Low Carbon Fuel Standard Re-Adoption

May 30, 2014

Agenda

• Proposed Re-Arrangement of LCFS Regulatory Language
• Proposed Revisions
• Environmental Analysis for LCFS & Alternative Diesel Fuel Rules
• Next Steps
Proposed Re-Arrangement of the Regulatory Language

- Summarizes related provisions
- Logical
- Easier to read
- Easier to find provisions

Proposed Revisions

- Indirect Land Use Change Values (status)
- Fuel Pathways
- Electricity Provisions
- Credit Trading Provisions
- Reporting and Recordkeeping Provisions
- Enforcement Provisions
**ILUC Update**

- Evaluating feedback received from March 11\(^{th}\) workshop
  - Reviewing literature provided by stakeholders
  - Utilizing data to support/modify current approach
  - Consulting with subject matter experts
- Model updates
  - Working on including irrigation impacts
  - Reviewing data to refine forestry issue
  - 1\(^{st}\) Draft model expected to be available for testing mid-June 2014

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**ILUC Update (cont.)**

- Additional work
  - Potential changes to scenario runs
  - Considering changes to Monte Carlo simulations
- Meetings with stakeholders to discuss ILUC feedback
- Next Workshop (end of June or early July 2014)

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### Proposed Revisions

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### Fuel Pathways Agenda

- Two-Tiered Pathway Framework
- Fuel Pathway Process
- New CA-GREET 2.0
- Physical Transport Mode
Two-Tiered Framework

- Providers of conventionally produced first-generation fuels would apply through the Tier 1 process
- The Tier 1 process is simpler and faster than the Tier 2 process
- Applicants would calculate their CIs using a Tier 1 interface in CA-GREET 2.0 (to be discussed later)
- The resulting CI would be, following Executive Officer approval, the certified pathway CI
- Our proposal no longer includes the bins that were proposed earlier

Two-Tiered Framework (cont.)

Two categories of fuels would fall into Tier 2:
- Next-generation fuels
  - Cellulosic alcohols
  - Waste-based fuels (alcohols, drop-ins)
  - Biomethane
  - Hydrogen
- First-generation fuels produced using innovative methods
  - Carbon capture and sequestration
  - Renewable sources of process energy
  - Reduced emissions from feedstock production
  - Unforeseen innovations
Two-Tiered Framework (cont.)

Tier 2 applicants would apply using the familiar Method 1, 2A, and 2B processes

- **Method 1**: Select, subject to Executive Officer approval, a pathway from the Lookup Tables

- **Method 2A**: Apply using a Lookup Table pathway or previously approved, producer-specific pathway as a reference pathway

- **Method 2B**: Apply for a pathway for which no reference pathways exist (new process; new fuel)

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Two-Tiered Framework (cont.)

- We propose a proportional substantiality requirement for Method 2A

- For proposed Method 2A pathways with carbon intensities greater than 20 gCO$_2$e/MJ: 5.5 percent lower than the reference pathway well-to-wheels carbon intensity

- For proposed Method 2A pathways with carbon intensities of 20 gCO$_2$e/MJ or less: 1 gCO$_2$e/MJ less than the reference pathway well-to-wheels carbon intensity

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Fuel Pathway Process

We propose to streamline the application process in two ways:

• The current fuel pathway application and producer registration processes would be consolidated

• The consolidated process would be completed interactively through the LCFS Reporting Tool (LRT) web portal

All applicants, regardless of Tier or Method, would start the process by completing a web-based New Pathway Request Form

Fuel Pathway Process (cont.)

• The New Pathway Request Form would obtain all information needed for:
  – Starting the pathway application process
  – Creating a new (initially inactive) record in the LRT

• Once the applicant’s Tier placement has been approved, the applicant can:
  – Submit required Tier 1 materials
  – Request a Tier 2 Method 1 (Lookup Table) pathway
  – Submit required Tier 2 Method 2 materials

• All application materials can be securely uploaded via the LRT

• Upon approval, the inactive LRT record is activated
New CA-GREET 2.0

• We are processing to update the current CA-GREET 1.8b

• Two primary advantages
  – Updated life cycle inventory data
  – Ability to build a greater variety of fuel pathways

• We are basing this update on Argonne National Lab’s GREET 2013

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New CA-GREET 2.0 (cont.)

