



**Comments of
Neste
On the
New York State Climate Action Council
Draft Scoping Plan
July 1, 2022**

Neste is pleased to submit these comments on the New York State Climate Action Council Draft Scoping Plan (“Draft Scoping Plan”),¹ which detail our strong support for the inclusion of a Clean Fuel Standard (CFS) in the Climate Action Council’s final Scoping Plan.

Neste believes that a CFS is critical to decarbonizing the entire transportation sector and to New York’s ability to meet its 2030 and 2050 climate goals, as articulated in New York’s Climate Leadership and Community Protection Act (CLCPA). We strongly believe that implementing a CFS in New York will also improve public health, reduce the State’s reliance on fossil fuels, increase equity, create jobs and economic opportunity, and reduce the disproportionate impacts felt by disadvantaged communities due to our nation’s history reliance on fossil fuels. Further, we believe that a CFS is the best policy tool to ensure that New York decarbonizes all segments of the highway and offroad transportation sector, not merely those that are likely to electrify soonest.

Policies that incentivize the decarbonization of “hard-to-electrify” sectors like aviation, heavy-duty transport, and agricultural or other offroad/nonroad diesel equipment will be a critical complement to other policies that may incentivize electrification in niches that are ready for electrification, such as passenger vehicles, school buses, and transit buses. We see a CFS as the most significant opportunity to rapidly and cost-effectively decarbonize these “hard-to-electrify” sectors in New York—segments of the transportation market that will rely on liquid fuels for the foreseeable future—by utilizing drop-in, scalable, renewable, and low carbon liquid transportation fuels.

About Neste

Neste is a publicly-traded, international fuel manufacturer based in Finland with a significant and growing presence in the United States. We are the world’s largest producer of sustainable, low carbon renewable

¹ New York State Climate Action Council, Draft Scoping Plan, December 30, 2021 (hereafter “Draft Scoping Plan”). Abbreviations and terms used herein shall have the meanings attributed to them in the Draft Scoping Plan.

diesel² and Sustainable Aviation Fuel (SAF), with an annual production capacity of 3.3 million tons (1.14 billion gallons) of renewable fuels, which will be increased to 4.5 million tons (1.56 billion gallons) in early 2023. The company aims to increase further the production to 5.5 million tons (1.9 billion gallons) by the end of next year. In 2021, our products helped our heavy-duty on-road customers reduce GHG emissions by 10.9 million tons, and we have a goal of reducing emissions by 20 million tons a year by 2030.

Neste is widely recognized as one of the most sustainable companies in the world. In fact, in 2021, Neste placed fourth on the Global 100 list of the most sustainable companies in the world. Neste has been ranked on this list for fifteen consecutive years and has been ranked as the most sustainable energy company in the world in multiple years.³

Neste represents a new generation of energy sector leadership. The company began as a traditional oil company, and has intentionally evolved into the world's largest producer of renewable diesel and SAF. Through our actions, we have proven that an oil company can transform into a provider of critically-needed climate solutions. Although renewable products now account for the majority of our business, Neste is more broadly in the business of combating climate change and is investing heavily in creating a circular economy by developing solutions where carbon is reused, again and again.

Neste's investments in low carbon technologies have led to the following successes and we hope to have similar results in New York:

- Renewable diesel and SAF produced by Neste emit 80% less carbon over their lifecycle than conventional diesel and jet fuel.
- According to the California Energy Commission (CEC), 30% of the greenhouse gas reductions in the California transportation sector in 2020 was due to the use of renewable diesel. Renewable diesel was the largest source of transportation-related GHG reductions among all alternative fuels, including electricity, hydrogen, natural gas, and the full array of biofuels.
- As of the 4th quarter of 2021, roughly 30 percent of the diesel used in California is fossil-free renewable diesel.

Neste was one of the first major suppliers of renewable diesel into the state of California when it implemented the nation's first Low Carbon Fuels Standard (LCFS). As an early participant in California's LCFS program, as well as in Oregon's Clean Fuels Program (CFP), we have extensive knowledge on complying with low carbon fuel standards. We also have extensive experience supplying renewable diesel and SAF fuels that are significantly less carbon intensive than conventional transportation diesel and aviation fuels.

