

Low Carbon Fuel Standard Proposed Amendments

May 24, 2013

Agenda

- Proposed Draft Regulatory Changes
 - Cost Containment Provisions
 - Electricity Provisions
 - Miscellaneous Revisions
- Next Steps
- Contact Information

May 24, 2013

2

Proposed Draft Regulatory Changes

- **Cost Containment Provisions**
- Electricity Provisions
- Miscellaneous Revisions

May 24, 2013

3

Approaches to Further Incent Investment in Low-CI Fuels and Provide Additional Compliance Strategy Options

Background

- State and federal regulations in place to help drive low-CI fuel volumes (e.g., next generation biofuels, electricity, natural gas, etc.)
- 2011 Advisory Panel expressed interest in further incenting investment in low-CI fuels
- Board requested follow-up in Resolution 11-39

May 24, 2013

5

Overall Approach

- Consider possible concepts
- Publish descriptions of initial ideas
- Solicit stakeholder input on merits/concerns of concepts
- Continue to work with stakeholders to refine analyses
- Determine which approach(es), if any, enhance the implementation of the LCFS
- Propose amendments to the Board, if needed

May 24, 2013

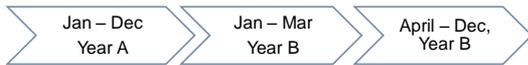
6

The LCFS Incentives Low-CI Fuels

Performance-based design gives regulated parties (RPs) the option of investing in the low-CI fuels that best suit their needs

- Investing in mature technologies to help drive down their carbon intensity
- Investing in emerging technologies to find the lowest carbon intensity solution

The LCFS has Several Options for Compliance



- Buy low-CI fuels for blending
- Produce low-CI fuels to generate credits
- Use credits from credit bank
- Buy credits from low-CI fuel providers
- Purchase carry back credits*
- If deficit from Year A is less than 10%, choose to carry it over to Year B*
- Use Cost Containment Option/s

*must still meet Year B target

Goals of Potential Provisions

- Further stimulate investment in low-CI fuels
- Provide regulated parties with additional compliance strategy options

Basic Principles

- Be straightforward and predictable
- Provide some degree of market certainty
- Clearly communicate that low-CI fuels have a secure market
- Minimize extent of market interference

May 24, 2013

10

5 Potential Options (So Far)

1. Credit Window
2. Reinvestment Plan
3. Credit Multiplier
4. Credit Clearance
5. Noncompliance Penalty

May 24, 2013

11

Option 1 – Credit Window

- Original proposed plan from 2011 Advisory Panel sub-group
- At end of compliance year, if regulated party (RP) unable to purchase credits in the market, they can purchase compliance-only credits from ARB
- ARB provides compliance-only credits at a price set forth in the regulation
- Proceeds from the credit purchases are distributed to parties who use or produce low-CI fuels

May 24, 2013

12

Option 2 - Reinvestment

- A price threshold is set in the regulation
- Instead of purchasing compliance-only credits, RPs would invest in projects outlined in the regulation that further the goals of the LCFS
 - Low-CI fuel production
 - Additional infrastructure to distribute low-CI fuels
 - Energy efficiency improvements
 - Others

May 24, 2013

13

Option 3 – Credit Multiplier

- Additional LCFS credits introduced by applying a multiplier for low-CI fuels
- Credits would be treated as any other credits in the market
- Approach amplifies signal that low-CI fuels are valuable in the market
- Likely to require additional adjustments

May 24, 2013

14

Option 4 – Credit Clearance

- Any RP with net positive credits can pledge credits for the credit clearance process
- Once RPs submit compliance reports, those with deficits declare how they will reconcile the deficits:
 - If < 10% short, carry deficit into following year, as allowed now
 - If > 10%, choose to purchase pro rata share of pledged credits in order to carry negative balance into the following year
- Process available as part of year-end reconciliation
- “Interest bearing” debt

May 24, 2013

15

Option 5 – Noncompliance Penalty

- RP out of compliance after the purchase of carry-back credits can opt to pay a pre-established, noncompliance penalty
- Funds would be deposited into the Air Pollution Control Fund

Discussion

- Merits of including such a provision
- Potential downside of including such a provision
- Benefits and challenges of each concept
- Additional concepts
- Consideration of convening a working group

Next Steps and Contact Information

- Comments requested by June 14th, 2013
- Comments and questions may be submitted to:

Ms. Michelle Buffington

mbuffing@arb.ca.gov

916-324-0368

Proposed Draft Regulatory Changes

- Cost Containment Provisions
- **Electricity Provisions**
- Miscellaneous Revisions

Overview of Electricity Provisions

- Electricity use in fixed guideway transportation and forklifts
 - Board direction to consider off-road sources of electricity
 - Consideration of two methods to incorporate these sources into the regulation
 - Overview of staff proposal
- Modification of requirement to provide metered electricity data for residential charging

