

July 1st, 2022

Draft Scoping Plan Comments
NYSERDA
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Introduction

Clean Energy applauds the diligent work of the Climate Action Council in crafting the draft scoping plan and appreciates the language therein supporting a Clean Fuel Standard (CFS). We respectfully request inclusion of a CFS in the final scoping plan's list of recommendations.

Clean Energy is North America's largest provider of renewable natural gas (RNG) vehicle fuel. RNG is increasingly derived from the capture of fugitive emissions from the agricultural sector and has been certified by the California Air Resources Board as a carbon net negative fuel under the state's low carbon fuel standard program¹. Our customers include major fleets such as UPS and Waste Management and we recently signed a contract to fuel 800 of NYMTA's transit buses. The multi-year agreement will displace an estimated 25 million gallons of diesel and reduce greenhouse gas emissions by more than 25,000 tons.

Cleanest Viable Option at Any Point in Time

The emission reduction goals set forth in the draft scoping plan are as admirable as they are aggressive. To attain these goals will require a steady transformation of the transportation sector toward clean and decarbonized fuels. The plan must not solely rely on technological speculation but rather embrace a performance-based approach that will support the cleanest viable options at any given point in time for all varying fleet applications and operations. Failure to include this type of flexibility will likely result in diesel maintaining its dominance and the state falling short of its important emission reduction goals.

For example, battery electric vehicle (BEV) heavy-duty trucks are currently limited to ranges of roughly 150 miles² and require recharging times that can exceed three hours³. Metrans Transportation Consortium conducted an analysis of drayage operations and found that a fleet of 19 drayage trucks would have to be expanded by 70% to complete the same work if replaced with plug-in battery electric trucks thereby substantially adding to costs. These realities limit BEV utilization to only a small portion of short haul routes. The majority of regional and interstate operations require much longer range and faster filling capabilities. Rather than surrender these operations to diesel, significant emissions reductions can be provided by biofuels such as RNG. Biofuel powered trucks have ranges of 1,000 miles or more and refueling times of only five to seven minutes.

¹ California Air Resources Board, Q4 2021 LCFS Data, and certified pathways as of November 8th, 2021.

² <https://www.electrive.com/2022/01/07/kenworth-presents-first-class-8-electric-truck/#:~:text=The%20vehicle%20is%20equipped%20with,at%20up%20to%20120%20kW.>

³ <https://www.fleetequipmentmag.com/kenworth-class-8-battery-electric-t680e-available-order/>

The draft scoping plan sets a new medium and heavy-duty zero emission vehicle (ZEV) sales goal of 40 percent or more by the year 2030, however, adoption and viability of ZEVs in the heavy-duty sector remains speculative. The draft scoping plan acknowledges this significant variable on page 97 where it notes the possibility that even by the year 2050, ZEVs may not be feasible for all medium and heavy-duty vehicle applications.

Full adoption of ZEVs with a zero-emission life-cycle analysis is the aspirational end goal but there are many intermediate steps that will need to be taken along the way to successfully transition to a zero-emission future. Though many speculate, the true timeframe is unknown and, therefore, a policy framework which supports the cleanest viable options available is imperative to maximizing emission reductions.

A Life-Cycle Emission Analysis Provides an Accurate Assessment

Tailpipe emissions are just one segment of total vehicle emissions whereas a full life-cycle emissions analysis measures all emissions related to a fuel's production and use. While ZEVs significantly reduce both greenhouse gas emissions as well as criteria pollutants, the use of the term ZEV gives the impression that these vehicles do not contribute emissions at all, an impression which is false. For example, a ZEV mass transit bus operating in New York contributes over 500 tons of greenhouse gas (GHG) emissions and over 800 pounds of NOx emissions over an average lifecycle according to Argonne National Laboratories' AFLEET emissions calculator⁴. These emissions are largely created by the generation of electricity used to power the bus. Consideration of life-cycle emissions is critical for informed decision making and to assess true environmental progress.

Clean Fuel Standard

An Effective and Reasonable Approach

Clean Energy applauds the Climate Action Council for including a Clean Fuel Standard (CFS) as a policy option in the draft scoping plan. Outside of administrative costs, the policy is budget neutral and unlike grant programs, it applies pressure to the entire on-road transportation sector to transition to cleaner decarbonized fuels. Perhaps the most effective aspect of the policy is that it provides fleet owners with a choice between various clean fuel alternatives to fossil fuels. The operational needs of fleet owners vary greatly. Providing the flexibility necessary for a fleet to choose the cleanest viable vehicle technology for the required duty-cycle will accelerate the transition away from fossil fuels. Furthermore, a CFS judges fuels based on their life-cycle emissions and rewards those fuels that deliver the fewest carbon emissions.

A June 2022 report by Scioto Analysis found that a New York CFS “could abate 16 million tons of carbon dioxide emissions per year when fully implemented.”⁵ To provide context, this annual reduction is greater than the annual carbon emissions from the entire economy of Vermont. Using the estimated 16-million-ton reduction from the Scioto study combined with the Biden Administrations social cost of carbon of \$51 per ton, provides an annual value for a New York CFS of \$816 million.