² Renewable diesel is chemically the same as petroleum-based diesel. This allows fleets to switch from a high-carbon fossil fuel to a low-carbon renewable fuel without investing in new engines, fuel storage or other fueling infrastructure, or other infrastructure. For applications where electrification is not commercially available or feasible in the foreseeable future, it provides a pathway to low-carbon, renewable operations immediately. For applications where electrification will eventually occur (e.g., school and transit buses), it provides a complementary approach that reduces GHG, PM, and other health-related emissions in Disadvantaged Communities and other locations with high diesel emissions immediately, while these fleets gradually transition to electric vehicle alternatives.

³ Neste, "2021 Global 100: Neste Ranked as the World's 4th Most Sustainable Company", January 25, 2021, accessed on June 29, 2022 at <https://www.neste.com/releases-and-news/sustainability/2021-global-100-neste-ranked-worlds-4th-most-sustainable-company>.

Why New York Should Include a CFS in its Scoping Plan

Neste strongly encourages New York to pursue a technology-neutral, science-based approach to developing its Scoping Plan. Central to this view is an acknowledgment that there is no single “silver bullet” to decarbonizing the entire transportation sector—and that decarbonizing the entire sector will be necessary to meeting the State’s CLCPA and Net Zero goals.

To decarbonize the entire transportation sector, the State will need to pursue policies that decarbonize all segments of the transportation sector, even those where electrification will be very difficult. So, while it is increasingly clear that passenger cars and other light-duty vehicles, school buses, and transit buses are likely to see dramatic growth in the sale of zero-emission vehicles (ZEVs), it is equally clear that vehicle turnover rates and the “hard-to-electrify” segments of the market will also need policies to accelerate their decarbonization because they will continue to rely on liquid fuels for the foreseeable future.

These “hard-to-electrify” segments are substantial, and include aviation, heavy-duty transport, agricultural and other offroad/nonroad diesel equipment. As the Draft Scoping plan states, “the transportation sector was responsible for approximately 28% of the State’s emissions in 2019, which includes on-road transportation (59%), non-road such as aviation (12%), emissions from imported fuels (26%) and HFCs used in vehicle air-conditioning and refrigeration (3%).⁴

Three examples illustrate why, even in the most ambitious electrification scenarios, low-carbon, renewable liquid fuels will still be necessary to meet New York’s climate goals:

- DEC’s own analysis underscores the need for a CFS and other policies that can accelerate decarbonization across the board. Even in the most aggressive electrification scenario (e.g., 98 percent of light-duty vehicle sales are ZEVs in 2030), roughly one-third of all transportation energy will still come from fossil fuels in 2050 unless steps are taken to decarbonize the liquid fuels that will still be used then.⁵
- The National Renewable Energy Laboratory’s (NREL) Electrification Futures Study found that, even in a “high electrification” scenario, only 52% of medium-duty trucks and 37% of heavy-duty trucks would be electric in 2050 due to the significant challenges associated with electrifying larger vehicles. The study identified challenges that included battery size, weight, volume, range, and charging duration.⁶
- The “100 Percent Clean Future” report by the Center for American Progress notes that some transportation sectors will not be able to decarbonize from electrification alone and that liquid fuels, like renewable diesel and SAF, will be needed in heavy-duty trucking, aviation, shipping, construction, and freight rail.⁷

⁴ Draft Scoping Plan, page 25.

⁵ Draft Scoping Plan, page 77. See also: [2022-04-18-CAC-meeting-presentation.pdf](#), slide 32.

⁶ See National Renewable Energy Laboratory, Scenarios of Electric Technology Adoption and Power Consumption for the United States, page 45, available at <https://www.nrel.gov/docs/fy18osti/71500.pdf>.

⁷ See Center for American Progress, A 100% Clean Future, page 39, available at <https://www.americanprogress.org/issues/green/reports/2019/10/10/475605/100-percent-clean-future/>.

A CFS will help meet the State's CLCPA goals

A CFS is a technology-neutral, performance and market-based approach that will help New York reduce emissions from the transportation sector and reach the State's ambitious climate goals. Currently, New York remains more than 95% reliant on petroleum in transportation, consuming 6.78 billion gallons of diesel and gasoline in 2019.

