

To Whom It May Concern,

6/17/2021

I write this letter as the droughts increase and the heat waves rage on our west coast, the glaciers melt at our north and south poles, the oceans slowly rise all around us, and the looming storms swell in magnitude, frequency, and ferocity, awaiting their next opportunity to overwhelm our shores and surge to devastate our city once again.

Per a joint study the National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA) published June 15, 2021 in [Geophysical Research Letters](#), the energy imbalance between the rate at which the Earth is absorbing energy from the Sun and the rate at which the Earth is releasing energy to space has risen from about half a watt per square meter in 2005 to about a full watt per square meter in 2019. As the Earth's surface area is slightly more than 510 trillion square meters, this means Earth is currently receiving at least 510 terawatts (TW) of global warming energy or "equivalent to four detonations per second of the atomic bomb dropped on Hiroshima, or every person on Earth using 20 electric tea kettles at once".

(<https://www.nasa.gov/feature/langley/joint-nasa-noaa-study-finds-earths-energy-imbalance-has-doubled>)

Those that deny that human activities significantly contribute to this massive destructive imbalance forfeit the opportunity to alter forecasted eventual global human extinction level outcomes by changing the way we do things now.

Ride-share vehicles inherently reduce the number of private passenger cars on the road, thus reducing transportation energy expenditure and pollution. If one car owning person chooses to take a taxi instead of driving, then one less car is on the road for that trip. Ride-sharing vehicles improve upon this by hosting multiple passengers. The more ride-sharing vehicles on the road at reasonable competitive prices, the fewer private passenger car trips are needed or incentivised. Thus ride-sharing vehicles reduce traffic congestion by removing private passenger cars from our roads and streets. Comparisons can be made between traffic congestion in New York City (NYC) with its many taxi and ride-share services (in addition to mass transit and alternative modes such as bicycles) and Los Angeles, California with its predominantly private passenger car transportation mode.

Internal combustion engine (ICE) vehicles are typically designed to operate most efficiently at highway speeds, and least efficiently (burning more gas and emitting more pollution) at slower city speeds, with frequent stopping and starting, while moving slowly through stalled traffic, and while idling (at red lights at stop signs, stuck in traffic jams, and during passenger pickups and drop offs). Sadly these lower efficiency operating conditions are exactly the conditions under which taxi and ride-share vehicles operating in NYC, with our maximum speed limit of 25-MPH on city streets, must abide. Thus ICE vehicles operate at lower than optimal design efficiency, and produce more pollution per mile, when used for taxi and rideshare services.

Battery electric vehicles (BEV) do not emit tailpipe pollution during their trips. Energy is expended, pollution emitted, and negative environmental impacts generated during the manufacture of BEVs and their batteries. Additionally BEVs may indirectly contribute to pollution if they cause significant increase in energy demand and production at local fossil fuel burning power plants. However, over the life of the vehicle, BEVs on average generate much less pollution than (ICE) vehicles. (<https://fas.org/sgp/crs/misc/R46420.pdf>, <https://www.nytimes.com/2021/03/02/climate/electric-vehicles-environment.html>)

BEVs are also well suited for NYC taxi and ride-share services because they have zero tailpipe emissions, perform efficiently at low speeds, recover energy via regenerative braking during frequent stops and starts, operate much more quietly than ICE vehicles, typically have driver assistance features to automatically recognize and avoid collisions, and may have higher crash safety ratings as determined by the National Highway Traffic Safety Administration (NHTSA) and the Insurance Institute for Highway Safety (IIHS). Ride-sharing BEVs thus provide the public benefits of indirectly reducing traffic congestion pollution by removing private passenger cars from the roads, as well as directly reducing toxic exhaust, greenhouse gas, and noise pollution by operating quietly with zero tailpipe emissions.

BEVs should be permitted to provide ride-share and taxi services within NYC for the reasons stated above. The current established NYC Taxi and Limousine Commission (TLC) policy of allowing BEVs to provide ride-share and taxi services without a TLC medallion or certificate is environmentally prudent, socially responsible, and economically encouraging as it allows for increased competition, innovative business models, and new job opportunities. These potential economic benefits are of great importance as NYC seeks to recover from the lingering effects of the global pandemic with additional flexibility, resilience, and innovation in our business sectors. The equity and transportation access provided by ride-share and taxi services are important not only to the single mother traveling to work in the early morning rain, the person trying to return safely home from a bar in the late evening, the senior or disabled person trying to get to their doctor's appointment on time, but to us all.

The current established policy permitting BEVs to be used for taxi and ride-share services should remain in effect and should not be altered or amended to reduce its effectiveness, limit its scope, ban, reduce, or cap new BEV taxi and ride-share vehicles, limit public access to BEV taxi or ride-share vehicles, stifle market competition, reduce NYC's ability to provide more hopeful long term outcomes for our residents and commuters, or reduce NYC's historic ability to set a shining example of foresight and wisdom for the cities and governments of the world.

Sincerely,

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NYS Licensed Professional Engineer