

**AIR RESOURCES BOARD
LOW CARBON FUEL STANDARD (LCFS)**

**FREQUENTLY ASKED QUESTIONS RELATED TO THE RE-ADOPTED LCFS
REGULATION**

Last Update: January 6, 2016

I. INTRODUCTION

Following the approval to re-adopt the Low Carbon Fuel Standard (LCFS) by the Air Resources Board (Board) at the September 24-25, 2015 Board Hearing, staff has compiled this list of Frequently Asked Questions (FAQs) to assist stakeholders. The purpose of this document is to provide simple and clear responses to the most commonly asked questions or concerns related to the re-adopted regulation.

While this document attempts to provide answers to many of the commonly asked questions, affected entities can also consult these documents for additional guidance related to fuel pathways:

- *Guidance Document for LCFS Pathway Re-certification; and*
- *Guidance Document for LCFS New Pathway Applications.*

Important Web Links

ARB LCFS Home Page:

<http://www.arb.ca.gov/fuels/lcfs/lcfs.htm>

Alternative Fuel Portal (AFP) and LRT-CBTS Reporting:

www.arb.ca.gov/lcfsrt

CA-GREET 2.0 Tier 1 and Tier 2 Models: <http://www.arb.ca.gov/fuels/lcfs/ca-greet/ca-greet.htm>

Fuel Pathways webpage:

<http://www.arb.ca.gov/fuels/lcfs/fuelpathways/fuelpathways.htm>

Critical Dates for Regulation, Re-certification, New Pathway Applications, and Sunset of CIs established under the original LCFS Regulation

Effective Date	Description
January 01, 2016	The re-adopted Low Carbon Fuel Standard Regulation Order goes into effect.
January 31, 2016	Requests re-certification of all Method 2A and 2B pathways certified during the period when the original LCFS regulation order was in effect must be received by this date to ensure a re-certified CI will be available prior to December 31, 2016. All new applications must also be submitted by this date to ensure a certified CI will be available prior to December 31, 2016.
December 31, 2016	All remaining Method 1, Method 2A- and 2B pathways certified under the original LCFS Regulation Order will sunset.

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Does an entity need to register in the LCFS program before beginning the process of obtaining a fuel pathway and certification?

Yes. The first step for registering a pathway in the LCFS program is using the Alternative Fuels Portal (AFP) to submit an "AFP ACCOUNT ADMINISTRATOR DESIGNATION," through which the fuel producer may directly input information, or can give their representative consultant the authority to act on their behalf.

When will re-certification and new pathway applications be accepted under the new LCFS regulation?

Requests to re-certify existing fuel pathways and applications for new pathway certifications have been accepted since November 10, 2015. Once the application for a new Tier 1 or Tier 2 pathway has been deemed by staff to be administratively complete, staff will process the application for pathway certification, and verify the applicant's pathway carbon intensity. Applications deemed incomplete will not be evaluated until the applicant has provided the additional information requested by staff.

How will the new LCFS Regulation affect fuel producers who have existing LCFS pathways?

The new LCFS Regulation sunsets existing fuel pathways (with certified CIs under the previous regulation) on December 31, 2016.

Fuel producers using existing Method 1 Pathway certified CIs should apply for a new pathway using the CA-GREET 2.0 model to estimate their pathway CI.

Fuel producers who were certified as Method 2A or Method 2B pathways have the option to request that ARB re-certify their pathways. If they choose to do so, they must make an official request to the ARB through the Alternative Fuels Portal (AFP). Alternatively, fuel producers may choose to submit new applications to request new fuel pathway CI certifications.

In the case of re-certification, the legacy CI value will sunset when the new value is available so that there is no loss of continuity or the ability to generate credits.

Do I need to supply new information to have my pathway re-certified under the new LCFS?

ARB staff will contact the applicant if additional information is needed. LCFS regulation § 95488(a)(2)(B) states that “Re-certification will be processed by the Executive Officer using information previously supplied to the Executive Officer under the provisions of the former LCFS regulation order, provided such information was complete pursuant to the former LCFS regulation’s requirements.”

When will these new pathway applications and re-certifications be processed and certified?

ARB staff targets certification of all re-certification requests and new pathway applications submitted on or prior to January 31, 2016 by December 31, 2016 (many will likely be certified well before then). Both re-certification requests and new pathway applications received by this deadline will be processed in batches based on fuel type in the following order: ethanol, biodiesel, renewable diesel, compressed natural gas, liquefied natural gas, followed by all others.

What is likely to happen if a pathway holder is unable to submit a request for pathway re-certification or a new pathway by January 31, 2016?

Re-certification requests and new pathway applications will continue to be accepted after January 31, 2016, but staff may not be able to complete evaluation and activate the updated CIs for these submissions by the end of 2016.

Will applicants requesting re-certification need to submit a new CA-GREET 2.0 model with their application?

No. Only applicants requesting new certifications need to submit a new CA-GREET 2.0 model.

For re-certification pathways, will the applicant have a chance to review the re-certified CI scores before CIs go into effect?

Yes. Re-certification applicants will have an opportunity to review the proposed CI score before it goes into effect. If the applicant is dissatisfied with the ARB Staff modeled results being proposed for re-certification, the applicant has the discretion to withdraw the re-certification request and submit an entirely new application.

Where is the correct version of the CA-GREET 2.0 life cycle analysis model?

The new CA-GREET 2.0 model with the Tier 1 and Tier 2 Calculators are available from the CA-GREET website¹. All regulated parties and other entities affected by the re-adopted LCFS regulation must conduct their revised life cycle analyses using the CA-GREET 2.0 model.

¹ CA-GREET 2.0 model: (<http://www.arb.ca.gov/fuels/lcfs/ca-greet/ca-greet.htm>).

How will staff process the data required for re-certification?

Staff will use existing data in CA-GREET 1.8b (and default input values from CA-GREET 2.0 where and when necessary) to re-certify legacy pathways.

If the original information submitted in the pathway has changed, may an applicant update the information at the time ARB re-certifies the legacy pathway?

If any information needs to be changed by the applicant it will constitute a new pathway application.

What is redaction, and how should an applicant seeking LCFS pathway certification protect sensitive or confidential business information from the public view?

The LCFS pathway certification process requires that certain documents associated with the LCFS pathway application process be posted on the LCFS website and available for public comment or inspection. The applicant may request that confidential business information be redacted from those documents prior to posting at the public ARB website. The applicant is given an opportunity to create a second, public copy by redacting confidential business information by blackening out (“”) or by replacing the sensitive information with the phrase “confidential business information.” In the past ARB has received documents with redacted information which can nevertheless inadvertently be revealed by copy – paste functions. Staff is not responsible for data/information that could be revealed in the documents posted publicly as part of the certification process.

How do I obtain third-party certification in-lieu of energy receipts and other data required by ARB? What are the third-party verifiers/certifiers that ARB will accept?

The LCFS regulation § 95488(C)(3)(a)3 states, “In lieu of receipts or invoices for energy consumption, fuel sales, feedstock purchases, or co-product sales, the applicant may seek Executive Officer approval to submit audit reports prepared by independent, third-party auditors that document energy consumption, fuel sales, feedstock purchases, or co-product sales.