The basic concept of the CFS is derived from the original "polluter pays" theory that underlies much environmental regulation: high-carbon fuel producers should "pay" for their pollution, rather than taxpayers or the general public. In the example of a CFS, they do so by buying credits from the providers of low-carbon fuels and vehicle technologies. By basing the system on declining carbon intensity values, the entire sector is increasingly decarbonized over time, while providing significant funds for investment in zero-emission vehicles and low carbon, renewable fuels. The result: faster decarbonization – at no significant cost to the taxpayer or the general public.

A CFS is especially important for the "hard-to-electrify" sectors that are beyond the reach of the State's Zero-Emission School Bus mandate, its Zero-Emission Transit Bus Mandate, and its Advanced Clean Truck Rule. As noted above, non-road sources (including aviation) are 12% of total transportation emissions in New York. Without additional action to reduce GHG emissions from these sources, their share will increase over time, as the highway sector is decarbonized. These sources also generate high levels of particulate matter and other emissions that harm human health. A CFS will accelerate the transition toward biofuels, hydrogen, and other low-carbon solutions in these sectors, thereby helping to ensure that these sectors decarbonize even if they cannot join the shift to battery-electric vehicles that will be happening in other segments of the transportation market.

The financial benefits of a CFS are substantial: according to the Clean Fuels New York Coalition, if New York simply adopted the California Low Carbon Fuel Standard (the first CFS in the nation and the model for the program proposed in the Clean Fuel Standard of 2021 bill (S2962B;A862B)) and continued using the same roughly 5.6 billion gallons of gasoline and 1.3 billion gallons of diesel that it currently uses in transportation each year, it could generate approximately \$1.423 billion in funds to help meet the CLCPA's decarbonization goals for transportation, assuming a credit price of \$200/ton. And, other than some modest administrative expenses, it would generate this annual investment with no additional tax revenue. It is hard to imagine a better investment in a healthier, more sustainable transportation future.

Of course, the CFS must employ a science-based approach when setting carbon intensity (CI) standards to be most effective. Doing so will instill in New York consumers the confidence that available fuels have accurate CI values, and that the most advanced renewable fuels are made available faster and at the lowest cost possible. It will also ensure that these renewable fuels are provided to New York at the lowest cost possible by allowing the most economical fuels to take priority. In its most recent draft Scoping Plan, the California Air Resources Board (CARB) stated that its Low-Carbon Fuel Standard (their name for the Clean Fuel Standard) is performing better than originally modeled.⁸

Renewable diesel and SAF offer significant climate benefits and are already reducing GHG emissions today without any need for infrastructure or equipment upgrades. For example, in California, renewable diesel and

⁸ California Air Resources Board, Draft 2022 Scoping Plan Update, May 10, 2022, page 56.

biodiesel are currently the single largest contributors to emissions reductions under the Low Carbon Fuel Standard, reducing 4.3 million tons of CO₂ in 2018 — far greater than the 1.2 million tons of CO₂ reduced by electric cars and trucks.⁹ The key driver — a Low-Carbon Fuel Standard program that incentivized the rapid growth in the use of renewable diesel in California from 1.8 million gallons in 2011 to 589 million gallons in 2020.¹⁰

California offers a great example of how incentives for low carbon fuels can also accelerate the movement towards electrification in the long-term — and provide near-term health benefits for Disadvantaged Communities in the short-term. For example, in November 2020 California launched its Clean Fuel Rewards Program, a statewide point-of-sale electric vehicle rebate program worth up to \$1,500 per vehicle (depending upon battery size) which is funded by credits from California’s Low Carbon Fuel Standard (LCFS) program. In 2019, California LCFS credits earned by electric vehicles had more than half a billion dollars in market value.¹¹ California’s latest Draft Scoping Plan Update underscored that communities of color and disadvantaged communities have been the biggest beneficiaries of reduced heavy-duty diesel vehicle emissions that have accompanied the introduction of the LCFS and other market-based programs in California.¹² The Draft Scoping Plan cited a 2022 report from the California Office of Environmental Health Hazard Assessment (OEHHA), which stated clearly that California’s programs to reduce heavy-duty vehicle emissions (including the LCFS) had created greater emissions reductions in the state’s Disadvantaged Communities than in communities that scored lower in environmental risk:

