



Western States Petroleum Association
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Catherine Reheis-Boyd
President

April 18, 2018

Clerk of the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: WSPA Comments on the Refinery Investment Credit Program and Buffer Account Elements of ARB's Proposed Low Carbon Fuel Standard Regulation Amendments

Clerk of the Board:

The Western States Petroleum Association (WSPA) appreciates this opportunity to provide input to the Air Resources Board (ARB) regarding the Refinery Investment Credit Program (RICP) and Buffer Account elements of the ARB's Proposed Low Carbon Fuel Standard (LCFS) Regulation Amendments. 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. WSPA will be providing additional comments regarding other aspects of the proposed LCFS Regulation Amendments in a separate comment letter.

§ 95489(e) - Refinery Investment Credit Program

WSPA supports a well-designed RICP to provide the opportunity to reduce the carbon intensity (CI) of fuels produced in refineries in California. Such a program can incent both short-term improvements that will often provide criteria pollutant co-benefit reductions, and in the longer-term incent more transformational technologies that can contribute meaningfully for California meeting its climate goals. WSPA's recommended regulatory language modifications for RICP are presented in Attachment A and discussed in detail below.

The industry recognizes the ARB's desire is for the LCFS to incent a variety of types of CI reductions, and must ensure that individual programs in the LCFS are both manageable and would not overwhelm the program in a way to compromise its other objectives. To help understand what a well-designed RICP would need to consider, WSPA commissioned a survey of its member companies to help frame the potential magnitude of utilization of this program. The blinded results were consolidated and are presented in Tables 1-3. **These tables represent industry aspirations; not all of these projects will ultimately come to fruition, but provides a reasonable basis for what the ARB could consider that the program may incentivize.**

The ARB's draft rulemaking language that provides for a project qualification via a GHG emission reduction threshold is an important improvement that we support. The survey results help inform the optimum level to set such a threshold and strongly suggest that a 10,000 MT threshold for projects quantified by direct emission reductions would be appropriate. Even at this threshold, the survey results

would indicate that there would likely only be 2-3 projects per year after an initial tranche of 10-12 pending projects are brought forward when a workable RICP is provided in rulemaking.

Table 1 - Anticipated Total Count of Projects by Year

| | Year Submitted (or Projected to be Submitted) to ARB for Approval | | | | | | | |
|------------------------|---|------|------|------|------|------|------|-------|
| GHG Emission Reduction | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | >2025 |
| 10,000-19,999 MT | 3 | 2 | 0 | 3 | 0 | 1 | 1 | 1 |
| 20,000-39,999 MT | 4 | 1 | 2 | 0 | 1 | 0 | 0 | 0 |
| 40,000-99,999 MT | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| ≥100,000 MT | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |

**Table 2 - Total GHG Emission Reduction Project Credits
Anticipated Average Credits for Year of Application**

| | Year Submitted (or Projected to be Submitted) to ARB for Approval | | | | | | | |
|------------------------|---|---------|--------|---------|--------|--------|--------|--------|
| GHG Emission Reduction | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | >2025 |
| 10,000-19,999 MT | 45,000 | 30,000 | 0 | 45,000 | 0 | 15,000 | 15,000 | 15,000 |
| 20,000-39,999 MT | 120,000 | 30,000 | 60,000 | 0 | 30,000 | 0 | 0 | 0 |
| 40,000-99,999 MT | 140,000 | 0 | 70,000 | 70,000 | 0 | 0 | 0 | 70,000 |
| ≥100,000 MT | 700,000 | 350,000 | 0 | 350,000 | 0 | 0 | 0 | 0 |

**Table 3 - Total GHG Emission Reduction Project Credits
Anticipated Average Credits for Year of Implementation**

| | Year (or Anticipated Year) of Project Implementation | | | | | | | | | |
|------------------------|--|---------|------|--------|---------|--------|---------|--------|--------|--------|
| GHG Emission Reduction | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | ≥2028 |
| 10,000-19,999 MT | 22,500 | 22,500 | 0 | 30,000 | 0 | 45,000 | 0 | 15,000 | 15,000 | 15,000 |
| 20,000-39,999 MT | 60,000 | 60,000 | 0 | 30,000 | 60,000 | 0 | 30,000 | 0 | 0 | 0 |
| 40,000-99,999 MT | 70,000 | 70,000 | 0 | 0 | 70,000 | 70,000 | 0 | 0 | 0 | 70,000 |
| ≥100,000 MT | 350,000 | 350,000 | 0 | 0 | 350,000 | 0 | 350,000 | 0 | 0 | 0 |

Retaining a 1% threshold as a secondary approach could still be of benefit to smaller refiners and provide a pathway for additional projects, and thus should be retained as an alternative threshold.