ARB does not currently maintain a list of qualified verifiers. Independent, third-party auditors are routinely engaged by companies to prepare and attest to annual financial statements required by the corporation to be filed with the federal and state tax agencies. ARB has envisioned something similar for the LCFS program to assist in the pathway verification process. These auditors may be publicly licensed professionals or firms such as CPAs and Professional Engineers registered with State Boards, etc. Additional work will be conducted in 2016 to enhance this portion of the program.

While invoices show the amount of chemicals, enzymes, and yeast purchased or sold by the ethanol producer during a given period, they do not indicate how much was used. To get an accurate estimate of the amount used, the starting and ending inventory of these items would be needed such that the amount used could be calculated. What documentation is acceptable for the starting and ending inventory?

Staff would prefer that the life cycle analysis be based upon process design considerations, and the fuel pathway applicant merely use purchase invoices to corroborate that the actual usage in practice at any operating level does not exceed the design case. Over a period of two years, there should be adequate

information to provide average inventory (starting and ending by month or quarter).

Can stakeholders use a monthly look-back allocation methodology, whereby a producer can reference the previous month's average feedstock percentage, or the previous month's average co-product percentage to allocate current fuel production as it goes into inventory? This would be done while operations are in "steady-state" and while the preceding month is generally representative of current month expected operations.

This may be permitted subject to completeness of data submitted.

For new pathway applicants, in addition to two years of commercial production data, some applicants are proposing to add in a "buffer" to their pathway CIs. This would be a small increase to the CI value to ensure on-going compliance with the certified CI. Should individual inputs be identified and increased or should the final CI value be increased in aggregate?

If applicants choose the option to use a "buffer" to account for the likelihood of a pathway CI being higher than the certified CI due to variability of their process, staff recommends the following:

- conduct a sensitivity analysis to identify critical parameters (the ones likely to have the largest impact on GHG emissions);
- estimate likely variability of identified critical parameters; and
- use a "buffer" based on highest likely CI from the analysis above.

Some producers were not recording exact usage of chemical inputs prior to 2015. For those periods within the whole 24 months of data, can the producer review data available and use the average usage amounts to "fill-in" those gaps?

Applicants are not allowed to “fill-in” data gaps under the regulation. Applicants who do not have usage for chemical inputs for the entire period of 24 months (since this input was not expressly required under CA-GREET 1.8b) can submit all available data and request ARB to waive requirements for this input category (only if the data for the entire 24 months is unavailable). This request will be considered under the condition that the applicant provide additional data in the future to ensure a total of 24 months of data will be made available post-certification.

As older legacy pathways are recertified and applicants attest to their validity, will CARB staff associate the comprehensive CI operating condition language rather than perpetuate the specific energy, yield, and DG drying conditions associated with legacy pathways?

Yes.

Can a facility that was given a certified pathway under the original LCFS regulation be re-certified as a legacy pathway if the facility is not expected to have one-quarter of commercial or operational data after the re-adopted LCFS goes into effect on January 1, 2016?

Yes. A facility may request re-certification of their certified prospective pathway and may receive a re-certified, prospective CI without the operational data that would otherwise be required for new pathway applicants. However, commercial operational data for each quarter must be submitted as soon as it is available to allow the Executive Officer to adjust the provisional CI based on these data if necessary as detailed in § 95488(d)(2). The provisional nature of the CI will be removed after a full two years of operating data is submitted.

For provisional pathways, will the CI adjustment be based upon accumulated commercial operational data?

Yes.

Is there a threshold for CI adjustment?

No. The Executive Officer may adjust provisional CIs as necessary but may choose not to do so for extremely minor quarterly variations.

If a fuel producer with existing legacy pathway requests ARB to re-certify their pathway, in general, how will their CI score change?

In most cases, the re-certified CIs are expected to be lower than the existing CIs. This is largely due to reductions in the indirect land use change (iLUC) estimate for most crop-based biofuels. However, some WTW re-assessments for Tier 1 fuels may result in higher CI estimates.

An ethanol fuel producer holds three certified CIs for ethanol produced from corn with three different levels of distiller's grains with solubles (DGS) co-product credit: dry DGS, modified DGS, and wet DGS. Will ARB issue new pathway certifications for all three pathways? Will facilities be able to discuss this issue with CARB staff prior to re-certification issuance? If a new staff summary will not be issued, how/where will those operating conditions be conveyed?

ARB will not issue new pathway certifications for all three pathways. A single pathway CI score will be re-certified based upon the originally submitted average energy use by the facility (energy use invoices supplied for up to two years). In the original application, the actual (or estimated) proportions of the individual streams of DGS (i.e., dry, wet, modified) would also have been provided by the fuel producer. As part of accepting the re-certified CI, the applicant needs to

attest that the proportions of DGS will be maintained in the same ratio on an annual basis (although if the proportions change to reflect higher proportions of wet DGS, it will be acceptable as long as the total CI of the re-certified pathway does not exceed the re-certified CI). If the facility anticipates changes to the proportions of DGS in 2016 and beyond (which will lead to increase in the re-certified CI), a new application should be submitted prior to January 31, 2016. In addition, if the applicant desires a separate pathway for each co-product and drying level, new pathway applications will be required for each co-product drying level. Plant-specific energy use for drying must be included as part of the application package.

Applicants have the opportunity to review and discuss their CI prior to re-certification. The original application which was used to certify a CI using CA-GREET 1.8b includes the operating conditions.

Will ARB post a Staff Summary for each re-certified legacy pathway?

No. ARB will post only a new re-certified CI on the Pathway website².

How will the pathways for dry mill, corn ethanol producers be re-certified if their initial certification was based upon the factor method to estimate natural gas use in dryers?

The “9,900 Btu per gallon of ethanol produced” factor method provided in CA-GREET 1.8b is no longer available to estimate energy used by natural gas-fired DGS dryers. Applicants will have to provide actual energy use for drying to apply for such pathways.

Can a new “Feedstock Only” pathway application be evaluated by the ARB?

² LCFS Fuel Pathways: <http://www.arb.ca.gov/fuels/lcfs/fuelpathways/fuelpathways.htm>

No. Under the new LCFS regulation, “Feedstock-Only” pathway applications will not be accepted by the ARB.

Will ARB re-certify existing “Feedstock-Only” pathway CI under CA-GREET 2.0?

No. At this time the new LCFS regulation does not allow re-certification of a “Feedstock-Only” pathway CI.

Can ARB accept feedstock production data from one company, and fuel production data from another company? If yes, who can use the pathway?

Yes. A feedstock producer and fuel producer may submit a joint application, alternatively, a feedstock producer may recommend that a fuel producer make a pathway application using their feedstock. If the pathway application is certified, the pathway certification would belong to the fuel producer, although LCFS credits could be shared based on mutually agreed-upon arrangements between the two parties.

Under requirements for producers of a “Tier 1 fuel using innovative methods” to qualify for a Tier 2 application, does the 20 percent threshold (substantiality) refer to: the total CI, or a portion thereof?