• Tier 1 Calculator for first-generation fuels
  – Starch- and sugar-based ethanol
  – Bio- and renewable diesel
  – Fossil and natural gas

• Tier 2 Modules for next-generation fuels
  – Innovative process, new feedstocks
  – User’s calculation with CA-GREET
  – Upstream and other plant specific parameters
**Evidence of Physical Transport Mode**

- Nomenclature change
- Electricity exempt from this requirement
- Clarification for biogas injected into interstate pipeline
  - Must be used for transportation purpose in California
  - No double-counting of emission reductions
- Limit retroactivity of credits based on this provision to 2 quarters max

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**Proposed Revisions**

- Indirect Land Use Change Values (status)
- Fuel Pathways
- **Electricity Provisions**
- Credit Trading Provisions
- Reporting and Recordkeeping Provisions
- Enforcement Provisions

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Changes to Electricity Provisions

- Proposing to exclude some supplemental information that is now required in annual reporting
  - Number of credits generated, sold, and banked
  - Number of EVs operating in service territory
  - Number of charging stations and charging incidents

- Change in heavy duty EV EER based on data for EV buses operating in CA (current 2.7, proposed 3.8)

Changes to Electricity Provisions (cont.)

- Opportunity for transit agencies to generate credits for fixed guideway systems
- Opportunity for utilities to generate credits for electric forklifts
- Slightly modified credit formula for fixed guideway and forklift credits to account for exclusion in baseline
- Adding new EER values
  - Heavy rail 4.6
  - Light rail and trolley bus 3.3
  - Electric forklifts 3.1
- Various edits to promote clarity
Changes to Electricity Provisions (cont.)

- Section 95484(b)(3)(C)(1) states that effective January 1, 2015, reporting of electricity dispensed to electric vehicles in residences must be based on direct metering
- Many EV owners are choosing to charge at residences with no meter
- A robust estimation method has been developed for use by CalETC members
- Staff is proposing that an approved estimation technique be allowed for credit generation after January 1, 2015

Proposed Revisions

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### Credit Transactions

- Consolidated regulatory text from various sections into one place [new section 95487]
- New User Related Definitions
  - “Broker”
  - “Credit Facilitator (CF)”
- New Acronyms Added: “LRT-CBTS”

### Credit Transactions (cont.)

- **Credit Retirement Hierarchy**
  - Credits acquired as a “carryback” purchase
  - Credits acquired during a previous compliance period
  - Credits generated in the earliest previous quarter
- **Credit Transfers**
  - All credit transfers to occur in LRT-CBTS
  - Online Credit Transfer Form (CTF)
  - 15 day period for Buyer to “Complete” a transfer
  - Regulated parties can authorize “Broker(s)”
  - Prohibited transactions
Proposed Revisions

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Definitions

Definitions Added

- **Reported Fuels Definitions:**
  - “Liquefied Compressed Natural Gas (L-CNG)”
  - “Biogas L-CNG”

- **Definition of Fixed Guideway Transportation**

- **Reporting Related Definitions**
  - “Total Obligated Amount”
  - “Product Transfer Document (PTD)”
  - “Fuel Transaction Form (FTF)”
  - “Reporting Party”: pertains to chain of custody reporting
Definitions & Acronyms

Definitions Added (cont.)

• **Revised “Transaction Type” definition**
  – Updated “Production” with “Production for use in California”
  – Added “EV Charging” and “Forklift Charging”
  – Added “Fixed Guideway Charging”
  – Added “NGV Fueling”

• **New acronyms**
  – “HDV-CIE,” “HDV-SIE,” “NGV,” and “L-CNG”
  – “LRT-CBTS”
  – “TOA”

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Reporting and Recordkeeping

• Pending credit transfers must be completed before annual report can be submitted

• Clarify reporting fuel production company ID and facility ID
  – Ethanol, biomass-based diesel, biogas, hydrogen facilities to be reported
  – Not required for CARBOB, diesel, fossil natural gas or electricity
**Reporting and Recordkeeping (cont.)**

- Record Retention period extended to 5 years
- Documenting fuel transfers
  - Product Transfer Documentation
  - Fuel Transaction Form
- Correcting a previously submitted report
  - Unlock Report Request Form
  - Provide Justification and Specify Changes
  - Corrected reports do not preclude enforcement based on misreporting

**Documenting Fuel Transfers**

**Product Transfer Document (PTD)**

Includes these parameters when obligation is passed:
- Transferor Company Name, Address and Contact Information
- Transferee Company Name, Address and Contact Information
- Date of Title Transfer
- Fuel Pathway Code (FPC) and Carbon Intensity (CI)
- Volume/Amount
- A statement identifying that the LCFS Obligation is passed to the transferee
- Fuel Production Company ID and Facility ID as registered with RFS2 program or LCFS program if not RFS2 registered
Fuel Transaction Form (FTF)

