Western States Petroleum Association
Credible Solutions • Responsive Service • Since 1907

Thomas A. Umenhofer, CCM, REPA
Vice President

December 4, 2017

Mr. Sam Wade
Branch Chief
California Air Resources Board
1001 I Street
Sacramento, California 95814

sent via email: LCFSworkshop@arb.ca.gov

Re: WSPA Comments on ARB November 6, 2017 LCFS Workshop

Dear Sam,

The Western States Petroleum Association (WSPA) appreciates this opportunity to provide feedback on the California Air Resources Board (ARB) Low Carbon Fuel Standard (LCFS) Workshop, held on November 6, 2017 in Sacramento, CA. WSPA is a non-profit trade association representing companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California and four other western states.

The LCFS Workshop addressed: (1) protocol for carbon capture and sequestration projects, (2) crediting provisions for refineries, (3) renewable electricity and hydrogen crediting provisions, (4) update to life cycle analysis modeling tool, and (5) credit trading provisions. WSPA is providing these comments as part of a continuous effort to provide feedback on the LCFS-related items presented by ARB.

Comments on Draft Regulation Amendments

§ 95484. Annual Carbon Intensity Benchmarks

As noted in previous WSPA comment letters, we continue to believe that the CI reduction benchmarks for gasoline and diesel through 2030 are too aggressive. Even by ARB projections, there will not be enough credits to sustain the LCFS program after the credit bank is exhausted.

§ 95486(a)(3). Buffer Account

In addition to credits that are not able to be credited retroactively, WSPA suggests that another source of credits for any buffer account should be associated with fuel pathway CIs that are found to be lower than the registered level during a verification audit. Any excess credits that would have been generated during the period in question under the lower CI should be the source of buffer account credits. Those credits would then be used should a subsequent audit find that another pathway was registered at a CI lower than it should have or the credits could be used in the event that the responsible party whose error resulted in invalid credits and that party can no longer replace the invalid credits. If such error is within 5% of the registered CI, buffer credits would be used to make up the difference, with no notice of violation issued. In addition, it is suggested that GHG reductions that fall below the 1% threshold pursuant to § 95489(f)(5)(C) be available as credits generated into the Buffer Account.

1415 L Street, Suite 600, Sacramento, California 95814
(916) 498-7750 ▪ Fax: (916) 444-5745 ▪ Cell: (805) 701-9142
tom@wspa.org ▪ www.wspa.org

§ 95487. Credit Transactions

With regard to § 95487(c)(1)(C), WSPA requests that ARB allow 5 business days for the Seller to post the Credit Transfer Form.

§ 95488.8. Special Circumstances for Fuel Pathway Applications

With regard to Table 8, WSPA requests that ARB clarify that the CI of 65 gCO2e/MJ (proposed for biomass based diesel for any feedstock derived from plant oils excluding palm oil) applies to both biodiesel and renewable diesel.

§ 95489(f). Refinery Investment Credit Pilot Program

WSPA supports all forms of flexibility for the Refinery Investment Credit Program. Key improvements would include (but not be limited to): eliminating prescriptive project types, eliminating the 20% cap, having a simple emissions-based threshold for qualifying projects, and eliminating the pilot status.

We are concerned that ARB has replaced such improvements with a new artificial constraint in the form of prescriptive project types for qualification. For example, by proposing to limit credit generation to CCS, renewable electricity, renewable process fuels, and electrification, ARB would not be encouraging other types of projects that can substantively reduce GHG emissions. ARB staff's rationale for this limitation is to avoid rewarding projects that a refinery would have pursued regardless of LCFS credits and ignores the fact that the carbon intensities established for CARBOB and CARB Diesel are calculated using a baseline that takes into account the existing configuration of refineries in 2010. Any subsequent projects (i.e., energy efficiency program) completed by a refinery that result in real, incremental GHG reduction represent a real reduction in the carbon intensity of the products produced by that refinery. While WSPA understands that ARB would want to draw the line at routine maintenance and curtailments, **any unique process improvement project should be eligible to apply for LCFS credits**. Every project will have unique characteristics that will need to be addressed in its application. WSPA believes the prescriptive list of project types as proposed in § 95489(f)(1)(E), is not the right solution and credits, should not be subject to an arbitrary limit set for the generation of refinery credits as proposed in § 95489(f)(1)(I).

With regard to shutdowns, valid emission reduction projects may result in shutdowns of GHG emitting equipment or even entire processing units that emit GHGs, but could be excluded from eligibility. These projects should be eligible. These projects are hard to judge on their face and cannot be properly covered by definitions without being interpreted as limiting. In addition, the regulation should make it clear that projects implemented mid-year can still be credited for the pro-rata share of verified emission reductions that occurred in that year.

WSPA supports the change that ARB has made to § 95489(f)(1)(A) to tie refinery investment credit project eligibility to project completion date (January 1, 2016 or later) rather than permitting. We also support the focus on a project system boundary rather than refinery-wide GHG emissions for credit calculation. This will allow better precision for determination of credits.