The substantiality requirements specify that to qualify for a Tier 2 pathway based on process innovation, the improvement in production efficiency must result in a minimum 20 percent reduction in the fuel CI. The 20 percent threshold applies to the “source-to-tank” (a.k.a. “well-to-tank”) portion of the CI which does not include GHG emissions associated with the use of the fuel in a vehicle, nor does it include iLUC emissions. See § 95488 (b)(2)(F).

How do producers of Tier 1 fuels using innovative methods demonstrate they qualify for Tier 2?

To demonstrate that the innovative process yields a minimum 20 percent reduction, the reference CI should be calculated using the Tier 1 calculator, using all the same inputs as would be appropriate for the proposed (Tier 2) pathway, without the innovative process.

Producers of Tier 1 fuels may also qualify for Tier 2 by utilizing low-CI forms of process energy, using unconventional, low-CI feedstocks, or using a method of carbon capture and sequestration; these applicants do not need to demonstrate a specific reduction in CI.

Can applicants obtain a certified pathway based on a temporary Fuel Pathway Code (FPC) application simultaneously submitted with a detailed pathway application to lower the CI value?

Yes, applicants can obtain a Temporary Fuel Pathway Code (FPC) CI while applying for either a Tier 1 or Tier 2 pathway certification (including applications for provisional pathways). Since the use of Temporary FPCs for Fuels with Indeterminate CIs is limited to two quarters, applicants must ensure all necessary data and information required for the appropriate tier classification is provided with enough lead time to allow staff to certify the pathway CI prior to expiration of the temporary FPC CI score.

If an applicant's fuel pathway is not represented by any of the pathways under the temporary fuel pathway codes (FPC) table (Table 7), can they use any value in that table?

No. If a prospective applicant's pathway is not represented by a temporary FPC, then the applicant has to apply for either a Tier 1 or Tier 2 pathway.

Can a small-volume producer use Tier 2, Method 2A? (Example: The fuel producer has been in commercial production for two calendar quarters and has been collecting operational data. The fuel production facility is however, designed to produce only eight million gasoline-gallon equivalents (GGE) of fuel per year.)

No. The fuel producer does not qualify to receive an LCFS fuel pathway since the applicant's proposed pathway will not supply the California market with at least ten million gasoline-gallon equivalents (1.1583×10^9 mega Joules) of that fuel (see § 95488(c)(4)(G)2.b.). The fuel producer may apply under the provisions for Tier 2, Method 2B pathway where there is no minimum fuel production quantity required to qualify for a fuel pathway. All other requirements for Tier 2, Method 2B must be satisfied to qualify the application for a certified CI.

What is the Tier 2 Lookup Table?

The Tier 2 Lookup Table (Table 6 in section 95488(c)(4)(F)) applies to Tier 2 Method 1 pathways for the following fuels: average California electricity, five hydrogen pathways, and three anaerobic digestion-based biomethane (CNG) pathways. An applicant may apply for a fuel pathway using the Tier 2 Lookup Table if the table contains a fuel pathway that closely corresponds to the applicant's actual physical fuel production pathway.

A Tier 1 corn ethanol pathway applicant operates a combined heat and power plant onsite as the sole source for thermal energy and electricity. The applicant does not know how to account for the co-product credit when surplus power is sold to the public grid. While this functionality is available for the sugarcane-based pathways in the Tier 1 Calculator, it is not available in the Tier 1 Calculator for corn ethanol. What must the applicant do?

The applicant may choose to apply under Tier 2 for this pathway.

Does an applicant need to consult with ARB staff prior to submitting paperwork to establish a new fuel pathway?

No. The online guidance is explicit in terms of what information and supporting documentation is required from each applicant to submit. Therefore, it is not necessary to contact ARB staff unless they perceive a problem with the Alternative Fuel Portal (AFP) website, or experience trouble uploading documents through the online web portal. Applicants are always welcome to consult with ARB staff prior to or after submitting their applications and are especially encouraged to do so for Tier 2 Method 2B applications.

Will applicants be allowed to use default transportation and distribution distances and attest that the default values are reasonable estimates of actual distances? Can staff use application-specific locations and evidence of fuel transport mode to define actual distances? Should default upstream fuel-production distances be used, along with specific Transportation & Distribution (T&D) for fuel-transport?

Generally, no. Applicants will be expected to provide actual transport and distribution distances associated with transport and distribution of fuel and feedstock everywhere a yellow-shaded input cell exists in the Tier 1 and Tier 2 worksheet. If a yellow-shaded input cell is not an option, then applicants may not change default T&D values embedded in the worksheet.

For re-certification pathways, the CI of the pathway will be determined using the T&D inputs for feedstock and fuel provided by the applicant in the original application prior to the LCFS re-adoption, except in the case where a new default T&D assumption replaces an older default T&D assumption. If the T&D distances (or modes) are unknown, then conservative values should be used

(i.e., the maximum distance and the mode which results in a higher CI).

Will an update to the CA-GREET model or LCI data be provided regularly?

Staff will make updates to the CA-GREET model on a periodic and planned basis as advances in life cycle analysis and refined information become available. Any changes beyond fixing non-substantial errors will be made as part of a formal rulemaking.

ARB has no plans to change the model during the 2016-2018 compliance years. An update to the CA-GREET model may be considered as part of the LCFS program review process (currently planned for 2018).

If a pathway (feedstock and fuel combination) that can otherwise be modeled in the Tier 1 Calculator has a different co-product that is not modeled in the Tier 1 Calculator, what can the applicant do?

The applicant should submit a request to the Executive Officer to be classified as a Tier 2 pathway rather than a Tier 1 pathway. If the impact of the co-product credit does not result in a 20 percent reduction in the CI, the pathway must be modeled using the Tier 1 calculator and forgo the co-product credit. Applicants may consult with ARB staff to explore if alternate options are available.

Can an applicant specify an electric energy mix based upon the renewable electric generating assets owned by the utility that provides electrical energy to the applicant's process?

No, for all applicants in regions covered by the eGRID values included in CA-GREET 2.0. The "User-Defined" option for electricity was included in the CA-GREET 2.0 model to allow for defining electricity mixes for regions outside the U.S. that are not included in the eGRID tool.

Can an applicant request the inclusion of electricity purchased or generated from solar or windfarms?

Electricity from a renewable energy source utilized in a fuel pathway may only be included in the CI determination if the energy from that source is directly consumed in the production process. No indirect accounting mechanisms, such as the use of Renewable Energy Certificates (RECs), can be used in determining the CI from electricity consumption. The applicant must provide evidence that the generation source is dedicated, generally by showing that the source is on-site/co-located, or was developed by the fuel producer with the sole intention of providing renewable power to the fuel pathway.

If the regulated party or entity seeking a new fuel pathway certification is registered in the USEPA RFS2 program, will the accreditation substitute for the LCFS pathway certification process?

No. The LCFS regulation is a California State regulation, and is not affiliated with U.S. EPA's RFS2 program. The information submitted to the US EPA in support of the RFS2 registration is not sufficient for new fuel pathway certification under provisions of the new LCFS, although it may provide a significant start in gathering information for the LCFS.

How is a pathway application determined to be deemed complete and what is the "deemed complete" date?

A pathway application that is "deemed complete" contains all relevant information that is required for staff to process the application and certify a pathway CI. The date staff is able to deem an application complete is termed "deemed complete" date.

