

June 30, 2014

California Air Resources Board  
 Katrina Sideco  
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Reference: **Comments on Data Verification**

Dear Ms. Sideco,

We are pleased to provide comments on ARB's presentations and regarding the LCFS. The comments herein address the question of data validation and verification for biofuel facilities. Discussions of verification have focused primarily on record keeping for fuel transactions. However, several other verification issues should also be examined under the revised LCFS.

### Data Requirements

ARB requires data on the life cycle inputs for each fuel pathway. ARB currently allows fuel producer to select a Method 1 pathway based on default parameters, where the fuel producer is effectively attesting that the process data from its facility and the feedstock are consistent with the default pathway.

Under Method 2 applications, fuel producers provide data for their facilities and rely on default CA\_GREET data for feedstock production. Some parameters are out of the control of the fuel producer and these parameters depend on the resource mix used in the CA\_GREET model, while others depend on the fuel production facilities operational performance and transport logistics to California. The type of data reported by fuel producers are apparent in most Method 2 applications; although the inputs are generally confidential.

Table 1 shows an example of the types of data used on CA\_GREET calculations and the verification requirements. A limited set of farming inputs are shown to illustrate the type of data that is needed.

**Table 1.** Example Inputs for Corn Ethanol Pathway

Pathway Input	Value	Verification Requirements
<u>Corn Farming Inputs, U.S. Average Data from GREET</u>		
1.Corn N Fertilizer	420 g N /bu	Current approach is to use GREET default. Using field specific data is under consideration for some fuel pathways. As long as default values are used in the fuel pathway, fuel producers don't need to verify data.
2. Farming Energy	12,635 Btu fuel/bu	
3. Distance to field	40 mi, truck	
<u>Facility Level Inputs, Method 2B Data or Method 1 default</u>		
4. Ethanol plant fuel	26,000 Btu NG/gal	Data used for Method 2A applications. Fuel producers provide historical data and keep records of these parameters as part of record keeping requirements for ARB.
5. Ethanol plant power	0.7 kWh/gal	
6. Ethanol yield	2.75 gal/bu	
7. DGS production	5.4 BD lb/gal	
8. Distance to California	2400 mi	One time railroad map observation in Method 2A application



## Data Verification Comments

ARB has developed a series of procedures and rulings affecting the development of new fuel pathways and the sale of fuel under the LCFS. The following procedures affect the development and implementation of corn ethanol and other biofuel pathways. Comments on aspects of these procedures follow.

**Aggregate Corn Farming Data:** The CA\_GREET model uses aggregate farm data for corn ethanol pathways. These data include fertilizer inputs, farming equipment energy, and crop hauling distances with examples in items 1, 2, and 3 in Table 1. U.S. conventional biofuel producers are not able to use farm level data for LCFS pathways. The rationale for using only aggregate data is that verification would be difficult and onerous. Furthermore, fuel producers with access to feedstock with lower GHG intensity would use actual data and those above the aggregate average would use a default (the cherry picking issue).

**Aggregate Farming Data Comment:** Fuel producers outside the U.S., and others whose fertilizer use are not represented by CA\_GREET default data can use actual fertilizer data. In addition several other feedstock producers have used actual field level data for LCFS pathways.<sup>1</sup> This approach is reasonable since the LCFS aims to incent the least GHG intensive options. The cherry picking or shuffling argument should not prevail over the benefit of rewarding efficiency and innovation. Therefore, all feedstock producers should be able to use field level data for LCFS applications. These data could be checked with third party verifiers or through ARB's existing procedures for data review.

## Verification Options

As discussed previously, the requirements for verification of LCA inputs for biofuel pathways depend on ARB's data requirements. The categories of data include:

- Optional farm level data for Method 2 applications (see Aggregate Farming Data Comment)
- Historical data for plant operation
- On-going operating data for record keeping purposes

Fuel producers should be able to develop a CI based on actual farming practices. Farming and land use practices can be reliably verified. Verification of these data could be accomplished through protocols developed by established certification organizations such as International Sustainability and Carbon Certification (ISCC). Many biofuel producers around the world and 20 ethanol plants in the US already certify under the ISCC procedures and collection of data to meet the LCFS needs coincides with information that is already being collected. Verification can provide a supplement to the ARB data review process and the precedent for using actual farming data has been established in the EU Renewable Energy Directive (RED) and other programs. Organizations such as Control Union, SGS, etc., already verify life cycle farm-level inputs for many corn ethanol plants for certification under the RED.

On-going operational data could be verified through quality assurance programs (QAP) similar to those developed under the Renewable Fuels Standard. Life Cycle Associates is aware that Genscape Inc. submitted comments to CARB on May 5, 2014, describing benefits and details of

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<sup>1</sup> For example, see Raizen sugarcane molasses pathway, April 2014, page 3. Even though the pathway is for molasses based ethanol, the crop is still sugarcane, which is represented by a CA\_GREET default value.



adapting the RFS2 QAP to program to insure integrity for LCFS credits. Life Cycle Associates believes that Genscape's comments provide a feasible pathway to gathering operational data while simultaneously creating a LCFS credit integrity program.

### Verification Incentives

An additional incentive for verification could be to grant a credit towards the iLUC adder for fuel producers. The rationale for this is that certified growers, for example, have been verified to have not converted any native lands into biofuels production.

While it is recognized that other indirect conversions may take place, widespread verification will likely reduce the effect of iLUC in the aggregate. The magnitude of such an iLUC credit would need to be determined.

Thank you for taking into account these comments. Life Cycle Associates, ISCC, and Genscape would like to arrange a joint visit to ARB to discuss these comments in more detail. Please let us know your time and availability.

Best Regards,



Stefan Unnasch  
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Life Cycle Associates, LLC