

Hi my name is Krish Sharma and i'm an 8th grade student at the Bethlehem Central Middle school In Delmar, New York. I got into fighting to end climate change because I want my future to be just as good as past generations were. I'm tired of politicians saying they will do something towards the cause, but then never doing something. I want to be able to live my future with no worry of the world being destroyed due to climate change. That's why I'm sending this testimony. We need to end climate change and the sooner we actually start the more we can slow it down and ultimately end it.

I've personally not experienced major forms of climate change, but a couple of years ago in February I was excited to go on a ski trip weeks before February break, only to find out a few days ahead, that this week would be sunny with temperatures well above 65 degrees fahrenheit. Now the average temperatures in Upstate New York during the months of February are 29-43 degrees fahrenheit, so with temperatures getting over 65 degrees it is extremely warm for upstate NY in the month of February. This abnormal temperature rise was caused by climate change and all the pollution caused by us humans. Now if we went back to past generations times something like this would not have happened, but because of the amount of fossil fuels people rely on these days, this is why that happened and it needs to stop. I should not have to have my excitement taken away as a young child because of climate change and this will only continue to get worse if we don't act now.

Key Omissions in the Scoping Plan

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 that 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.

Public Education Campaigns

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.

Decarbonizing 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 GHGs 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* by Vibrant Clean Energy and recommend significantly higher DER generation targets than the current ones in the Final Scoping Plan.

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. DERs add geographical diversity to the overall solar generation portfolio, thus reducing the overall variability in the total combined solar output of DER and utility-scale projects.
7. 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.
8. 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 (NO_x), 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

You can choose one of the following two final paragraphs

Option 1:

The Climate Action Council put forth three scenarios for the implementation of the CLCPA. I am advocating the Council to reject Scenario #2 and to adopt Scenarios #3 or #4, which include low-to-no bioenergy and hydrogen, the simultaneous acceleration of electrification of both

buildings and transportation, and limited use of low-carbon fuels with high quality offsets to render such use equivalent to zero emissions.

Option 2:

The Climate Action Council put forth three scenarios for the implementation of the CLCPA. 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.

Thank you once again very much for the council's hard work in helping us fight climate change. I don't want to have to keep watching natural disasters unfold without anything being done to stop them from happening. We need to stop climate change. It kills millions and will kill much more if we don't act now.