Fuel production facilities that have been in operation for less than two years may apply for pathway certification provided they have been in full commercial production for at least one full calendar quarter. May such applicants provide any three consecutive calendar months of operation?

The intent of the regulation is to obtain a quarter of commercial operating data (implying any three consecutive months, regardless whether they coincide with a traditional fiscal quarter). Quarterly operating data should be submitted regardless of how well it supports or conforms to the input parameters submitted in the provisional application. ARB will take into consideration non-standard situations (e.g., unplanned plant shutdown) during the first two calendar years of operation, and the applicant may submit data generated during the shutdown period along with an explanation of the event (and any supporting data or information they wish to supply in support of the claim), and then continue to supply quarterly operational data beyond two calendar years, until ARB has received two years operational data representing normal, steady-state operation. In order to continue to earn LCFS credits, the applicant has to continue to submit operational data until the two years requirement has been satisfied.

What are the criteria for determining that a fuel production method is innovative enough to qualify it as a Tier 2 pathway? Some “innovative” inputs such as using LFG as a process fuel are already in the Tier 1 calculator.

The use of LFG as a process fuel was included in the Tier 1 calculator because some current pathways have incorporated LFG as a process fuel and utilizing this option in the Tier 1 classification expedites pathway processing.

Generally, to qualify for Tier 2 treatment the applicant must demonstrate process innovations that improve efficiency such that the resulting CI is at least 20 percent lower due to the innovation. Further, to qualify as an innovative, low-CI process energy source, energy from the source must be directly consumed in the production process.

Are custom, market-specific DGS displacement ratios permissible for use in the lifecycle analysis of corn ethanol pathway CI determination?

CA-GREET 2.0 life cycle analysis model does not permit the modification of the default DGS displacement ratio to compute the co-product credit in the corn ethanol pathway.

Will the DGS co-product credit be changed over time to account for actual agricultural practices?

Agricultural products and prices for livestock feed tend to vary over time. It is particularly important to be able to verify that the DGS co-product credit is valid over time. If there is evidence that the DGS co-product displacement ratios have changed over time, then an update to the co-product credit may be considered in future updates to the CA-GREET 2.0 model.

The lime use in the agricultural fertilizer inputs for the corn ethanol pathway cannot be changed in the Tier 1 Calculator from the default application rate. What should the applicant do if the region where the corn was grown did not demand lime application?

Until such time a complete protocol for verification of agricultural phase parameters has been developed, formally adopted, and goes into effect, the applicant must accept the CA-GREET 2.0 default lime application rate for their corn and any other feedstock pathway CI determination.

For the transport of ethanol from the blending terminal to the retail outlet, the CA-GREET 2.0 uses a default value. Why is an input (yellow) cell not permissible for this parameter?

The final distribution of finished gasoline to the retail outlet is a default parameter that cannot be modified in CA-GREET 2.0. This design choice was made because the added complexity of tracking this parameter would have been counterproductive to the desired streamlining of the pathway process accomplished through the re-adoption rulemaking that concluded in September of 2015.

If an existing commercially producing fuel processor with a certified LCFS pathway makes major process changes or additions to a facility that may consequentially result in a change in the fuel CI, does the fuel producer need one quarter of commercial operating data in order to apply for a new pathway?

Yes. The applicant should submit a new provisional pathway application with one-quarter of commercial operating plant data. Similar to other provisional pathways, the applicant is obligated to provide data quarterly until the two-year data reporting requirement is satisfied.

A fuel producer produces renewable diesel from algal oil at a pilot facility that is designed to produce 2 million gallons of fuel a year. The fuel producer has obtained permits to build a 50 million gallon fuel production facility, and would like to start the pathway application process shortly after commencing construction. This would enable the fuel producer to have their fuel pathway certified before start-up and commencement of commercial production. Is that permissible under the re-adopted LCFS?

No, the regulation requires that all pathway applicants have at least one quarter of commercial production operational data in order to apply for an LCFS fuel pathway. Therefore, the fuel producer may not apply until one calendar quarter of production operating data is available. However, staff encourages such facilities to enter into a dialogue with ARB about how such applications should be prepared.

A potential applicant for pathway certification uses a unique feedstock to produce fuel which does not have an iLUC defined in the LCFS regulation (for example, Jatropha, Miscanthus, Switchgrass, Poplar trees, etc.). How quickly can the ARB assign an iLUC estimate for such pathways?

The iLUC development for individual crops is an elaborate process. ARB recommends that applicants with unique feedstocks begin their application process early, and work with staff to estimate iLUC impacts. Until staff modeling and research is complete, a temporary iLUC may be assigned to such feedstocks. The temporary iLUC will be based on a similar crop with comparable global displacement and substitution impacts.

May a fuel producer earn credits from the federal RFS2 program while also claiming LCFS credits?

Yes. A fuel producer is entitled to credits in both RFS and LCFS if it adheres to the requirements of both programs.

May a participant in the LCFS program also participate in other programs such as California's Renewable Portfolio Standard, or Cap and Trade?

Generally no. Credits generated in the LCFS program cannot be directly transferred to (or to meet obligations of) the California Cap and Trade regulation, the Renewable Portfolio Standard or any other similar programs. Also, in most cases, a fuel producer (or supplier) may not claim credit for the same emission reduction in the LCFS and any other programs except the RFS2. However, there may be situations in which a single fuel producer may be eligible to claim credit in a separate program and in the LCFS for two separate but related abatement actions.

For example, a dairy digester operation may export some portion of biomethane to generate grid electricity and use some biomethane for onsite vehicle fuel: those distinct volumes may be separately registered in each program. This is permissible so long as the producer can provide evidence that the same volume was not double counted.

As another example, credits for avoided methane emissions from a dairy digester can either be claimed separately as part of a Cap and Trade offset credit application, or as part of an LCFS pathway. Regardless of what route the project developer selects for this avoided methane portion of the lifecycle, they may also claim credit in the LCFS for avoided diesel emissions if the biomethane is used as a vehicle fuel.

What documentation will be required to establish the DGS yield per gallon of ethanol produced? Since the calculation of DGS yield requires an accurate measure of the moisture in the DGS to calculate the bone dry yield, what documentation requirements will there be, if any, for

permissible moisture levels?

If the fuel pathway applicant is seeking a Tier 1 ethanol pathway certification, the same documentation will be necessary as that applicable to energy use in the fuel production phase (i.e., two years of production records verifying the amount of DGS and ethanol produced during each of the calendar years). The DGS yield must be adjusted for dry basis (solids less moisture). Such measurements are typically made by the fuel producer's quality and laboratory analysis group and these must be provided with the application.

Most Brazilian sugarcane-based ethanol producers produce ethanol to some extent from sugarcane molasses, a by-product of the sugar production process. At what threshold of production should sugarcane molasses be considered as a separate feedstock for LCFS purposes?

Research papers previously suggested that by-product molasses is a minority feedstock for ethanol production in Brazilian sugarcane mills. The amount of by-product molasses contributing to ethanol is assumed to be insignificant unless it is self-declared by the applicant as a major feedstock.

While there is no official threshold to determine if a separate pathway is required for by-product molasses feedstock, staff recommends that if the amount of byproduct molasses used to produce ethanol is not "insignificant," then a separate pathway application for by-product molasses feedstock should be made. Staff will be available to assist applicants to make this determination.