The survey information further suggests that refineries in California ultimately could, by way of efficiency improvement projects, deliver about 10% of the total CI improvements that would be projected to be required by the ARB's "low demand" case in its illustrative compliance calculator on the LCFS website. Given this, WSPA concurs that setting aside as much as 20% of program credits for these types of projects is unwarranted and would advocate that a 10% limit for these types of projects would be reasonable. Given that the delivery of such projects will vary by facility, it will be important to confirm tradability of such allowances within the LCFS market. That the tradability restriction language has been lifted seems to indicate this is the ARB's intent, but WSPA would appreciate the inclusion of language that would confirm trading of credits derived by the RICP is permitted.

What will be imperative for a successful RICP is that refineries have confidence in the time window during which projects can earn credits. Attempting to define the credit generation window based on a calendar is problematic, as projects will develop over time, and will have significantly variable durations for their development, permitting and implementation. A program that would provide a fixed year of

credits for approved projects upon start-up will effectively address this concern. Given that the major types of investments that refineries make are typically designed to last 25 years or more and it is not uncommon for regulatory agencies to recognize project benefits for the life of the project, this section of the regulation should be considerate of the long-time horizons for such investments. To balance the need that ARB has expressed to drive more aspirational technologies longer-term, WSPA would recommend that a 15-year window be provided for projects that are approved under the RICP. The longest credit generation window that can be provided will incent the maximum number of projects, as the value of these credits would be factored into every project's economic evaluation. More projects equates to more GHG emission reductions, more co-benefit pollution reductions, and more jobs and investment in California.

In § 95489(e)(2)(B)(2) and § 95489(f)(2)(A), it is not clear what the term Volume^{Total} is intended to include that is different from Volume^{XD} in the numerator. WSPA requests further clarification.

In § 95489(e)(1)(E)4, electrification at refineries that involves substitution of high carbon fossil energy input with grid electricity are eligible projects under the proposal. However, refineries with co-generation facilities do not appear to be addressed in the regulatory language. As electrification takes place within a refinery, a co-generation facility may reduce electricity supplied to the grid system. WSPA requests that ARB provide guidance as to how this situation will be handled in the amended regulations.

WSPA supports the concepts that routine maintenance activities should not earn LCFS credits, nor should shutdowns that predominantly reduce the capability of a refinery to produce the high-specification liquid fuels needed by California motorists. Language that attempts to address this, however, has to be carefully constructed as to not inadvertently exclude projects that have a coincidental shutdown of equipment or even full production units, but is not primarily intending to erode refinery capability.

There is a similar concern about the proposed restriction in the latest draft of the rule regarding "crude switching" projects; again, if this language is not written well, projects that the spirit of the program would not intend to exclude could be rejected for consideration upon a narrow interpretation of the language.

In § 95489(e)(1)(E)(5), WSPA requests that the term "shutdown" in second sentence be replaced with term "curtailment" and the following definition for curtailment be added to the end of this provision:

"For the purposes of this section, curtailment is defined as an intentional operational and/or physical change exclusively for the reduction or cessation of CARBOB and CARB Diesel manufacture at the refinery. Curtailment does not include the coincidental rate reduction or shutdown of associated emitting equipment as part of a process improvement project or projects aimed primarily at optimizing refinery efficiency."

In § 95489(e)(1)(E)(5), the term "crude oil switching" has been added to the amended regulatory language. As presented, this term could potentially be interpreted in a manner that would inadvertently disqualify viable RICP projects. WSPA suggests that ARB either remove this term or refined it to better reflect the intent of its inclusion in the section.

Global Warming Potential (GWP) values will change from time to time which can impact the emission calculations. It is unclear in the regulatory language if those changes will be credited or debited to a project at the corresponding number of credits related to the change or will the project be grandfathered in. WSPA requests that the regulatory language provide direction in such cases.

