



NEW YORK STATE
COUNTY HIGHWAY SUPERINTENDENTS ASSOCIATION

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Comments Regarding the Climate Action Council Draft Scoping Plan

The New York State County Highway Superintendents Association (NYSCHSA) has reviewed the Climate Action Council (Council) Draft Scoping Plan (Plan) mandated by the Climate Leadership and Community Protection Act (CLCPA) and welcomes this opportunity to comment on aspects of the Plan that impact our local highway departments' operations and our abilities to respond to the state's climate goals. NYSCHSA represents the rural, urban, and suburban county highway departments that, together with the other local governments, are responsible for eighty-seven percent of the roads and over half the bridges in New York.

INTRODUCTION

The Plan was released at the end of December 2021. The document determines that achieving intense decarbonization of the New York economy is feasible by mid-century. Emissions limits of the magnitude mandated by the CLCPA requires actions to be taken in all sectors of New York's economy. These efforts will require massive public and private sector investments, the sources of which are not made clear in the Plan.

NYSCHSA seeks to assist the state in reaching the goals set out in the CLCPA and to constructively engage with Council members, state legislators and policy makers on strategies that show promise and on what barriers there may be to achieving these goals.

The Plan lays out goals and strategies for the transportation sector to reduce net greenhouse gas (GHG) emissions to produce environmental benefits. The Plan makes clear that transitioning the transportation sector to zero-emission technologies is central to achieving the State's GHG emission reduction requirements. In most cases this means replacing existing vehicles that run on gasoline or diesel fuel with either battery electric, hydrogen fuel cell or future zero-emission technologies.

A major area of concern is the existing state mandates and goals of the Plan that promote replacing fossil fuel (gasoline, diesel) powered medium- and heavy-duty (MHD) trucks and equipment with those with zero emissions pursuant to an aggressive schedule. The success of this strategy is not yet possible without mature supply markets, commercialization of larger, powerful truck and equipment manufacturing and the build out of electric charging-supporting infrastructure for such vehicles and equipment. So far, the battery technologies that will be relied upon for zero emission vehicles (ZEVs) and backup storage for the power grid are not yet evolved to be widely available, or efficient enough to meet the Scoping Plan's vision as a critical component of the carbon-free statewide 100% electric energy system.

The State's vision is far reaching, and its consequential impacts on the public sector construction and transportation systems are not fully explored or explained in the Scoping Plan or by the available accompanying documents. Nor is the potential cost to local governments, contractors, equipment and vehicle manufacturers,

materials suppliers, the various other transportation-related industries, and most consequently taxpayers, adequately addressed. These expected industry impacts will have down-stream cost affects that will ultimately determine the amount of critical road and bridge work that will be accomplished over the next decade and beyond. Considering local highway departments do not have adequate financial resources now to address the needs of the local transportation systems, these potential cost and supply shocks must be considered from an economic development and safety perspective and public investment adjusted accordingly.

THE TRANSITION TO ZERO EMISSION VEHICLES BY LOCAL HIGHWAY DEPARTMENTS

The Plan determines that, although they comprise only a small portion of total vehicles in the State, diesel trucks and port equipment are one of the largest sources of local air pollution in some communities. These trucks and buses are responsible for 30% of total particulate matter (PM) and nitrogen oxides (NOX) emissions from mobile sources. Replacing diesel trucks and port equipment with ZEV trucks and equipment would have a substantial impact on improving air quality statewide especially in Disadvantaged Communities, according to the Plan.

Legislation signed into law last year establishing a goal for all new light duty vehicles (LDV) and non-road vehicles sold in the State to be zero-emission by 2035 and all new medium- and heavy-duty vehicles (MHV) to be zero-emissions by 2045. To help meet the State's Climate Act requirements and goals, New York must first have a comprehensive and feasible implementation plan in place to achieve these goals. Yet, the strategies proposed aim for an even more rapid transition to ZEVs, achieving close to 100% ZEV sales for LDVs by 2030, 50% ZEVs sales of medium-duty vehicles by 2030, and 80% ZEV sales of heavy-duty vehicles by 2035.

BARRIERS TO ZEV TRANSITION FOR LOCAL GOVERNMENTS

The Plan acknowledges that ZEV trucks, buses, and non-road vehicles are significantly more expensive to acquire than diesel equivalents today. While the Plan forecasts acquisition and operation of electric vehicles to become more cost competitive over time, predicted cost savings resulting from the transition to electric vehicles is realized over time, with a return on investment upwards to 20 years. These up-front acquisition costs within a relatively short phase-in period could very well be beyond the financial ability of most counties and other local governments without massive government subsidies.