“We found that diesel particulate matter (DPM) concentrations have decreased across California for the last 20 years, with the greatest benefits accruing to high-scoring communities identified by CES as having high levels of both pollution and vulnerability to its effects. DPM has decreased in these communities three times more than it has in low-scoring communities.”¹³

The Case for Sustainable Aviation Fuel as Part of a CFS Policy

The Draft Scoping Plan states clearly that aviation is a sector that will rely on a renewable version of today’s petroleum aviation fuel, without specificity about the incentives that would be provided to ensure that this transition actually happens. Airlines want to bring SAF to New York — in fact, Delta recently operated its first-ever LaGuardia flight on SAF, using Neste’s fuel.¹⁴ Jet Blue also uses fuel from Neste and others, and has committed to a target of converting 10% of its total fuel usage on a blended basis to SAF by 2030. However, almost all SAF flights currently originate from California airports, thanks to the incentives provided by that

⁹ See Diesel Technology Forum, Climate Change and Diesel Technology, available at <https://www.dieselforum.org/policy/climate-change-and-diesel-technology>.

¹⁰ California Air Resources Board, Draft 2022 Scoping Plan Update, May 10, 2022, page 18.

¹¹ See <https://blog.ucsusa.org/jeremy-martin/californias-low-carbon-fuel-standard-accelerating-transportation-electrification/>.

¹² California Air Resources Board, Draft 2022 Scoping Plan Update, May 10, 2022, page 15, citing a 2022 report from the California Office of Environmental Health Hazard Assessment (OEHHA) (see footnote 13 below).

¹³ California OEHHA, Summary — Impacts of Greenhouse Gas Emission Limits within Disadvantaged Communities: Progress Towards Reducing Iniquities, page 2, accessed on June 30, 2022 at <https://oehha.ca.gov/media/downloads/environmental-justice//executivesummary020322.pdf>.

¹⁴ <https://www.flyingmag.com/saf-refiner-neste-delivers-fuel-to-laguardia-airport/>, accessed on June 21, 2022.

state's LCFS program. In order to scale SAF up at New York's airports, it will need to implement a CFS program that provides a pathway for using SAF here.

The global aviation industry has committed to reducing emissions by 50% from a 2005 baseline by 2050. Rapid deployment and scale-up of SAF will be critical to achieving this goal or even more ambitious targets because electrification is not feasible in the near- to medium-term for anything other than short-haul regional flights. Fleet turnover is also slower in the aviation sector, with planes produced today expected to have a useful life of 25 years or more. Thus, climate policy for aviation must be built around technologically feasible developments in the industry, including decarbonizing the fuels that will continue to be used. While there is widespread consensus that while aircraft can continue to improve efficiency through use of advanced materials and more efficient engines, there is a similar consensus that the vast majority of use cases (i.e., medium- and long-haul and larger short-haul jets) will require decarbonized liquid fuels through at least 2050.

SAF offers a promising pathway to decarbonization because it is compatible with existing aircraft and infrastructure and can currently be blended with conventional jet fuel as high as 50%. There are currently five approved pathways under ASTM D7566 covering a variety of feedstocks and production processes. Fuel meeting one of the annexes to D7566 is deemed equivalent to the conventional jet fuel specification, ASTM D1655, and is fungible with other jet fuel throughout the fuel distribution system.¹⁵

SAF can provide substantial lifecycle GHG emissions of 80% or more, compared to conventional petroleum jet fuel. In addition, with zero sulfur and no aromatics, SAF also significantly reduces conventional pollutants, which would benefit Disadvantaged Communities near airports that are subject to high pollution burdens. A recent federally-funded study by the Airport Cooperative Research Program found that a 50% SAF blend could reduce emissions of particulate matter (PM), sulfur oxides (SOx), and carbon monoxide (CO) from jet aircraft by up to 65, 37, and 11 percent, respectively.¹⁶ Emerging research further suggests that SAF's PM reductions also deliver additional climate benefits, both from a reduction of black carbon emissions that accelerate Arctic warming¹⁷ and from reduced contrail formation, as contrails have a radiative forcing impact.¹⁸

SAF can be made from a wide variety of sustainable and scalable feedstocks and technologies. These feedstocks include oily waste and residues like animal fat and used cooking oil, lignocellulosic forestry residues, municipal solid waste, waste steel mill gases, cover crops that do not compete with food production, surplus ethanol (or other alcohols), and even captured CO₂ itself. Many of these feedstocks can also be co-processed at conventional refineries, providing an additional opportunity to scale SAF production.