Fixed Guideway Transportation and Forklifts Board Direction

- Only on-road vehicles currently qualify for credit generation
- Board directed staff (Res. 09-31 & 11-39) to:
 - Evaluate the feasibility of issuing credits for non-road electricity-based transportation sources, including mass transit, and
 - Propose amendments, if appropriate, to the regulation
- Staff is proposing to add fixed guideway transportation and electric forklifts as eligible to opt-in

**Fixed Guideway Transportation and Forklifts
Consideration of Two Methods**

Original staff concept

- Allow these sources to opt into LCFS
- Use modified electricity credit calculation
 - EVs receive credit for low-CI fuel used *and* emissions avoided by conventional vehicle *not* purchased
 - Fixed guideway transportation and forklifts not as directly linked to diesel fuel displacement
 - Therefore, credit calculation should *not* include additional credit for diesel fuel displacement

**Fixed Guideway Transportation and Forklifts
Consideration of Two Methods (cont'd)**

Baseline approach

- Consideration requested by stakeholders
- Incorporate 2010 electricity and natural gas fuel use into diesel baseline
- Modify annual standards based on new diesel baseline
- Allow credit generation from additional future transportation technologies using electricity

**Fixed Guideway Transportation and Forklifts
Consideration of Two Methods (cont'd)**

Staff does *not* recommend baseline approach

- Affects all regulated parties
 - Increases annual CARB diesel deficits
 - Reduces annual credit generation under diesel standard for lower-CI fuels
- Credits for fixed guideway transportation and forklifts will likely not *all* be realized (not all regulated parties will opt-in and report)

**Fixed Guideway Transportation and Forklifts
Consideration of Two Methods (cont'd)**

Staff recommends original concept

- Maintains current baseline and standards
- No change in obligations for diesel regulated parties
- Number of off-road sources that qualify for credit generation is known and fuel use is quantifiable

**Fixed Guideway Transportation and Forklifts
Overview of Staff Proposal**

Fixed Guideway Transportation

Definition: A fixed guideway system is a system of public transit electric vehicles that can operate only on its own guideway constructed specifically for that purpose, such as light rail or heavy rail, exclusive right-of-way bus operations, and trolley coaches

**Fixed Guideway Transportation and Forklifts
Overview of Staff Proposal**

Fixed Guideway Transportation

- Transit agencies would be eligible to opt in to generate credits, with utilities as back-up
- Credit calculation would not include credit for diesel fuel displacement
- New system extensions may be eligible for full credit calculation if fuel use can be quantified

**Fixed Guideway Transportation and Forklifts
Overview of Staff Proposal (cont'd)**

Electric forklifts

- Utilities would be eligible to include this electricity use
- Fuel use would estimated based on forklift shipments, battery size, operating hours, and load factor
- Credit calculation would not include credit for diesel fuel displacement

Modification of Requirement for Metering of Residential Electricity

- Section 95484(b) requires regulated parties for residential charging to be based on direct metering starting January 1, 2015
- Direct metering means use of a utility meter or submeter in the charging equipment
- Utilities estimate <50% of residential EVs are metered
- Staff proposes to modify the requirement so that an approved estimation method may be used for EVs not using a direct meter

Proposed Draft Regulatory Changes

- Cost Containment Provisions
- Electricity Provisions
- **Miscellaneous Revisions**

Miscellaneous Updates

- Draft Language for:
 - Diesel Compliance Obligation
 - Battery Switch Stations
 - Energy Density
 - Method 2 Electricity Mix
- Conceptual Ideas for:
 - Method 2 Facility Location
 - Method 2 Retroactivity
 - Credit Trading Provisions
- LRT/CBTS Updates

May 24, 2013

31

Diesel Compliance Obligation Retention

Amend Section 95484(a)(2)(B)(4)

Compliance obligation may not be transferred to a buyer of finished diesel fuel, provided the buyer asserts in writing, as part of the transaction, that it intends to sell the diesel as a finished fuel and does not have the ability to blend the finished diesel fuel with additional blendstock (e.g., biodiesel).

May 24, 2013

32

Battery Switch Station Owners

Amend Section 95484(a)(6)(C.1)

To receive credit for transportation fuel supplied through battery switch stations, the regulated party must include, in annual compliance reporting, an accounting of the number of battery switch stations and the number of battery switch incidents.

May 24, 2013

33

Energy Density

Inclusion of language prior to Table 4

Subject to Executive Officer approval, a regulated party may use an energy density value for a fuel or blendstock that is different than shown in Table 4, provided that energy density value was developed by the Executive Officer pursuant to Method 1 under section 95486(b), or certified by the Executive Officer pursuant to Method 2A or 2B under section 95486(f).

