Dear Sir/Madam,

My name is Paul Kiesler and I live in the East Village in Manhattan. I am the Co-chair of the **Climate Reality Project NYC Chapter**, which is an organization set up by former VP Al Gore back in 2006. We have 1,000 members in the NYC chapter, and more than 2,000 members across the State; our mission is to educate and advocate for solutions to the climate crisis across all levels of society. As the largest source of GHG emissions in NY is from the building sector, I am also a member of **Renewable Heat Now**, an organization set up to advocate for the electrification of buildings in NY so that we can meet the goals of the CLCPA.

My testimony may be of interest as we have electrified our personal building and transport sector! The first step was to electrify our apartment in an 1850 brownstone in the East Village. The building’s air and water are still heated with gas, but we have air source heat pump HVAC for our apartment, induction cooking and an electric clothes dryer. We also have a small 1880 farmhouse in Gardiner, NY (Ulster County) which has been fully electrified with air source heat pump HVAC, hybrid heat pump water heating, induction cooking, heat pump clothes drying and an electric vehicle.

We have experienced nothing but positive benefits from these changes. In terms of health benefits, we are breathing demonstrably cleaner air than when there was gas and fuel oil combustion in our homes (we have meters which prove this). In addition we have strong financial benefits - the investments are paying off handsomely and are helping us massively deflate our fuel expenses in this inflationary period. Last, we have comfort advantages in that we have air conditioning now and are able to set the temperatures in different zones. Overall. Electrification of our home has been an advantage.

The challenge has been supplying that electricity with renewable resources. Upstate we were able to avail ourselves of the NYSERDA incentives, state and federal tax credits to install solar that supplies our home and car. The process was complicated and expensive. Our cost was about $4/kWh before and $2 after incentives while in Australia the cost is around $1/kWh. The process needs to be streamlined and installations need to scale up quickly to become m uch less expensive!

In the City, we have been trying to get community solar for about 18 months. We are on a waiting list for a site in the Bronx. This program also needs to be massively expanded to meet the demand, and it needs to be freed from geographic constraints so that NYC residents can participate.

I would also like to point out in this preface that this is good business for New York. I spent 30 years as a senior executive for PepsiCo across Europe and Latin America. I do not understand why New York does not a celebrate renewable energy at home so that we can reduce the importation of energy supplies from all over the country and world. We can create so many jobs in the trades and business that we outsource today. Let’s electrify our grid ASAP to grow our home-grown economy!

**A key omission in the scoping plan**

First and foremost, I would urge the Council to immediately fund and start a sustained statewide education and awareness campaign on the benefits of a clean energy economy. This education campaign is necessary to counter the relentless and massive disinformation crusades by fossil-fuel interests and status-quo forces who’ve spent decades perfecting their chicanery, first to deny climate science, and now to cast doubt on the solutions. Given their long track record of weaponizing disinformation to sustain the extraction and burning fossil fuels, the absence of a public information component in the scoping plan is a surprising, but grave oversight. I encourage the Council to add a chapter on community-specific outreach, awareness, and education in the Final Scoping Plan with recommendations for assuaging New Yorkers’ disinformation-induced fears about the CLCPA and for informing them how the law will be implemented and what its climate, health, environmental, and economic benefits are.

**Sector-specific goals and enforcement mechanisms**

The Draft Scoping Plan does not ensure that the CLCPA targets are met. The Draft Scoping Plan: (1) at times does not clearly specify greenhouse gas (GHG) emissions reduction targets for certain sectors; (2) adopts targets that are inadequate in relation to the overall CLCPA targets (i.e., an 85% reduction in GHG emissions by 2050); and (3) includes too many proposals that depend on voluntary action by industry and residents rather than legally enforceable mandates. The Final Scoping Plan must specify the level of mandated reductions in greenhouse gas emissions and co-pollutants that each sector, including electricity generation, must achieve by the years specified in the CLCPA, as well as a timeline for achieving such reductions. The Final Plan should also specify the state agency or agencies responsible for enforcing the CLCPA targets for each sector, including electricity. Taken together, the mandated industry sector reductions shall achieve the CLCPA targets.

In addition to targets by sector, the Scoping Plan must specify in detail the regulatory mechanisms by industry sector that are necessary to ensure that each sector can achieve its goals, and the regulatory steps, including legislation, necessary to achieve these goals.

The Council must review the state’s regulatory structure by each sector to determine what legislative and regulatory changes are necessary to ensure that structures are put in place to mandate that all businesses in New York comply with the clear GHG and co-pollutant reduction targets by a schedule the conforms with the CLCPA, and put recommendations for such changes in the Final Scoping Plan.  When appropriate, GHG reduction targets should be set for individual large businesses, like utility companies.

**Addressing electricity generation**

Electricity generation currently accounts for about 13% of New York’s GHG emissions. However, by 2050, our electricity needs in New York will double, as we electrify our buildings and transportation sectors. Therefore, we not only need to decarbonize our generation capacity, but we also need to add significant amounts of new carbon-free generation capacity.

**How do we get there?**

Decarbonizing and expanding electricity generation in NY is critical to decarbonizing the buildings, transportation and industrial sectors. As we transition our homes, businesses, and private and public transportation to electrical power, affordable, reliable and clean electricity is essential for achieving our net-zero goal.