In addition, electric truck and equipment designs for highway and bridge construction is a complex problem that requires balancing power, energy, range, performance in extreme temperatures, component life, reliability, weight, payload capacity, and cost. Many highway department vehicles are designed to perform specialized tasks or to be fitted with interchangeable bodies and attachments. These economical practices save taxpayers money. County highway departments together own thousands of Class 8, Class 7, Class 2, and other vehicles, as do our contracting partners. The effective replacement of a majority of these fossil fuel dependent vehicles and equipment with electric models in the time frames set forth does not appear to be possible given the Plan's uncertain reliability on technology that does not yet exist and funding streams that still need to be identified and developed.

While there are considerable efforts by U.S. based and international vehicle manufacturers, and multiple startups to design and test these new generation zero-carbon vehicles, the advancements in technologies and tooling manufacturing plants to produce ZEV trucks at the scale envisioned to meet climate goals worldwide is a fledging enterprise. Few ZEV trucks have demonstrated that they can meet the needs for the levels of horsepower and torque on an hour-to-hour basis required for highway construction or plowing snow. While progress is being made, existing supply chain problems, chip and mined mineral shortages, general inflation, and the rising cost of renewable energy to power this effort are raising concerns. Indeed, the frequent media accounts of bankruptcies of electric car startups, labor shortages in many sectors of the economy, and predictions of a coming nationwide/worldwide recession are all dampening many of the expectations that the CLCPA goals and timelines can be met.

OTHER SCOPING PLAN STRATEGIES THAT WILL STRESS LOCAL GOVERNMENT BUDGETS

To further encourage ZEV adoption, the Plan urges that New York enact legislation that establishes procurement and contracting rules to increase the percentage of zero-emission equipment and vehicles used for State-funded projects (including contractors and subcontractors) based on production and availability, to align with New York's commitment to converting 100% of public MHD fleet (where technically feasible) to ZEVs by 2040.

The affected industries subject to state procurement rules, including local government highway and bridge construction and maintenance operations, and those companies with which we contract for work, will need time to plan for the increased acquisition costs of more expensive zero emission (ZEV) on-road trucks and construction equipment. In addition, the Plan's support of the adoption of "green procurement" policies by the State extends beyond ZEVs to include construction materials. Products that claim to be green or environmentally friendly, should be tested, approved, and certified by a third party as safe and the material suppliers must bear the liability, not the contractors or local governments. Ultimately, product procurement should be a decision for the highway professionals and public project owners based on many considerations including field experience and cost effectiveness. Either way, expect these green procurement practices to add costs to most projects. The Plan needs to recognize that, if there are few states working toward lower carbon materials goals, there will be a smaller number of manufacturers producing those New York specialized products.

The ZEV-truck sales mandates have no accompanying strategy to ensure that ZEV trucks will be available and affordable for a variety of highway construction needs. As previously mentioned, there are many reasons the state should be skeptical. Without improved technologies, significant subsidies, and other financial incentives, and the build-out of charging infrastructure with reasonable electric rates, it is hard to see the public highway construction sector as a responsive market for MHD ZEV trucks anytime soon.

Even if the cost of ownership is becoming more cost-competitive, the Plan acknowledges, targeted incentives will be necessary to facilitate the transition to emerging ZEV technologies. The Plan recommends funding direct incentives to support the purchase of ZEV trucks and buses, but with a focus on fleets operating in low and middle income and overburdened communities. However, the nature and magnitude of these incentives and the source of funding are not made clear. There must be real and substantial financial and continuing subsidies made available to all local governments throughout the state for on- and off-road vehicles and equipment and for the development of local electrification infrastructure requirements.

The recently enacted Advanced Clean Truck Act is expected to cause GHG "leakage." The new regulations could reduce emissions in New York but the used "fossil fuel" construction equipment in the State will need to be sold or transferred to other construction firms that can then use them freely within surrounding states. The New York's mandates may not be sufficient to promote a competitive, viable market here for zero emission equipment. This could further exacerbate an already unprecedented supply chain and materials cost issues currently impacting projects both public and private.

BRIDGING THE GAP BETWEEN ZEV TIMELINES WITH LOW CARBON FUELS

NYSCHSA is urging that the implementation timelines for some of the Plan strategies, such as ZEV sales mandates, be extended. The Plan recognizes that low-carbon fuels such as bioenergy or green hydrogen have a role to play in sectors that are challenging to electrify, including MHD vehicles and non-road transportation such as aviation and rail. However, the Plan does not promote these alternatives to ZEVs as desirable long-term solutions as they fall short of what is needed to reach the State's rigid emissions reduction targets. The use of renewable diesel can help the transition to a cleaner environment without needlessly retiring currently

functioning equipment. Useful life of equipment must be taken into consideration as it is wasteful to deem it obsolete prematurely.

NYSCHSA members worry that the transition to all-electric construction vehicles (and snowplows) for example could create shortages of viable and critical equipment within a few years. Low carbon alternative fuels such as natural gas and LNG as bridge fuels should also be enthusiastically embraced by the Plan as ways of enabling further renewables development. Due to the disruption of the pandemic, most counties are only just now beginning to retain consultants to conduct studies on transitioning county services and administrative operations to all-electric based. Early review and surveys for those few counties that have completed preliminary, or early-phase studies are identifying many barriers and cost concerns with the transition. As an industry, construction will also have major challenges with charging their fleets in the field.

