

17 February 2015

Clerk of the Board, Air Resources Board
ATTN: Mary Nichols, Chairman
1001 I Street, PO Box 2815
Sacramento, California 95812

Re: Notice of Public Hearing to Consider a Low Carbon Fuel Standard

Dear Chair Nichols and Air Resource Board Members:

Thank you for the opportunity to provide comments to the California Air Resources Board (CARB) regarding its re-adoption of the Low Carbon Fuel Standard (LCFS). Neste Oil US, Inc. respectfully presents the following comments for consideration.

Neste Oil continues its successful strategy of focusing on the production of cleaner traffic fuels and has a long history in providing clean fuels to California that have been refined from traditional petroleum products. Consistent with our vision to be the preferred partner for cleaner traffic fuel solutions, Neste Oil has expanded into the production of transportation fuels from renewable feedstocks and is now the leader and largest producer world-wide of renewable hydrocarbon diesel produced at locations in Porvoo, Finland; Singapore; and Rotterdam, The Netherlands. Neste Oil uses a wide variety of sustainably produced vegetable oil feedstocks including soybean oil, palm oil, rapeseed oil, camelina oil, and various biogenic waste oils and residues including animal tallow, technical corn oil, and other triglyceride oils and free fatty acids usually produced as wastes or residues from various industrial processes.

Neste Oil's renewable hydrocarbon diesel (NEXBTL) meets the ASTM D975 specification for diesel fuel; qualifies as CARB diesel; and is a fully fungible, drop-in fuel that can be used in existing diesel engines without a blend wall and which can utilize existing infrastructure. This renewable hydrocarbon diesel has significantly lower carbon intensity as compared to petroleum diesel and is almost free from aromatics and sulfur, whilst reducing NOx, particulate, and hydrocarbon tailpipe emissions.

Neste Oil supports California's commitment to reducing the greenhouse gas emissions associated with transportation fuel and has incorporated this demand for low-carbon fuels into our business plans. Specifically, Neste Oil has delivered, and plans to continue to deliver, commercial volumes of renewable hydrocarbon diesel (NEXBTL), which qualifies as a low carbon fuel, to numerous customers in California.

Stable Program Necessary to Support Capital Investments

Neste Oil, along with many other low-carbon fuel producers, have made significant capital investments in response to the LCFS implementing a demand for renewable or low-carbon transportation fuels. Changing the course or significantly altering the goals of the program at this late stage will have a severe chilling effect on any future potential investments as participants, investors, and capital markets will lose confidence in California's commitment to follow through with its policy goals. Accordingly, re-adoption of a stable LCFS is a necessary next step to fulfil the commitment California made to those producers, to support those investments, and realize true change in the air quality resulting from California's

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transportation fuels. Implementation of a stable Low Carbon Fuel Standard in California will send the proper signals to fuel producers like Neste Oil and will provide a significant driver to draw low-carbon fuels to the State in adequate volumes to comply with the target of 10% carbon intensity reduction by 2020.

In addition to stabilization, ARB should use the re-adoption as a springboard to begin to formulate and implement longer-term targets. Producers cannot recoup large capital investments in a short economic cycle. To further support the investments and growth in the production of low-carbon fuels, the market will require signals that the program will remain effective and robust beyond the 2020 timeframe currently at issue.

Proper Implementation is Key to Success

Opponents of the re-adoption efforts may cite concerns about a potential future lack of credit availability. Neste Oil has confidence that a properly implemented Low Carbon Fuel Standard would stabilize the economic drivers and would be an adequate market signal driving continued volumes of low-carbon fuels to California.

Accordingly, proper implementation of the program – both during the re-adoption transition and under the new program – is paramount to the success LCFS. Neste Oil sees staff's inability to timely process and approve otherwise complete pathway applications as an obstacle to additional volumes of low-carbon fuels to be available for consumption in California.

The simple economic model shows that fuels with a lower carbon intensity yield a higher return. However, absent the confirmed CI determination, a producer might reduce fuel production or instead send the fuel to more economical markets outside of California. The removal of those otherwise credit-generating fuels from the California transportation fuel pool could create a shortage – not because of the failure of the market or program design, but as a failure of implementation.

With the addition of more approved low-carbon pathways, Neste Oil hopes to significantly increase the volume of low-carbon renewable diesel that it will deliver to its California customers. Neste Oil proposes that the ARB direct staff to implement more robust procedures to ensure that fuel producers are not limited from participation in the California market because of gaps in staff resources.

As a supplement to the pathway application processes proposed, Neste Oil reiterates its recommendation that CARB authorize third-party verifiers, who are unrelated to the applicant, to perform due diligence on the proposed pathway and verify the CI modeling and calculations. The role of CARB staff would then be focused on oversight and verification of Method 1 pathway applications and Tier 1 pathway applications, leaving Tier 2 for more specific staff review, if desired. This methodology is in place in jurisdictions of British Columbia, Alberta, and Ontario and is functioning well. Additionally, the European Union's Renewable Energy Directive (RED) similarly allows producers to calculate actual production values and then be confirmed by an independent third-party verifier.