¹⁵ Comprehensive information on SAF can be found on the website of the Commercial Aviation Alternative Fuels Initiative (CAAFI), a public-private partnership co-sponsored by the Aerospace Industries Association (AIA), Airports Council International-North America (ACI-NA), Airlines for America (A4A) and the Federal Aviation Administration (FAA). See www.caafi.org. See also Atlantic Council, Ready for Takeoff: Aviation Biofuels Past, Present, and Future, available at <https://www.atlanticcouncil.org/in-depth-research-reports/report/ready-for-take-off-aviation-biofuels-past-present-andfuture/>; Airlines for America, Deployment of Sustainable Aviation Fuels in the United States, available at https://www.airlines.org/wp-content/uploads/2019/08/A4A-Sustainable-Fuel-Report_FINAL.pdf.

¹⁶ See Airport Cooperative Research Program, Alternative Jet Fuels Emissions: Quantification Methods Creation and Validation Report, available at <http://www.trb.org/Publications/Blurbs/179509.aspx>.

¹⁷ <https://www.neste.com/releases-and-news/sustainability/neste-my-renewable-jet-fuel-wins-award-reduction-blackcarbon-emissions>

¹⁸ See Patrick Leclercq and Bruce Anderson, ECLIF - Emission and Climate Impact of Alternative Fuels and ND-MAX – NASA/DLR Multi-Disciplinary Experiment, Presentation at CAAFI Biennial meeting, December 6, 2018, available at http://www.caafi.org/resources/pdf/3.2_SAJF_Benefits.pdf.

Widespread deployment of SAF, in conjunction with continuing aircraft technology improvements and operational efficiencies, holds the promise of decoupling aviation emissions from global passenger growth and ultimately significantly reducing global aviation emissions. However, significant policy support will be needed to incentivize production and feedstock development.

Stationary Generators, Heating and Rail Opt-In Use of Renewable Diesel:

New York, along with several states, has experienced significant growth in the installation of stationary backup generators. These stationary sources provide emergency backup power for the data center industry or provide essential power for critical infrastructure like hospitals, factories, and public safety. Since renewable diesel is a drop-in fuel that can decarbonize this growing emissions source, operators of stationary generators have expressed strong interest in creating incentives to replace conventional diesel with renewable diesel for these generators. New York should add stationary generators as an opt-in use of renewable diesel in any future CFS. Adding this unique use of renewable diesel is no different than current proposals that allow forklifts and other non-road equipment to use lower CI fuels in California's LCFS and other similar programs.

Similarly, New York should decarbonize the emission from heating oil by incentivizing the use of renewable diesel. New York could be a pioneer by being the first state to tackle these emissions. Allowing such renewable usage as an opt-in fuel in a CFS program could achieve that. Lastly, leaders in the rail sector have indicated to Neste an interest in using renewable diesel if incentivized by New York. As a direct drop-in replacement of fossil diesel, renewable diesel could play an important role in decarbonizing the rail sector in New York if allowed as an opt-in fuel under a CFS.

Incentivizing use of renewable diesel in stationary generators, heating fuel and rail will likely provide significant environmental and health benefits to nearby Disadvantaged Communities and other locations that are adjacent to these emissions sources by reducing criteria and toxic air pollutant emissions, and these benefits are unique to renewable diesel use.¹⁹

Administrative Streamlining:

Neste has a few suggestions that could further optimize the administration of a CFS in New York:

- **Fuel Pathway Reciprocity with Other States:** Similar to Oregon and Washington, New York should allow fuel pathways approved by other state low carbon fuels programs and not require an original application for each fuel pathway. This will minimize administration of any future CFS program in New York, thereby helping to ensure a successful launch when it is implemented.
- **Optional Expedited Application Fee:** Allow regulated parties to pay an optional expedited application fee for fuel pathways that require a more urgent approval. This will ensure that the Authority has the resources to provide faster delivery of the most advanced renewable fuels, and could make New York the top destination of new lower CI fuels.

