the-above approach can achieve our emissions reduction goals by utilizing all energy sources with underground, reliable natural gas infrastructure that includes low-carbon fuels when wind and solar are unavailable.

Relying on one energy system for everything in New York from fueling our cars, heating our homes and businesses, and manufacturing our products is just too risky, particularly as we see an increasing need for energy

system reliability, resilience, and quicker recovery from more frequent and significant weather events. Thank you for the opportunity to comment.

There are also huge environmental concerns with NYS plan to rely on solar power as a major source of energy for NYS. Solar requires a significant amount of energy up front to produce. Mining, manufacturing and transportation all require substantial amounts energy. Quartz must be processed, and cleaned and then manufactured with other components which may come from different facilities (aluminum, copper etc..) to produce a single solar module. Heating the quartz during the processing stage requires *very* high heat. Manufacturing requires combining multiple materials with incredible precision to produce high efficiency panels. All of this requires lots of up-front energy. With traditional fuels such as natural gas are extracted, cleaned/processed and burned at very large scales, typically in a single location.

To produce solar-grade silicon, semi-conductor processing typically involves hazardous chemicals. Depending on the solar panel manufacturer and country of origin, these chemicals may or may not be disposed properly. Like every industry, there are companies leading by example, and others which cut corners to save cash. Not every company will dump chemicals, or won't recycle their byproducts properly, but there are bad apples out there.

What happens when solar panels break or are decommissioned? As I watch beautiful farmers' fields slowly get destroyed and replaced with solar panels I try to imagine what does the future hold for these panels. Although solar panel recycling has not become a major issue *yet*, it will in the coming decades as solar panels need to be replaced. These are the major environmental concerns when we are talking of extreme loss of wildlife habitat. Removing a major food sources from an area will surely have a destructive impact on the local ecosystem. I fear that Upstate New York will become littered with abandoned solar farms when the leases run out and be the ghosts of solar energy's past. The fear is certainly cause for further investigation and to allow technology to develop and implement a safer transition.

Sincerely,



Brendan Loughheed