ILUC Considerations

As a part of the re-adoption proposal, staff has included the use of indirect land use change (ILUC) values for crop-based feedstocks. Staff have made considerable efforts to update the indirect ILUC values of corn ethanol and sugarcane ethanol as well as soy biodiesel, revising these values for all of

these pathways downward by 10 to 30 g CO₂/MJ points. These revisions are a result of robust scientific review and stakeholder engagement. However not all of the proposed ILUC values for crop-based fuels have completed the same degree of review to provide adequate confidence. Neste Oil expresses concern regarding some the methodologies used and submits a more detailed analysis and more specific recommendations in the enclosed Attachment A. We look forward to working the staff to refine the ILUC component of the program and modifying the proposal to provide a better result of the indirect land use effects associated with the ever-evolving fuels market.

Renewable Hydrocarbon Diesel Definition

As part of ARB's efforts in the re-adoption of the LCFS regulations, staff identified renewable hydrocarbon diesel as a potential low carbon fuel. The proposed regulation properly describes renewable hydrocarbon diesel as an alternative fuel subject to the LCFS regulations and a biomass-based diesel fuel made from biogenic feedstock sources.

Unfortunately, the proposed definition is less accurate than necessary to describe the various types of fuel available on the market. The proposed LCFS regulation uses the term "renewable diesel". [Of note, staff in the Transportation Fuels Branch have proposed an alternative term and definition for the same product as a part of the Alternative Diesel Fuel Regulation that uses the term "non-ester renewable diesel". At a minimum, we would encourage all programs under ARB to have unified definitions.] While that was a term used in the early commercialization of the fuel, it is not the most accurate term given the wide variety of fuels and different uses of the term. Specifically, some jurisdictions (like Ontario, Canada) use the term "renewable diesel" broadly to include both oxygenated biofuels (fatty acid methyl ester biodiesels or "FAME") along with fungible renewable hydrocarbon diesel (RHD).

Confusion may exist in the market regarding fuels that are not fungible with conventional diesel and are not fully de-oxygenated but are nonetheless called "renewable diesel". As such, that term is not ideal for use by the ARB in its regulations. The commonly understood product available in California and described in the ISOR and proposed regulations is a hydrocarbon oil. The definition should reflect that fuel as accurately as possible.

We propose that the term "renewable diesel" be replaced with the term "renewable hydrocarbon diesel" (including references in the definition of "biomass-based diesel" and in section 95486(b)(1) [energy density table]). We further propose that staff consult with the Oil and Gas and GHG Mitigation Branch and with the Department of Measurement Standards to align the nomenclature ("renewable hydrocarbon diesel") within the various regulations that touch and regulate this fuel.

In order to further align the LCFS definition with those in the Proposed ADF Regulations and the LCFS definition of "biomass-based diesel", we propose including language indicating that the fuel is intended for use in a compression ignition engine and that it must comply with ASTM D975-14a (2014). A uniform definition throughout the various ARB regulations will help reinforce a consistent nomenclature and description, accurately describe the fuel with adequate specificity, as well as avoid unnecessary confusion within the agency.

The proposes definition uses "derived from nonpetroleum renewable resources" as descriptive language. This is less useful for the regulations purposes in that it uses the word 'renewable' in the definition of 'renewable diesel' (potentially sloppy drafting), and attempts to define the fuel using a negative by what it is NOT rather than what it IS. A clearer definition would include the phrase "derived

from biomass.” This is further supported by the fact that the term “biomass” (which is defined in the LCFS regulation) would be clear and adequate.

Accordingly, we propose the following definition (to be used in both ADF and LCFS regulation):

“Renewable Hydrocarbon Diesel” means:

- a) a hydrocarbon oil meant for combustion in compression ignition engines;
- b) derived from biomass;
- c) not a mono-alkyl ester;
- d) registered as a motor vehicle fuel or fuel additive under 40 CFR part 79; and
- e) complies with ASTM D975-14a, (2014) *Specification for Diesel Fuel Oils*

CONCLUSION

Neste Oil appreciates the opportunity to comment on the re-adoption proposals. Like California, Neste Oil is proud of its continued leadership in producing clean transportation fuel. While no one producer or type of low-carbon fuel will be able to satisfy the State’s carbon reduction and air quality improvement goals in the near term, Neste Oil believes its efforts, along with others like it, can contribute to the continued success of the Low Carbon Fuel Standard.

We look forward to continued participation in the California fuel market and the continued success of the Low Carbon Fuel Standard. Please do not hesitate to contact me if at 713.407.4415 or Dayne.Delahoussaye@nesteoil.com if you have any questions regarding the foregoing.

Respectfully submitted,

NESTE OIL US, INC.



Dayne Delahoussaye