¹⁹ See California OEHHA, Summary – Impacts of Greenhouse Gas Emission Limits within Disadvantaged Communities: Progress Towards Reducing Iniquities, p. 2, accessed on June 30, 2022 at <https://oehha.ca.gov/media/downloads/environmental-justice//executivesummary020322.pdf>, as well as <https://ww2.arb.ca.gov/our-work/programs/alternative-diesel-fuels>.

The Advantage of a Low Carbon Fuel Standard in New York’s Disadvantaged Communities

Neste strongly believes that the accelerated use of renewable diesel in fleets that are housed or operate in the State’s low-income communities of color and other Disadvantaged Communities will complement ongoing efforts to accelerate electrification in those communities. Indeed, the Draft Scoping Plan clearly lays out the case for incentivizing both the electrification of fleets operating through Disadvantaged Communities, as well as the need to use replacement fuels such as renewable diesel and green hydrogen until that electrification takes place. If both strategies are needed, then it is logical that both electrification and alternative fuels need to be incentivized.

Indeed, as stated clearly above, California has recently confirmed that Disadvantaged Communities reap the disproportionate benefits of the pollution reductions in diesel-fueled heavy-duty vehicles that has occurred because of that state’s LCFS and other market-based mechanisms that have reduced diesel pollution – that diesel PM emissions have decreased in California’s “high-risk” communities three times more than it has in the state’s low-risk communities.²⁰

Neste appreciates and supports the commitment to electrifying the school and transit buses that serve the State’s Disadvantaged Communities by 2035 and 2040, respectively. However, this long-term investment commitment does nothing to relieve the health burdens currently carried by asthmatic children and others in the State’s Disadvantaged Communities. Replacing petroleum diesel with renewable diesel now will reduce PM and NOx emissions in these communities as soon as this fuel switch takes place, while also moving these fleets off fossil fuels years before any future ZEV requirement is implemented. Moreover, the CFS will generate credit revenue that can be used by these school and transit buses to make sure that they do, in fact, shift to ZEVs on or before the statutory deadline. This is a complementary, “no-regrets,” “win-win” solution for these communities today and the State’s GHG goals over the longer term. Implementing a CFS will make it more cost-effective—and therefore more likely—that both the ZEV and the renewable diesel solutions will be implemented and will in a timely way.

Conclusion

In order to decarbonize all transportation—at scale, this decade, to meet our 2030 carbon goals and to provide relief to today’s asthmatic children—New York should adopt complementary strategies that accelerate both electrification and low-carbon, renewable fuels. Even under the most ambitious electrification scenarios analyzed by DEC, roughly 1/3 of the energy used to power the State’s vehicles will be fossil-fueled, unless aggressive steps are taken to decarbonize and replace the gasoline and diesel fuel that will continue to be used. In short, renewable diesel and SAF can and should play a significant role in the State’s low-carbon future.

While heavy-duty, aviation, and maritime are more difficult to decarbonize than light-duty transport, there are significant opportunities to decarbonize these sectors without the need for additional infrastructure or new equipment. A policy approach that is centered on low carbon fuels for these sectors offers significant advantages, and the needed technologies and feedstocks are available. With appropriate policy support, these sectors can meet New York’s decarbonization goals.

²⁰ California Air Resources Board, Draft 2022 Scoping Plan Update, May 10, 2022, page 15.

As stated at the outset, Neste strongly supports a Clean Fuel Standard as the best policy tool to decarbonize all vehicles and engines used in highway and offroad use in New York State. We strongly encourage New York to include the CFS in its final Scoping Plan, and to implement such a program as expeditiously as possible.

Please feel free to contact Ender Reed at ender.reed@neste.com if you want additional information or have questions regarding our submission.

We appreciate your consideration. Thank you for the opportunity to comment.