For a fuel producer that utilizes two (or multiple) feedstocks at their facility, and whose accounting system permits the producer to associate all volumes of biodiesel/renewable diesel produced with specific individual feedstocks, can the producer selectively sell fuel in California associated with a particular feedstock only?

A fuel producer who can account for fuel yields from two (or multiple) feedstocks would be able to sell specific volumes of fuel associated with each individual feedstock using the CI associated with the respective feedstocks. This policy reflects mixed feedstocks such as corn and sorghum used for ethanol production, as well as different oilseeds used for biodiesel and renewable diesel production.

Will ARB require that the fuels produced with different feedstocks be kept physically separated?

A mass balance accounting approach may be utilized for mixed feedstock fuel pathways. As long as the fuel producer's inventory accounting system allows it to track a certain volume of fuel produced with a specific feedstock, the fuels produced may be co-mingled in storage tanks, as well as transported and distributed in similar vessels. Producers should be able to provide records that unequivocally associate specific quantities of feedstock with specific volumes of fuel produced. As volumes are added to and withdrawn from the tank, the volume at each feedstock-related CI will be adjusted to account for those additions and withdrawals.

What if the fuel producer's accounting system does not permit the producer to track the fuel produced with the feedstock utilized?

Producers whose accounting processes do not enable them to track the fuel volume produced in terms of the feedstocks used must label all gallons of fuel produced with the carbon intensity (CI) associated with the feedstock having the highest CI.

A biodiesel producer sources UCO feedstock from several different regions of the world. How is the fuel producer to report biodiesel sales during an average calendar quarter?

The quantity of fuel sold each quarter must be reported using the CI corresponding to the region from where the UCO feedstock was procured for biodiesel production. In the event that feedstocks are purchased in the open market and applicants are not able to determine where the feedstock for their process comes from, the pathway application (CI determination) should be based on worst-case procurement, transportation and distribution assumptions. For producers who have multiple fuel pathway codes for feedstock sourced from different regions, then fuel volumes reported should correspond to all gallons of fuel produced with the carbon intensity (CI) associated with the feedstock having the highest CI.

Will staff add “no cook” used cooking oil (UCO) as a pathway in the Tier 1 Calculator of the CA-GREET 2.0 model? May producers of bio- or renewable diesel from “no cook” UCO feedstock request Tier 2 classification?

No. The fuel producer may request an application via the Tier 2 process if the requirements are met for “Tier 1 fuels produced using one or more innovative production methods” (see § 95488(b)(2)(F)). If it qualifies for Tier 2 on that basis, information is required to demonstrate that the feedstock uses the “no-cook” process.

Why is the co-product credit for surplus cogenerated electricity sales to the public grid much lower in the Tier 1 Calculator of the CA-GREET 2.0 model compared to the co-product credit determined in CA-GREETv1.8b?

The co-generated electricity co-product credit is much lower in the CA-GREET 2.0 model because the model uses an average electrical mix for displaced electricity GHG impacts. Previously, the CA-GREET 1.8b model assumed displacement of marginal electricity for determining the co-product credit. As an

example, co-product credit for Brazilian sugarcane ethanol is now based largely on hydro-electric power which makes up more than two-thirds of Brazilian average electrical energy mix compared to the marginal mix which was based on natural-gas-based generation.

Are minor changes to the Tier 1 Calculator permissible? For example, an applicant would like to assess the impact of running 10 percent of their fleet on LNG fuel. The inputs in the Tier 1 Calculator only assess the GHG impacts of petroleum-based diesel fuel used in transportation.

No. The Tier 1 Calculator was designed to assess GHG impacts for the most common pathway processes with the most commonly used parameters, and simplified pathway assumptions. Specialized transportation and distribution (T&D) GHG impacts (such as the use of LNG-fueled vehicles) must be assessed outside of the Tier 1 Calculator. It is recommended that applicants consult with staff prior to submitting such a pathway application.

What are the different ways to estimate GHG emissions from co-products? When can an applicant use the displacement (system expansion) approach, rather than physical-property based allocation method (e.g., mass, energy allocation, or market value allocation)?

There are essentially two strategies for treating co-products; the substitution method and the allocation method. In the substitution method, the first order market effects of producing co-products by subtracting impacts are presumed to be avoided by substituting the co-products for other products that provide the same function. For example, DGS and cogenerated electricity produced by ethanol producers are assumed to displace corn feed for livestock and grid-based electricity, respectively.

Physical-property based allocation methods apportion the inputs and emissions from a process amongst the various co-produced outputs based on some characteristic of the process inputs, outputs, or operation. The allocation method is further divided into three groups; the price or market allocation, the energy allocation, and the mass allocation methods.

Applicants should first follow the methodology which is used for co-product accounting in CA-GREET 2.0. For pathways and co-products which are not included in CA-GREET 2.0, the applicant may propose to use any relevant methods mentioned above; however, applicants will be required to perform a sensitivity analysis showing the results of the alternative methods in order to demonstrate that the proposed method results in the most conservative emissions (lowest credit, therefore highest CI for the fuel pathway), or is not significantly different from the outcome of selecting another relevant method. This is consistent with the methods used in CA-GREET 2.0 (e.g., the use of the displacement approach) for DGS in which replaced corn grown for animal feed results in a higher CI (lower credit) than mass, energy, or market value allocation.

How is an applicant to determine the applicable eGRID zone for choosing the Feedstock and Fuel Phase electrical energy mixes in the Tier 1 Calculator?

If the location of the facility is not obvious, then the applicant may use a zip code locator for finding the correct regional eGRID mix. Applicants may use the e-grid locator³ to match their zip code to the appropriate eGRID mix.

Are foreign-based regulated parties or entities disadvantaged with regards to the amount of time it would take to process their fuel pathway applications?

³ eGRID zip code locator: <http://www.arb.ca.gov/fuels/lcfs/egrid-locator.xlsx>

No. Staff experience suggests that processing fuel pathway applications after the application is deemed administratively complete takes an equal amount of time regardless of whether the regulated party is based domestically or abroad. Differences in processing time occur in instances when staff must verify pathway-specific information that is unique to the pathway itself.

What is a Tier 1 or Tier 2 facility? Can the same facility have different pathways, perhaps one Tier 1 pathway and another Tier 2 pathway?

“Tier 1” and “Tier 2” designations apply to individual pathways, not fuels or facilities. Commonly a given facility will make a fuel using one tier classification. There may be a few instances where a facility produces fuels using both Tier 1 and Tier 2 pathways (e.g., a first-generation corn ethanol facility that may also produce cellulosic ethanol).

Ethanol plants typically load the ethanol onto railcars at the production facility. There is normally no trucking of ethanol from the ethanol facility to the rail loading location. What documentation will be needed to demonstrate to ARB that it is zero?

The applicant should attest to the information regarding specific modes of transport utilized by the fuel producer. Alternatively, the applicant could submit a Google Earth satellite image of the ethanol production facility showing the rail tracks leading to the ethanol loading zone of the plant.