While the primary objective of a CFS is the reduction of carbon emissions, a CFS provides the co-benefit of reducing local air pollutants. A March 2020 report by Cerulogy projects a clean fuel standard in the state of New York would lead to a cumulative reduction of 1,300 to 3,700 metric tons of NOx by 2030⁶. According to

⁴ [Heavy-Duty Vehicle Emissions Calculator \(anl.gov\)](#)

⁵ Economic and Health Impacts of a Clean Fuel Standard for New York, Scioto Analysis, June 2022.

⁶ Malins, Chris, “New York’s Clean Fuel Future,” Report, Cerulogy, March 2020.

the U.S. EPA, a short period of exposure to NO_x emissions “can aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms.” Regarding longer term exposure, the EPA states that “elevated concentrations of NO₂ may contribute to the development of asthma and potentially increase susceptibility to respiratory infections.”⁷

Near-zero engines, which can be powered by RNG, are certified by the California Air Resources Board to reduce NO_x emissions by 90 percent compared to the current federal diesel NO_x standard. In-use testing by the University of California at Riverside showed the actual in-use emissions to be 95 percent below the current federal heavy-duty diesel truck and bus standard for NO_x⁸.

Addresses Environmental Justice Communities Today

The benefits of an accelerated transition away from diesel through adoption of a CFS will be most closely felt in environmental justice communities. These neighborhoods are commonly adjacent to industrial sites with heavy truck traffic and need relief now from heavy toxic diesel exhaust exposure.

Given the lower income of residents, electric cars may not be a realistic option in the near-term and as acknowledged in the draft scoping plan, it may take more than 30 years before ZEVs can replace all heavy-duty diesel trucks. Evidence of the slow adoption of EVs in the heavy-duty sector is provided by data from California’s Hybrid and Zero-Emission and Bus Incentive Program (HVIP). This program provides vouchers for the purchase of zero-emission trucks and has issued over \$500 million in said vouchers to ZEV-BEVs. Shockingly, 97 percent of the vouchers remain unredeemed, demonstrating a lack of viability and/or commercial availability of heavy-duty BEV trucks⁹. Therefore, in order to address the air quality issues in our disadvantaged communities today, other clean fuels must be utilized.

Advances Electrification and Maximizes Emissions Reductions

A CFS provides the necessary support for electrification efforts and is supported by the leading electric vehicle and recharging industry stakeholders. But unlike an electrification-only policy, a CFS provides support for the replacement of diesel with other clean fuels where electric vehicles are not a viable option. This allows the transportation sector to transition away from diesel at an accelerated pace, thereby decreasing more harmful emissions and greenhouse gases sooner. A study prepared by Ramboll U.S. Consulting, Inc. found that “*Expanded implementation of zero-emission and Low NO_x vehicles, coupled with increased introduction of renewable liquid and gaseous fuels, can deliver earlier and more cost-effective benefits than a zero-emission vehicle (ZEV) only approach.*”¹⁰

Provides the Support Necessary to Tackle Agricultural Sector Emissions

The largest source of methane emissions in the United States is from the agricultural sector. Over 250 million metric tons of CO₂e are produced from this industry each year.¹¹ Capturing these emissions is essential to tackling climate change. A CFS provides the necessary market support for farmers to start addressing this environmental challenge. RNG is increasingly derived from the capture of methane emissions from cattle and

⁷ <https://www.epa.gov/no2-pollution/basic-information-about-no2#What%20is%20NO2>

⁸ “Ultra-Low NO_x Natural Gas Vehicle Evaluation ISL G NZ, Dr. Ken Johnson, February 2016.

⁹ <https://californiahvip.org/impact/#deployed-vehicle-mapping-tool> , June 27, 2022.

¹⁰ Multi-Technology Pathways to Achieve California’s Air Quality and Greenhouse Gas Goals, Ramboll U.S. Consulting Inc., February 1, 2021.

¹¹ U.S. Emissions Reduction Action Plan, The White House Office of Domestic Climate Policy, November 2021.

swine farms. RNG from these sources is a carbon net negative vehicle fuel. In California, RNG, on average, delivered a negative carbon intensity score of -33.33 statewide for 2021. RNG produced from dairies had an average carbon intensity score of -354.5.¹² RNG powered trucks have similar range, power, and refueling time as their diesel counterparts. Their performance profile has made it an easy transition for America's leading fleets.

Conclusion

Supporting the adoption of a CFS is the right policy choice for the great state of New York. It will provide the fastest transition away from diesel, achieve significant emissions reductions in the near-term, address both the transportation sector but also agriculture sector emissions, and grow a resilient green economy in New York. This policy has been successfully implemented in California, Oregon, Washington, and British Columbia, and will soon be implemented across all Provinces of Canada. We respectfully request the Climate Action Council whole heartedly support and recommend adoption of a CFS in the final scoping plan.

Regards,

A handwritten signature in black ink, appearing to read "Brett Barry", written in a cursive style.

Brett Barry
Senior Policy Advisor
Clean Energy

¹² California Air Resources Board, Q4 2020 LCFS Data and Certified Pathways, November 8, 2021.