May 24, 2013

34

Method 2A/2B Electricity Mix

Amend Section 95486(c)(4) & 95486(d)(6)

An applicant shall use one or two of the following electrical energy generation mixes when calculating the carbon intensities of its feedstock production and fuel production steps, whichever applies (subject to Executive Officer approval):

- The applicable marginal mix specified in CA-GREET 1.8b;
- An applicable marginal mix derived from the U.S. EPA's Emissions & Generation Resource Integrated Database (eGRID);

May 24, 2013

35

Method 2A/2B Electricity Mix

Amend Section 95486(c)(4) & 95486(d)(6) - continued

- The applicable Northwest average mix; or
- The published Bonneville Power Administration (BPA) electrical energy generation mix, provided the applicant can demonstrate by contract or other documentation that the production facility(ies) receives and will continue to receive 100 percent of its electricity from the BPA while it produces fuel for the California market.

May 24, 2013

36

Method 2 Facility Location

Amend Section 95486(c)(4) & 95486(d)(6)

- Applicants to provide the *Longitude, Latitude, and Centroid* of the plants.
- These coordinates will allow staff to verify the plant's existence (domestic/or international) using Google Earth as applicants propose for their carbon intensity certification.

May 24, 2013

37

Method 2A/2B CI Retroactivity

Amend Section 95486(f)(2)

- Method 2 applicants may request approval for use of new or revised pathway CIs to apply retroactively to the date on which the applicant's Method 2 application was deemed complete by ARB staff
- Requests for retroactivity beyond the date on which the applicant's Method 2 application was deemed complete will not be approved

May 24, 2013

38

Credit Transfer Provisions

Amend Section 95488 (c)

- Online credit bank and transfer process (CBTS) to replace paper-based transfers
- All past-due reports to be submitted before credit transfers can be completed
- All "Pending Credit Transfers" initiated in previous compliance period must be completed before submittal of annual reports

May 24, 2013

39

Credit Transfer Provisions

Amend Section 95488 (c) - continued

- “Delegation Letter” required with LRT-CBTS registration
- Brokers to submit to the jurisdiction of California courts
- “Credit Facilitator” is to refer to RP users, whereas “Brokers” are third party representatives
- Voluntary posting of credits for sale on CBTS forum

May 24, 2013

40

Other Provisions

Amend Section 95488 (d) (2) (A)

Default Credit Retirement Hierarchy to be used for the retirement of credits

Amend Section 95484(b)

- Grace period provided for corrections to quarterly reports
- Corrections to be submitted no later than April 30th of the following compliance year

May 24, 2013

41

Credit Bank & Transfer System (CBTS)

- CBTS Release – May 17, 2013
 - Online Credit Transfers with Transfer Log
 - Post “Credits to Sell” and Contact Information
 - Broker Registration and “Authorization”
 - Integration with LRT and CABS (credit ledger)
- Phase III Development – Public Disclosure Reports

May 24, 2013

42

Miscellaneous LRT System Updates

LRT Updates – May 17, 2013

- Electricity Report Document Upload with Annual Reports
- Positive Total Obligated Volume (TOV) must be maintained
- MCON Reporting Template Posted
- New CBTS User Guide V1.0

May 24, 2013

43

Agenda

- Proposed Draft Regulatory Changes
 - Cost Containment Provisions
 - Electricity Provisions
 - Miscellaneous Revisions
- Next Steps
- Contact Information

May 24, 2013

44

Next Steps

- Comments due June 14, 2013
- Submit comments via email to Katrina Sideco at ksideco@arb.ca.gov
- Planning additional workshops in June, July, and August
- 45-day comment period scheduled to begin September 9, 2013
- Board Hearing scheduled for October 2013

May 24, 2013

45

Agenda

- Proposed Draft Regulatory Changes
 - Cost Containment Provisions
 - Electricity Provisions
 - Miscellaneous Revisions
- Next Steps
- **Contact Information**

May 24, 2013

46

Contact Information

Proposed Regulatory Amendments (Overall Lead)	Katrina Sideco (916) 323-1082 ksideco@arb.ca.gov
Cost Containment Provisions	Michelle Buffington (916) 324-0368 mbuffing@arb.ca.gov
Electricity Provisions	Carolyn Lozo (916) 445-1104 clozo@arb.ca.gov
Miscellaneous Changes	Stephen d'Esterhazy (916) 323-7227 sdesterf@arb.ca.gov

May 24, 2013

47

Contact Information

Mike Waugh, Chief, Transportation Fuels Branch
(916) 322-8263, mwaugh@arb.ca.gov

Floyd Vergara, Chief, Alternative Fuels Branch
(916) 327-5986, fvergara@arb.ca.gov

Wes Ingram, Manager, Fuels Evaluation Section
(916) 322-3984, wingram@arb.ca.gov

Manisha Singh, Manager, Fuels Section
(916) 327-1501, mansingh@arb.ca.gov

Jim Aguila, Manager, Substance Evaluation Section
(916) 322-8283, jaguila@arb.ca.gov

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

May 24, 2013

48