The recent events in Ukraine underscore the need for energy independence and fossil fuel independence. We must do our part to remove fossil fuels from the international geopolitical equation, and at the same time provide reliable, clean and affordable energy throughout New York State.

I wholeheartedly support the plan to zero out emissions from electricity generation by 2040 and the use of regulatory options and market mechanisms to carry out this plan while maintaining reliability and affordability. I am concerned that some proposals to address long-term storage and peak demand involve using processes that emit GHG’s or are produced with significant embedded carbon.

I strongly support NYSERDA’s renewable energy procurement targets, and we need targets for siting of renewables. I strongly support building renewable energy capacity and shutting down gas-fired power plants while maintaining reliability and affordability. I believe in easing opposition to siting of renewables through public education and other methods. We must have targets to expand roof top and parking lot solar, and pair solar with electrification of low-income housing and opportunities for low-income participation in community renewable energy. The plan should also consider otherwise unusable areas (e.g., highway rights of way and brownfields) for siting of renewables, grid enhancements, and related infrastructure. It is important that local governments have more control through the use of siting tools. Innovative siting such as agrovolatics should be encouraged.

New York should set a year-by-year target for permitting new wind, solar, and battery storage. State agencies should fully leverage tools like community workforce agreements, community benefit agreements, first-source hiring, and project labor agreements to increase access to construction jobs and permanent jobs for disadvantaged communities; work with the capacity of people and develop agreements in partnership with frontline communities, industry, and organized labor; and further emphasize green worker-owned cooperatives. It is crucial that this point is stressed to continually call attention to the state to address barriers to renewable energy siting. All work to this end requires full staffing of relevant state agencies, including the Office of Renewable Energy Siting, engagement with Indigenous Nations in NY, and a comprehensive public education and information push on the benefits and opportunities of clean energy

Since New York State is situated near two of the Great Lakes, pumped storage hydropower should be considered in addition to battery storage technology. I support investment in R&D for long-term energy storage, grid technology, and novel zero-emissions electricity sources.

**Added Emphasis on Distributed Energy Resources**

Distributed energy resources (DERs) like parking canopies are not only essential for NY State to meet its emissions targets, but they will play a critical role in keeping consumer energy prices low as the state transitions to carbon-free electricity. Electricity generation at or near the point of consumption helps reduce the supply charges that customers pay, especially during peak summer demand, and it helps reduce the frequency and duration of curtailment events.

Buildings and transportation together account for more than 60% of New York’s greenhouse gas emissions. It is widely accepted that electrification is the only viable way of substantially decarbonizing these sectors, which means that in the coming years, urban electricity consumption will increase dramatically. DERs such as solar parking canopies will play an important role in keeping long-term delivery rates low during this transition by reducing the amount of expensive transmission infrastructure that will be required to meet future urban electricity demand. I strongly urge the Council to heed the report [*Decarbonizing New York Through Optimizing Distributed Resources*](https://www.vibrantcleanenergy.com/wp-content/uploads/2021/10/VCE-VS-NY_Final.pdf) and proposed significantly increased DER generation targets than the current ones.

There are other very good reasons for encouraging rapid adoption of urban solar canopies:

1. Solar canopies ameliorate urban heat-island effect by shading the paved surface, which is prone to overheating.
2. These solar arrays boost comfort and reduce pollution and energy wasted in cooling the cars by shading them in the summer. They also provide protection from rain and snow. Shoppers would prefer a solar carport to an uncovered parking lot, boosting business activity.
3. These solar canopies could provide pollution-free electricity to co-located electric vehicle charging stations.
4. They would contribute to the local property-tax base.
5. Parking lots and large rooftops are ideal locations for solar electricity generation from a land-use perspective; they help reduce the use of farmland or wilderness areas for solar development.
6. A large open parking lot is one of the most unaesthetic urban sights and one of the worst uses of urban land. Solar canopies redeem some of what a city has already lost to this poor land-use. They help extract more value from this land and ameliorate some of the aesthetic and environmental damage.
7. Every driver prefers a covered/shaded spot to an uncovered one.

**Misinformation and False Solutions**

I strongly oppose blending “green hydrogen” and “renewable natural gas” for wintertime use. Such alternatives are entirely unacceptable because they serve mainly as an excuse for fossil fuel interests to maintain their pipeline infrastructure. This is the reason why despite their gross inadequacies, these are being heavily promoted by the fossil-fuel industry.

Hydrogen combustion emits nitrogen oxides (NOx), a precursor to ozone, particulate matter, and nitrogen dioxide (NO2) at levels that may be higher than those from natural gas combustion because of hydrogen’s high combustion temperature. RNG combustion also results in pollutant emissions similar to fossil gas combustion. The scoping plan must hold firm to the commitment for zero emissions in the electric sector by 2040, and account for the cumulative impact of pollutants on disadvantaged communities.

**Concluding Remarks**

The Climate Action Council put forth three scenarios for our climate future. I am advocating for Scenario #3, which includes low-to-no bioenergy and hydrogen and the simultaneous acceleration of electrification of both buildings and transportation to ensure clean air and a healthy environment.

Thank you for reading my comments,

Paul Kiesler

Co-Chair NYC Metro Chapter Climate Reality Project

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