Ethanol plants typically ship to multiple locations in California. Each will have a different distance. The physical pathway demonstration requires only one supply route. Can the ethanol producer use the same distance as in the physical transport demonstration, and is that documentation sufficient for documenting this distance?

Yes. For life cycle analysis purposes, prudence dictates that the application be based upon the worst-case transport distance parameter value. If that value is used in the life cycle analysis, the CI certified for the fuel would never be violated.

How will ARB ensure that crop residues such as corn stover, wheat straw, and sugarcane straw are sustainably harvested for the production of cellulosic ethanol?

Cellulosic ethanol pathways certified in the past by ARB are contingent upon removal of no more than 50 percent of the residue left on the ground after the crop harvest, or until research informs what constitutes a reasonable and sustainable rate of crop residue removal. The burden is upon the fuel producer to source their feedstocks from farms that have implemented sustainable residue removal practices. The enforcement and verification protocols currently under development are likely to address best management practices for cellulosic harvesting in the future.

Can the carbon dioxide sequestered during the corn-ethanol fermentation process be credited to the corn ethanol pathway?

No. Until such time a complete protocol for Carbon Capture and Sequestration (CCS) has been developed, formally adopted, and goes into effect, no credit will be assessed for carbon sequestration. Such a protocol is under development and expected to be presented to the Board by 2018.

In the Tier 1 Calculator for sugarcane-based ethanol pathways, how is the mechanized harvesting fraction and credit determined?

The applicant must furnish GIS-based shape files of sugarcane harvest areas (maps) from where cane is procured for sugar and ethanol production, along with a self-declaration of harvest practices at each farm. The self-declaration should

disclose the harvest practice, as well as the name and arable acreage of each sugarcane farm. Staff will then obtain remotely-sensed, satellite-based burn-area imagery for the past two harvest cycles, and overlap the imagery with the harvest maps to determine what fraction of the sugarcane fields were harvested manually with burning. The results of this evaluation are shared with the applicant. This fraction partially offsets the GHG impacts assessed with straw burning.

If a biofuel was produced but not used/sold/blended into a finished fuel until after January 1, 2016, can the producer/counterparty report the CI value and production volumes in Q1 2016? Is this still applicable if the product changes custody and/or ownership, but still is not placed into the fuel supply stream until after January 1? An example would be that renewable diesel was produced, but for storage limitations at the producer's facility was transferred to a finished fuel provider who stored it until after January 1, 2016.

New CI values will be released based on the anticipated schedule for each fuel "batch" as shown below. Once these new CI values are active they should be used to report both new production and fuel that is part of the existing inventory. (If the fuel is sold out of inventory during the quarter in which the new CI value is certified, then the new CI can be used for reporting purposes for that quarter. However, if the new CI has not been certified yet, the old CI should be used.)

For example, if renewable diesel was produced and stored prior to January 1, 2016 and then sold as a finished fuel during Q1 of 2016, an old CI will have to be used for this transaction because the new CI will not likely be available until the end of Q2 2016 per the schedule shown in the table below. However, if the same fuel is sold and used during Q2 of 2016 then it would be eligible for the new CI assuming the new CI is certified by the end of Q2 of 2016.

Fuel Type	Anticipated Certification	Effective Date
Ethanol	By March 31, 2016	1 st quarter 2016
BD/RD	By June 30, 2016	2 nd quarter 2016
NG/LNG/L-CNG	By September 30, 2016	3 rd quarter 2016
Others	By September 30, 2016	3 rd quarter 2016

Can an applicant start using a new CI immediately upon submission of the attestation letter, or do they have to wait until the new CI is posted at the end of the quarter to start using the new CI?

Applicants may start using the new CIs only after the entire batch by fuel type is released.

How specifically will these fuel inventory issues be handled in the LCFS Reporting Tool (LRT) for pathways that are being recertified? Does ARB have any suggestions as to how I should demonstrate my change in use of codes in my LRT account?

Reporting parties may want to submit a two-step transaction where they reduce the inventory of their current FPCs in the quarter preceding the re-certification and then raise the inventory of their new FPCs in the quarter of re-certification. In doing so, credit gains/losses are centered around each individual party rather than across multiple parties where advantages and disadvantages may occur.

Example: If regulated party ABC Ethanol had 1 million gallons of ETHC008 and 500 thousand gallons of ETHC003 in their inventory on December 31, 2015, they could submit their quarterly reports with the following four transactions (Assuming that in

Q1 2016, the legacy code ETHC008 is recertified to ETHC108 and the legacy code ETHC003 is recertified to ETHC103):

Q4 2015 report:

Transaction Type: Loss of Inventory 1 million gallons ETHC008

Transaction Type: Loss of Inventory 500 thousand gallons ETHC003

Q1 2016 report:

Transaction Type: Gain in Inventory 1 million gallons ETHC108

Transaction Type: Gain in Inventory 500 thousand gallons ETHC103

The four transactions would reset their inventory without affecting upstream or downstream parties that have transacted fuel with them.

Will ARB post on the LCFS website a list, by fuel production company and facility, the old fuel pathway code and CI value and the corresponding new pathway code and CI value which should be used for reporting. If there is not a one-to-one correspondence, will ARB give specific instructions (in the posting, or in a Q&A document) explaining the procedure that obligated parties should use for reporting the correct retroactive fuel pathway codes and CI's?

ARB will provide a table listing alternative fuel production facilities showing their old FPC and CI value (when applicable) with corresponding new FPC and CI value. For facilities that had multiple FPC and CI values in the past, the table will clearly show the merged nature of any new values that will replace them. This table will be released as certifications are completed for each fuel batch per the anticipated schedule shown above.

Can individual utilities in CA request specific electricity CIs?

No.

The requirement for a 20% reduction in carbon intensity to achieve Tier 2 status could act as a disincentive for efficiency improvements. Would ARB support making an exception for ethanol facilities to be able to become a Tier 2 fuel because it could have a significant impact on the ability for facilities to reduce their CI and to capture the value created by this reduction?

No. This requirement is in the regulation and cannot be changed without a regulatory action.

Would staff consider the total amount of fuel produced by a company (and not the requirements of 10M gallons per site) as the basis for a Method 2A application as long as the CI reduction requirement is also met?

No.

What information does a corn ethanol plant have to obtain to estimate production emissions for corn oil in an ethanol plant, short of operating the plant removing no corn oil for some period, and then operating it removing corn oil for another period, and looking at the energy differences, if any?

A biodiesel plant which purchases corn oil from a corn ethanol plant should request data (such as amount of corn oil produced, metered drying energy, estimated corn oil extraction energy, amount of DGS, etc.) from the corn ethanol plant and submit it with their application.

Do producers have to change the values in every yellow cell in the CA-GREET Model? Can some of the default values be used if no plant specific data is available? If producers are unable to produce values for some of the yellow cell parameters whose default is zero, will they be able to use the default? If not, what value will they have to use?

The values in yellow cells serve as place holders and do not represent defaults. Applicants are advised to use their own specific data. If an applicant employs a value of “zero”, it should be justified by appropriate documentation.

For a Tier 2 pathway, if it is necessary and/or more convenient to modify the CA-GREET2.0 model directly, instead of putting parameter values into the Tier 2 calculator sheet, are we allowed to do so?

No.