Further, WSPA supports the proposal to change to a GHG emissions threshold, versus a fuel intensity threshold for projects. WSPA would note, however, that the 1% threshold proposed is roughly double that which currently exists. A more appropriate threshold would therefore be 0.5%. Further consideration should be given to a lower threshold than this to incent more projects being justified.

1415 L Street, Suite 600, Sacramento, California 95814
(916) 498-7750 ▪ Fax: (916) 444-5745 ▪ Cell: (805) 701-9142
tom@wspa.org ▪ www.wspa.org

WSPA appreciates the urgency with which the ARB is attempting to establish clear and effective regulations for Carbon Capture & Sequestration (CCS). ARB staff has acknowledged that the work has been accelerated to fit the timeline of the overall LCFS Regulation Amendments. This was evident during the November 6th Workshop where it appeared during the discussion of several technical points that ARB staff's work has not progressed to point of readiness for an imminent rulemaking. As a result, staff is leaning toward prescriptive and onerous accounting and permanence protocols that will likely discourage/prevent regulated parties from pursuing CCS projects. WSPA recommends that ARB revise the text to rely on performance-based standards. This approach will provide three benefits: (1) allow reliance on technical performance capabilities which are continually improving, (2) better address project-specific risks and characteristics, and (3) improve the overall rulemaking process. This approach can allow ARB to complete the work while ensuring a practical and fair protocol that will attract rather than discourage/prevent projects. If necessary, WSPA would support ARB staff's withdrawal of the CCS protocol from this rulemaking to allow more time to complete the work that is required to develop practical and fair performance standards that will attract rather than discourage/prevent projects.

A required monitoring of a 100 years after injection into the well (as noted in ARB's Protocol for Carbon Capture and Geologic Sequestration on page 95) is unrealistic. WSPA requests that ARB establish performance-based criteria against which individual projects can apply for closure. Once injection and monitoring wells have been plugged and abandoned, there is little value to ongoing monitoring for surface expressions of the injected CO_2.

Comments on the Lookup Table Pathways

Table A.2. Refining Parameters Used in CARBOB Refining CI Calculations

WSPA requests that the term "refining energy efficiency" should be changed to "CARBOB energy efficiency". Also, CARBOB energy efficiency in the CA-GREET 3.0 model has been revised to 88.64% as compared to 89% in CA-GREET 2.0 model. However, the same reference (Forman et al. (2014)) has been cited for both versions. It is requested that ARB provide the reasons for the marginal decrease in CARBOB energy efficiency.

Table A.4. Comparison of CIs and Refining Details for CARBOB Production between CA-GREET 2.0 and CA-GREET 3.0 GREET

The refinery fuel share mix has been revised in CA-GREET 3.0 model, although, the same reference (Palou-Rivera et al. (2011)) was cited for the fuel share mix for CA-GREET 2.0 model as well. It should be noted that hydrogen use data in Palou-Rivera et al. (2011) is for the year 2006. For the year 2010, for PADD V, the relative share of natural gas and hydrogen seems higher than for residual oil. The list of fuel inputs in Table A.4 do not align with the inputs in Table 3 from Palou-Rivera et al. (2011).

Table B.2. Refining Parameters Used in ULSD Refining CI Calculations

WSPA requests that the term "refining energy efficiency" should be changed to "ULSD energy efficiency". As noted in a previous comment, ULSD energy efficiency in CA-GREET 3.0 model has been revised to 85.87% as compared to 88% in CA-GREET 2.0 model. CA-GREET 3.0 supporting documentation should elaborate on the reasons for the change in ULSD energy efficiency.

Table B.4. Comparison of CIs and Refining Details for ULSD Production between CA-GREET 2.0 and CA-GREET 3.0 GREET

For consistency, the refinery fuel share mix for ULSD for CA-GREET 3.0 model should be the same for CARBOB as stated in Table A.4. CA-GREET 3.0 documentation has not been posted on the ARB website with

1415 L Street, Suite 600, Sacramento, California 95814
(916) 498-7750 ▪ Fax: (916) 444-5745 ▪ Cell: (805) 701-9142
tom@wspa.org ▪ www.wspa.org

key information related to the November 6th Workshop. WSPA requests that ARB post the CA-GREET 3.0 documentation promptly and notify stakeholders as soon as the documentation becomes available.

Comments on the CA-GREET 3.0 Spreadsheet

Under the "Fuel_Specs" tab, the sulfur content in conventional diesel and California diesel should not exceed 15 ppm post-2005. The model shows 200 and 120 ppm, respectively. ARB should correct the specifications and report if any impact to CI values.

WSPA appreciates this opportunity to provide our input regarding the November 6th LCFS Workshop. If you have any questions, please contact me at (805) 701-9142 or via e-mail at tom@wspa.org.

Sincerely,

cc: Catherine Reheis-Boyd, WSPA

1415 L Street, Suite 600, Sacramento, California 95814
(916) 498-7750 ▪ Fax: (916) 444-5745 ▪ Cell: (805) 701-9142
tom@wspa.org ▪ www.wspa.org