IMMEDIATE NEGATIVE MARKET REACTION

A concern for planners of highway equipment purchasing is the potential for the disruption and scarcity of the supply of conventional fuels or even affordable and adaptable low-carbon alternative fuels for existing vehicles and equipment even before the sales mandates kick-in. Forcing ZEVs into the market prematurely will lead to negative experiences with the technology and result in increased hesitancy by fleet operators to embrace them. ZEVs reportedly have lower residual values. They will require new maintenance facilities, mechanic training, and parts inventories almost immediately upon first acquisitions of these vehicles. The transition could result in a loss of jobs, a relocation of businesses out of the state, and an adverse ripple effect on our local economies.

It is expected that fossil fuel producers and distributors will continue to reduce their investments in this state or completely exit the New York market in anticipation of low or no profits, additional industry regulations and restricted sources of capital. Further, electricity supply reliability and costs are concerning as the state accelerates its dependence on intermittent renewables and they become a greater percentage of the energy supply. The reconfiguration of the electric grid needs more time to mature to ensure renewable power is available to meet the increased demand throughout the regions where ZEV trucks will be in operation.

THE AVAILABILITY AND RELIABILITY OF RENEWABLE ENERGY TO CHARGE ZEVS IN AN ALL-ELECTRIC SYSTEM

ZEVs will need to be charged in one of the nation's highest-cost electric energy markets. While the State intends to provide rebates or direct investment to encourage the development of charging stations and hydrogen filling stations, where market support is needed, these investments are not targeted to highway departments. Further, the reliability of the grid to support the swift transition to electric vehicles at the same time as emissions reduction efforts are aimed at constructing and retrofitting New York-based industries, commercial buildings, and homes to be all-electric and even aircraft and trains, will mean additional pressures on an electric grid that is already showing signs of stress. The New York Independent System Operator (ISO) Comprehensive Reliability Plan, that evaluates the reliability of NY's grid through 2030, concludes that while the state's bulk electric system is expected to meet reliability requirements, risks to reliability and resilience remain. The study cites key risk factors such as resource adequacy margins tightening across the New York grid through time, from Buffalo to Long Island. New York would experience even smaller margins if additional power plants become unavailable or if demand is greater than forecasted. If the margins are totally depleted, a possibility if the Plan succeeds in retiring many fossil fuel assets as scheduled, the reliability of the grid would be at risk.

The grid must be reliable for local governments to be able to energize services and equipment needed to keep the public safe. Any new policies that increase the cost of energy, reduce the reliability of energy, or increase the cost of emitting GHGs could cause businesses to shift their production or investment outside of New York State. This will hurt New York and provide no aggregate environmental benefits.

SUMMARY OF SUPPORT FOR FLEXABLE IMPLEMENTATION ACTIONS

Existing law directs the conversion of New York based trucking vehicles to ZEVs by 2045. Few local governments are expected to be in the market for ZEV MHD vehicles for some time because of the longevity of current conventional fueled vehicles and the high cost of acquisition. Currently, even if available the cost of ZEVs is approximately three times more. The public sector is not unique in this regard. Since there are currently few ZEV truck prospective purchases, adoption of the Plan's sales mandates now will be premature.

Fittingly, the law also directs the New York State Department of Environmental Conservation, in consultation with other State agencies, to prepare the necessary market-development, incentive and infrastructure-funding strategies over the next few years to achieve the bill's ZEV-truck targets. The state should make this the central focus for now. Instead, the Plan seeks to accelerate the 100% goal by five years.

Improving the prospects of success for meeting the goal of a sustainable and cost-effective market for ZEV trucks will require public and private purchasing subsidies; a robust network of recharging stations; a transition to service and maintenance garages staffed by trained mechanics and stocked with available parts; and ZEV truck roadside assistance networks. These features need to be much further developed before a high volume of ZEV truck sales could reasonably be mandated. To date, we are not aware of any concerted effort on the part of vehicle manufacturers (essentially all located out of state) to reach out to local highway departments to solicit input on their equipment needs and designs, explain electric charging infrastructure characteristics, identify available transitional clean fuel choices or to estimate price points. Further, the New York State Energy Research and Development Authority should be directed to collaborate with counties and offer more assistance (both technical and financial) in planning and preparing for the vehicle and fleet transitions to supplement its efforts regarding electric busses.

To be responsible to taxpayers, public sector ZEV truck and equipment purchases need to be good for the environment, highway department functionality, and fit within county budgets. The market and infrastructure for ZEV trucks in New York is not yet developed to a point to justify the adoption of the aggressive timeline for converting conventional fuel powered truck and construction equipment to 100% zero carbon at this time. We urge that the final Plan reflect the consideration of NYSCHSA comments.

Sincerely,



Andrew P. Avery, P.E.
President

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