If the actual CI is higher than was approved for a provisional pathway, will there be any penalty for the companies besides the adjustment of all credits generated during the provisional period?

No.

If a plant has GREET 1.8b Method 2A pathways for wet and dry DGS, but has not utilized them in the last year or two, will ARB act on the plant's request for re-certification, even though the plant has not used those pathways in the last year or two?

Yes. Re-certification can be requested and ARB will re-certify the pathway CI. All supporting data submitted as part of the original application must be attested to as being reflective of current operations if the re-certified pathway is used.

How recent does the engineering review need to be (within 6 months, etc.)?

For facilities submitting the most recent two-year data, a review within this period will be acceptable. For facilities submitting less than the two-year data requirements, the review should be within the period covered by the submitted data.

For re-certification, is there a minimum gallon requirement to ship to CA – or minimum plant production capacity?

No.

Will the Method 1 Lookup table values from old LCFS be available through 12/31/2016?

Yes, only for facilities that registered these pathways on or before December 31, 2016.

Since updated iLUC values for BD/RD will be effective 2nd quarter of 2016, it places such fuels at a disadvantage compared to ethanol which is expected to be certified effective 1st quarter 2016. The iLUC penalty is independent of any of the specific inputs for a default or custom pathway and therefore stakeholders request updating all pathways with the updated iLUC values at one time. A global change to update iLUC values for all default and custom pathways effective 1/1/2016 is the best approach. This approach will enable producers to realize the value of the updated iLUC immediately which will help industry achieve the overall objectives of the LCFS program faster.

Staff considered but will not take this suggestion due to the added complexity of needing to iterate on all pathways twice—once to make the iLUC value adjustment and once to make any remaining direct carbon intensity adjustments. We will update iLUC values for the impacted fuels with the batch releases planned by fuel type. Most RD/BD fuel pathways are derived from waste feedstocks with no iLUC impacts. The same holds true for RNG/NG pathways.

Can a company request a pathway re-certification and new pathway application concurrently? If so, in what order will they the applications be reviewed. If both are approved, can the company just use the lower CI between those two?

Generally no. Applicants need to review the section “Outdated Operational Data: Process Parameters Have Changed Significantly Since the Original Application was Approved” of the *Guidance Document for LCFS Pathway Re-certification* (available at <http://www.arb.ca.gov/fuels/lcfs/fuelpathways/legacy-11052015.pdf>) for guidance as to whether the request for re-certification of an existing pathway is appropriate. If

a pathway is not eligible for re-certification, then the applicant must apply for a new pathway CI. The latest certified CI supersedes any previously certified CI.

For a provisional pathway from a new facility (without two years of operational data) submitted after 1/31/2016, will these pathways be certified by 12/31/2016?

Staff will expedite the approval process for such pathways and certify a CI within 90 days after receipt of a complete application.

For fuel pathways based on the old Method 1 Look-up Table values that are not part of the Tier 2 Lookup table (i.e. fossil CNG and LNG), when do fuel provider need to submit a Tier 1 application for their facility compression/liquefaction energy so there will not be a lapse in credit generation?

Applicants need to submit a new application by January 31, 2016 which will guarantee a certified CI by the end of 2016.

For ethanol pathway re-certification applicants, if a stakeholder does not agree with the re-certified CI and submits a new application past the January 31, 2016 deadline can they continue to use the CI certified under the old rule until they get a new certified CI?

Yes. When a re-certified CI is provided for review, the applicant can choose not to accept the re-certified value. If the applicant chooses not to accept the re-certified value, the applicant may continue to use the CI certified under CA-GREET 1.8b through the end of 2016 and/or apply for a new pathway.

However, in rejecting the re-certified value and submitting a new application after January 31, 2016, staff cannot guarantee the pathway will be certified before the end of 2016.

Are the temporary Fuel Pathways Codes (FPCs) the default pathways to be reported until new pathways are approved?

No. The legacy pathway CIs certified under CA-GREET 1.8b should be used for reporting until the new recertified values are available. Temporary FPCs are intended for use by facilities without existing facility-specific values, especially new facilities. Temporary FPCs will not be available for use by any facility with a legacy pathway in place until after the re-certification batch for that fuel is released.

A new facility (with impending commercial production) may request the use of a temporary FPC to report fuel volumes under the LCFS even prior to the release of the fuel batch in question in the re-certification process. The facility should plan to submit a provisional application soon thereafter to ensure a certified CI is available to use prior to the two quarters of use of the Temporary FPC. When the provisional pathway CI is approved, fuel volumes must be reported using the updated CI.

How will non-provisional pathways generate credits while their application is being reviewed if their batch has not been released yet and they do not have access to temporary FPCs (specifically, biomethane since their batch is not till Q3)? Can the EO allow these facilities to use the temporary FPCs past 2nd quarters if they are not reviewed/certified in 2nd quarters due to the re-certification process of legacy pathways?

Yes, the EO has the authority to grant the use of these codes past two quarters if necessary. However, each individual EO approval of the use of a temporary FPC will be permitted for a maximum of two quarters (the quarter during which the use is approved and the subsequent full quarter). After that point in time the approval expires and another request to use the temporary FPC must be submitted.

We are concerned that the new AFP may not be flexible enough or may not have been designed to handle a broad range of new, potential pathways. Can ARB provide some “transitional” time, or a hybrid approach where “hardcopy applications” and applications via the AFP are allowed?

No. Section 95488(c)(1) of the regulation requires that all applicants seeking to obtain a CI must complete the on-line application process via the AFP web portal.

Therefore, ARB has invested significant resources into designing the system to be able to handle all types of applications without any problems. However, just as with any other complex software, ARB intends to keep improving the system on a continuous basis. We welcome stakeholder feedback to facilitate such improvements.

Will fixed guideway systems start to compile credits starting 1/1/2016, or will they begin with a bank of credits already in place?

According to section 95483(e)(6) of the regulation, fixed guideway systems will be able to opt in and generate credits under the LCFS program starting on January 1, 2016. Therefore, the earliest opportunity to generate credits is for Q1 2016. It is important to note that if fixed guideway providers do not chose to opt in then the electrical utility is eligible to claim their credits. Opting into the LCFS program becomes effective when the fuel provider registers with ARB and establishes an account in the Low Carbon Fuel Standard Reporting Tool and Credit Bank & Transfer System ([LRT-CBTS](#)).

Will producers of alternative fuels need to apply for new pathways and if these new pathways are approved at a lower CI than they were prior to 2016, will obligated parties be able to get these pathway CI reductions retroactively applied to the alternative fuel volumes they purchased from 2011 to 2015, lowering their cumulative CI deficits? Is this addressed in the new regulations anywhere?

ARB will not be crediting retroactively beyond what is allowed in section 95486(a)(2) of the re-adopted regulation.

Would fuel purchased under a temporary pathway get replaced retroactively with the new pathway once it is approved?

Consistent with the retroactivity provisions in section 95486(a)(2), once the new pathway has been certified, it can be used for reporting fuel transactions that occurred during the quarter in which it was certified. Additionally, transactions from

the previous quarter can be reported with the new certified CI provided the pathway application was deemed complete on or before the previous quarter. However, no credits may be generated or claimed by reporting transactions with the new CI after the deadline for the quarterly report has passed. This means that retroactive credits must be claimed before the deadline of the quarterly report for the quarter during which the transaction took place.