§ 95486(a)(3) - Buffer Account

WSPA appreciates ARB's inclusion of the Buffer Account concept in the proposed regulation amendments. We would like to emphasize that the following design suggestions are intended to improve/enhance this concept. In the LCFS program, there are three verification/validation overarching concerns: ability to correct previous reporting period errors, administrative penalties for minor accounting/recordkeeping/reporting errors/omissions, and variation in actual versus approved pathway CI values of low CI fuels.

WSPA is concerned that the current regulations may leave actual reductions out of obligated party compliance accounting, making it more difficult for such parties to comply. ARB's proposal prohibits retroactive corrections to previously filed quarterly reports. This would eliminate credits from over-reporting a previous quarter's obligation that could be credited if retroactive report amendments were allowed, leaving such credits "orphaned" and uncounted.

We are also concerned that minor accounting/reporting/recordkeeping errors and omissions, and small variations in verified CI values may result in administrative penalties as there is no mechanism for regulated parties to correct these small errors which they have expressed a desire to have.

WSPA believes that these concerns can be addressed through a "Reporting Entity Buffer Account" concept. Specifically, the goals of the concept would be to: (1) address the lack of retroactivity, (2) address minor deviations in actual/expected compliance values, and (3) improve liability protection for minor deviations. WSPA also believes that a Reporting Entity Buffer Account would provide some additional protection to accommodate instances where staff invalidates credits that were previously issued, traded in the marketplace and potentially used to retire individual parties' compliance obligation.

The "Reporting Entity Buffer Account" would be "funded" from four eligible potential sources of credits:

1. Previous reporting period adjustments that identify under-reporting of credits or over-reporting of obligation.
2. CCS credits (as outlined in the finalized CCS protocol)
3. Credits accruing when verification reveals actual CI performance was superior to that anticipated based on certified pathway CI values.
4. Dedicated, on purpose credit purchase in the marketplace at the reporting entity's discretion.

The Reporting Entity Buffer Account would be used to provide credits when:

1. Previous reporting period adjustments that identify over-reporting of credits or under-reporting of obligation.
2. Carbon storage facilities experience CO2 leakage/releases (as outlined in the finalized CCS protocol).
3. A shortfall is identified due to verified actual CI performance falling short of that anticipated based on certified pathway CI values.

Under the Reporting Entity Buffer Account, the sequence of steps to follow when a credit invalidation event occurs would be as follows:

1. The reporting entity that generated the invalidated credits is responsible for making up the shortfall their invalidation created. If that reporting entity has a buffer account, they may use their available buffer account credit balance to satisfy part (or all) of that need.

2. If the credit shortfall is larger than then buffer account balance, the reporting entity is responsible for acquiring credits in the marketplace to satisfy the residual.
3. If the reporting entity that generated the invalidated credits is no longer in existence and unable to make up the residual credit shortfall through market credit purchases, then the obligated party holding (or having used) the invalidated credits may use its available buffer account balance to satisfy part (or all) of the remaining credit shortfall.

The Reporting Entity Buffer account concept also entails a revision in the thresholds before administrative action is undertaken by staff. It is proposed that there would be no administrative action if a Reporting Entity's Buffer Account balance is sufficient to cover the credit shortfall at hand, regardless of the magnitude of the shortfall. If the buffer account balance is insufficient to cover the shortfall, then the criteria proposed by staff on the magnitude of the shortfall would apply (e.g., 5% deviation or 2 CI number difference between actual and pathway CI value).

The ARB LCFS Data Management Systems - comprised of two tightly integrated modules including the LCFS Reporting Tool (LRT) and the Credit Bank & Transfer System (CBTS) - already does have the capability for this type of documentation. The Reporting Entity Buffer Account usage would be limited to the applications described herein. A negative buffer account balance would, by definition, not be permissible. Credits could not be sold or transferred out of the account to another party.

WSPA looks forward to ARB's responses to our comments. If you have any questions, please contact me at this office, or Tom Umenhofer of my staff at (805) 701-9142 or via email at tom@wspa.org.