- Used to obtain confirmation and reconciliation prior to reporting
- Record aggregated and non-aggregated data from PTDs
- Upload and validate FTFs quarterly in LRT-CBTS
- Preview and route to Business Partners within LRT-CBTS
- Partner Confirmation and Reconciliation
- Significant reduction in report corrections

Fuel Transaction Form (FTF)

Includes these parameters:

- Business Partner - FEIN and Name
- Business Partner Name
- Year and Quarter
- Fuel Pathway Code (FPC)
- Volume/Amount
- Transaction Type
- Production Company ID
- Production Facility ID
- Physical Transport Mode Code
- Aggregation Indicator (T/F)
- Title Transfer Date or Aggregated Transaction Date (last day of quarter if aggregated) and a memo (optional)
Schedule for Submitting Fuel Transaction Form Data

- FTFs are required to be submitted within 20 business days of quarter end date
- FTFs are to be acknowledged by Business Partners within 30 days of quarter end date
Proposed Revisions

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Agenda

Enforcement Provisions

- Executive Officer Authority
- Enforcement Protocols
- Jurisdiction
- Violations
Executive Officer Authority

New Section 95490.2  
ARB Executive Officer has the authority to:

- Suspend an account
- Revoke credits
- Hold credits
- Limit or prohibit transfers of credits

Draft Amendment-Enforcement

- Enforcement Protocols
  - Section 95492  [Formerly Section 95490]

- Jurisdiction
  - Section 95493  [Formerly Section 95480.5]
Draft Amendment Violations

• Violations

  Section 95494  [Formerly Section 95484(d)]

• Stakeholder Feedback

  Generally supportive with some sensitivity to what is deemed a violation

Draft Amendment Violations (cont.)

Violation Language to include:

• Violation examples
  - Late, not reporting, or inaccurate reporting
  - Annual compliance: deficits

• Penalties
  - Existing H & S Code governs
  - Per deficit

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• Environmental Analysis for LCFS & Alternative Diesel Fuel Rules

• Next Steps

Environmental Analysis for LCFS and Alternative Diesel Fuel (ADF) Rules

• Environmental Analysis (EA) will be prepared to analyze environmental impacts of both the LCFS and ADF regulations since the two are interrelated

• CEQA checklist will be used to identify and evaluate potential impacts to environmental resource areas

• The EA will include:
  – Methods of compliance
  – Beneficial impacts and adverse impacts
  – Mitigation measures
  – Alternatives Analysis
2009 Environmental Analysis for the LCFS

The Air Quality Analysis in the EA prepared for the LCFS in 2009 identified:

- Significant GHG reductions due to production and use of lower CI fuels
- Potential reductions due to changes in vehicle fleet composition
- Estimated 2020 Biofuel Production Facilities
- No change in emissions from petroleum refineries, power plants, or existing corn ethanol facilities over baseline emissions
- Criteria pollutant emissions related to truck trips associated with delivery of feedstock and finished fuel
- Emissions offset by using newer trucks as prescribed by other State and federal regulations (such as LEV and CAFÉ standards)
- Health risk analysis to assess localized impacts

EA for Proposed 2014 Rules

- As part of 2014 EA, staff will assess beneficial and adverse environmental impacts from the proposed 2014 LCFS and ADF regulations
- Conclusions in 2014 EA may vary from those previously reached in the 2009 LCFS EA
- Air Quality Analysis will be a major focus of 2014 EA, as it was in the 2009 analysis
- Air Quality Analysis will address the potential for proposed LCFS and ADF regulations to increase NOx emissions
**Public Feedback on Scope of the EA**

ARB staff invites feedback on appropriate scope and content of the EA as it’s being developed. The scope and content of the EA would include:

- Identification of potentially significant adverse impacts from the LCFS and ADF regulations
- Alternatives to the proposed LCFS or ADF regulations that might avoid or substantially lessen significant adverse impacts
- Mitigation measures that should be analyzed for any significant adverse impacts

*We welcome your feedback on the planned EA*

Please submit to Katrina Sideco (ksideco@arb.ca.gov)

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- Next Steps
Next Steps

- Feedback due June 13, 2014
- Submit via email to Katrina Sideco at ksideco@arb.ca.gov
- Additional public workshops
- Board Update – Summer (July?) 2014
- Staff report – Summer (September?) 2014
- Board Hearing – Fall (November?) 2014

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[http://www.arb.ca.gov/fuels/lcfs/lcfs.htm](http://www.arb.ca.gov/fuels/lcfs/lcfs.htm)
Thank You