How will retroactivity affect reporting, since reporting is on a quarterly basis?

Reporting deadlines for quarterly reports are 90 days past the quarter end date (e.g. the deadline to submit 2016 Q1 report is June 30, 2016). Fuel pathways that are certified by the end of a quarter will be available for reporting transactions that occurred during that quarter. For example, an applicant submitted his/her application for a new CI in Q1 of 2016 and it was certified in that same quarter. In this case, the applicant can claim credits for transactions that occurred in Q1 onwards. However, no credits may be generated or claimed after the deadline for the quarterly report has passed. This means that retroactive credits must be claimed before the deadline of the quarterly report for the quarter during which the transaction took place.

We request that each producer be able to state during the pathway application process whether they elect to have their new CI score be retroactive to the 1st day of the quarter. Further, we request that if the producer elects not to retroactively apply the CI, the producer's new CI would go into effect 60 days from the release of the batch CI or 12/31/2016, whichever is earlier.

ARB does not plan to add this optionality at this time.

In addition, for ease of administering the change of CIs, once the recertified new CIs are released, the corresponding legacy CIs will not be available for reporting. However, parties that do not choose to apply for re-certification of legacy pathways (or who reject the ARB-proposed re-certified value) can use the old CI until December 31, 2016.

We believe the reissuance of revised PTDs could be a very onerous process.

Reissuance of revised PTDs will not be required when new CIs become available. PTDs associated with the production or import of the fuel that occurred prior to the issuance of the new CI would show the old CI. ARB plans to issue a table listing the old and new CI values for facilities. Using this table, reporting parties will have the ability to crosswalk the old CI to the new CI for any given pathway. The use of old CIs on PTDs will not create a problem with respect to verification of the accuracy of PTDs.

The financial hurdle of negotiating the value of an unknown CI score when selling biodiesel before the pathway has been recertified poses difficulties for our industry. The producer would have to either pass on its current CI score or sell based upon an estimated CI score and then go through a “true-up” process once the final score is known. This situation would create an entirely new level of counterparty risk if buyer or seller is relying upon a “true-up” payment being made.

We understand the commercial issues the shift in CIs creates, but it is likely that in many cases a fuel that currently is sold under CA-GREET 1.8b CI will have a lower CI after the transition to CA-GREET 2.0. Therefore, there will be additional value on the table that counterparties can work to split up. ARB will not get in the middle of commercial arrangements between two parties or suggest contract structuring strategies to distribute this additional value.

Furthermore, the new CI scores are not completely “unknown”. The applicants for either re-certification or a new pathway CI should be able to calculate those values with reasonable accuracy using the CA-GREET 2.0 model.

We request that ARB ask companies to voluntarily provide company contact information for LCFS PTD purposes. These company contacts would then be posted on the LCFS website, and business partners could use them to supply the company contact requirement of the seller and buyer on the new PTD’s. We suggest ARB advise companies that they can provide an email address

(i.e. LCFSPDInquiries@XYZOil.com) rather than an individual's name and phone number if they elect to provide contact information.

ARB will ask for this information on a voluntary basis as part of the updated LRT-CBTS registration process that commences in 2016 per the provisions of section 95483.2 of the re-adopted LCFS.

Can ARB design its 3rd-party verification program after the U.S. EPA's QAP program? Would ARB consider expanding the QAP to accommodate the requirements of the LCFS program?

Staff agrees that the U.S. EPA's QAP program is one potential model for an LCFS monitoring and verification system. We also agree that extending the basic QAP framework to accommodate the additional requirements of the LCFS program might be a reasonable approach to the design of an LCFS program. Although it's not yet possible to specify which elements of the QAP will and will not be incorporated into our program, we feel that the QAP is likely to influence our design choices.

Regardless of its ultimate design, will the LCFS verification program be cost-effective?

We are confident that it will be possible to roll out a program that is both effective and affordable.

How does ARB propose to satisfy the Board's direction in Resolution 09-31 (sustainability initiatives), without imposing additional burdensome requirements on regulated parties?

We look forward to releasing our findings and recommendations in the area of sustainability certification, and discussing that information with interested stakeholders.

ARB should consider developing a CI monitoring and verification program which provides indemnification to regulated parties. Necessary safeguards (to protect regulated parties) must be included to account for invalidated CIs.

Can ARB's proposed program be designed to provide protection to downstream parties?

Staff's current thinking is that the goal of adding third-party verification to the LCFS is to improve data quality across the entire system, not simply create a premium credit type associated with fuels that have undergone verification. ARB has found that buyer indemnification is not helpful in other tradeable permit systems such as the Cap-and-Trade program. This issue will be discussed more in future stakeholder dialogue.

ARB should consider releasing an interim program on a trial basis prior to roll out of a full-fledged regulatory program. This program should be rolled out prior to initiating enforcement activities.

We do not feel that an interim verification program is helpful at this time. Further, the legal framework to support such a program does not exist. Producers seeking assurance in the short term that their CIs are at or below the CIs under which transactions involving their fuels are being reported can now take clear and effective actions to validate those CIs. They can perform the necessary data collection and CA-GREET modeling using either internal resources or a consulting firm with experience in this area. Regulated parties can also request or require their blendstock suppliers to undertake this kind of verification, as is now being done by some parties. ARB staff is also available to advise and assist. If such assessments reveal that transactions are being reported under CIs that might be too low, producers should contact staff immediately about revising their pathway applications to reflect more reasonable life cycle CIs. Good-faith producer-initiated efforts to adjust CIs to reflect new data will likely not result in enforcement action (knowing and willful use of an inappropriately low CI would, however, result in enforcement).

We feel that the fuels market is well-informed about ARB's intentions and will take all prudent steps to be prepared for a monitoring and verification program. We do not, therefore, expect "wholesale enforcement," leading to destabilization of the credit market. In connection with this point, LCFS enforcement is already underway, and

will continue through 2016, as the monitoring and verification regulation is being drafted and vetted publicly. These actions should adequately telegraph the importance of undertaking serious CI validation in the near term.

While the LCFS monitoring and verification program is under development, would ARB allow the use of the federal QAP 3rd-party verification documents to partially verify their fuel pathway CIs? Reporting requirements that deviate from RFS2 requirements will be costly to fuel providers—possibly preventing some from entering the California market.

See response to the “interim program” FAQ above. We note, in addition, the following:

1. RFS2 QAP verification only confirms that a fuel falls within a certain RIN D-Code category. It does not confirm a fuel’s specific CI. QAP verification documents would have very limited use in a LCFS CI monitoring and verification process. As pointed out above, however, using the QAP program as a starting point for the design of a *final* LCFS program could be a reasonable approach.
2. Some potential LCFS fuels would not be part of the RFS2 program because they do not meet the federal definition of “biomass-based.” This would mean that no RFS2 data would be available for those fuels, and they could not participate in an interim, QAP-based, verification system.
3. The circumstances that prompted the U. S. EPA to develop an interim QAP program—the discovery of significant quantities of fraudulent RINs—do not currently exist in the LCFS program.