Sincerely,



Attachment

cc: Tom Umenhofer - WSPA

Attachment A

Attachment to the WSPA Comment Letter to ARB, dated April 18, 2018 Alternative RICP Regulatory Language

§ 95489. Provisions for Petroleum-Based Fuels (e) Refinery Investment Credit Program (1) General Requirements

ARB Proposed Language

(C) The refinery investment credit project must achieve a carbon intensity reduction equivalent to at least 1 percent of pre-project on-site refinery-wide greenhouse gas emissions (baseline) in metric tons per year.

Alternative Language

(C) The refinery investment credit project must generate a reduction of at least 10 kt/yr of CO₂e or 1% of pre-project on-site refinery-wide greenhouse gas emissions (baseline) in metric tons per year, whichever is lower. Further, for any refinery investment credit project including projects involving hydrogen plant(s) or cogeneration unit(s), the baseline calculation of the total applicable refinery emissions shall exclude the emissions from these facilities consistent with their being reported separately under MRR.

§ 95489. Provisions for Petroleum-Based Fuels (e) Refinery Investment Credit Program (1) General Requirements

ARB Proposed Language

(E)5. Process improvement projects that result in carbon intensity reductions per megajoule of total CARBOB and diesel produced. Greenhouse gas emissions reductions due to shutdown, simple maintenance and crude oil switching are not eligible.

Alternative Language

(E)5. Process improvement projects that result in carbon intensity reductions per megajoule of total CARBOB and diesel produced or deliver a reduction in baseline refinery-wide greenhouse gas emissions as outlined in 95489(e)(1)(C). Greenhouse gas emissions reductions due to curtailment, simple maintenance and crude oil switching are not eligible. For the purposes of this section, curtailment is defined as an intentional operational and/or physical change exclusively for the reduction or cessation of CARBOB and CARB Diesel manufacture at the refinery. Curtailment does not include the coincidental rate reduction or shutdown of associated emitting equipment as part of a process improvement project or projects aimed primarily at optimizing refinery efficiency.

§ 95489. Provisions for Petroleum-Based Fuels (e) Refinery Investment Credit Program (1) General Requirements

ARB Proposed Language

~~(F) Credits created pursuant to Section 95489(g) may not be sold or transferred to any other party.~~

Alternative Language

(F) Credits created pursuant to Section 95489(f) may be sold or transferred to any other party.

Attachment A

Attachment to the WSPA Comment Letter to ARB, dated April 18, 2018 Alternative RICP Regulatory Language

§ 95489. Provisions for Petroleum-Based Fuels

(e) Refinery Investment Credit Program

(1) General Requirements

ARB Proposed Language

(H) Credits generated pursuant to section 95489(e)(1)(E)(5) may not be used to meet more than **5** percent of any entity's annual compliance obligation. The Executive Officer will exclude incremental deficits incurred pursuant to section 95489(b) when assessing this **5** percent limitation.

Alternative Language

(H) Credits generated pursuant to section 95489(e)(1)(E)(5) may not be used to meet more than **10** percent of any entity's annual compliance obligation. The Executive Officer will exclude incremental deficits incurred pursuant to section 95489(b) when assessing this **10** percent limitation.

§ 95489. Provisions for Petroleum-Based Fuels

(e) Refinery Investment Credit Program

(1) General Requirements

ARB Proposed Language

(I) Credits may not be generated pursuant to section 95489(e)(1)(E)(5) after January 1, 2025.

Alternative Language

(I) Credits would be valid for a period of 15 years after start-up of an approved RICP project.

§ 95489. Provisions for Petroleum-Based Fuels

(e) Refinery Investment Credit Program

(2) Calculation of Credits

ARB Proposed Language

(B)(3)(A)3. A preliminary estimate of the refinery investment credit, calculated as required in section 95489(e)(2), including descriptions and copies of production and operational data including energy use and other technical documentation utilized in support of the calculation. The production and operational data should cover at least a period of **one year** after the project becomes operational. The application must contain process specific data showing that the reductions are part of the transportation fuel pathway.

Alternative Language

(B)(3)(A)3. A preliminary estimate of the refinery investment credit, calculated as required in section 95489(e)(2), including descriptions and copies of production and operational data including energy use and other technical documentation utilized in support of the calculation. The production and operational data should cover at least a period of **three months** after the project becomes operational. The application must contain process specific data showing that the reductions are part of the transportation fuel pathway.