

California Environmental Protection Agency  
 **Air Resources Board**

**Low Carbon Fuel Standard  
Workshop:**

***Resolution 09-31 Updates***

*January 20, 2010*

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**Workshop Agenda**

- Regulatory Advisory
- Guidelines for New Pathways
- Expert Workgroup
- Sustainability
- Reporting Tool
- Biorefinery Registration
- Provisions for Regulated Parties of Electricity
- Credits for Off-Road Electric Vehicles
- Air Quality Guidance for Siting Biorefineries
- Rulemakings for Fuel Specifications

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**Feedback Requested**

- We request your comments
- Feedback requested by February 5, 2010

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California Environmental Protection Agency  
 **Air Resources Board**

**Low Carbon Fuel Standard  
Workshop:**

***Regulatory Advisory***

*January 20, 2010*

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**LCFS Regulatory Advisory**

- A one-time grace period for submittal of the first quarterly reports for the year 2010
- Due date extended from May 31, 2010 to July 1, 2010
- Grace period provided to allow adequate time for reporting
- Reporting tool and supporting documentation expected to be released for beta testing by mid-March 2010

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**Questions/Comments**

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California Environmental Protection Agency  
 **Air Resources Board**

**Low Carbon Fuel Standard  
Workshop:**

***Guidelines for New Pathways***

*January 20, 2010*

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**Method 2A/2B Guidelines**

- Regulated parties may report the carbon intensities of the fuels they provide using either Method 1 or Method 2
- Method 1:
  - Look up carbon intensities in the LCFS Lookup Tables
  - These contain the carbon intensities of currently approved fuel pathways.
  - One contains gasoline pathways, and the other contains diesel pathways
  - They are included in the LCFS Modified Regulation Order:  
(<http://www.arb.ca.gov/regact/2009/lcfs09/lcfs2ndmodtxt.pdf>)

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**Method 2A/2B Guidelines**

- Current Lookup Tables contain pathways developed by ARB Staff
- Tables will soon contain pathways developed by fuel providers using Method 2
- Method 2: fuel providers develop new pathways for one of two reasons:
  1. Lookup table contains a reportable pathway, but the carbon intensity is higher than the provider's pathway (Method 2A)
  2. No reportable pathway exists (Method 2B)

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### Method 2A/2B Guidelines

- In both cases, the fuel provider applies to ARB to have a new pathway added to the lookup table.
- Resolution 09-31 directed the Executive Officer to prepare guidelines to assist regulated parties.
- First draft of guidelines presented for comment at a Workshop on August 5th 2009
- 7 Comment letters received
- Comments received incorporated into a revised draft, available for this workshop



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### Method 2A/2B Guidelines

- Guideline Contents:
  - I. Introduction*
  - II. Establishing New Fuel Pathways*
    - A. Overview of The Method 2A and 2B Application Processes*
    - B. Method 2A Application Procedures*
    - C. Method 2B Application Procedures*
  - III. Land Use Change and Other Indirect Effect Determination Process*
  - IV. Fuels Deemed to Have Negligible or No Land Use Change or Other Indirect Effects*
  - V. Priority Pathways for Inclusion in the Lookup Table*
  - VI. Future Certification Program*
  - VII. Evaluation of High Carbon Intensity Crude Oils*



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### Method 2A/2B Guidelines Revision Overview

- Section/table on feedstocks with little or no land use change impacts expanded and reorganized
- This Section required by Resolution 09-31
- Additions:
  - Fuels: Biodiesel from tallow and waste, CNG/LNG from sewage digester gas, electricity from appropriate biomass, hydrogen from feedstocks in the table, Fischer-Tropsch from waste, etc.
  - Crops from double & mixed cropping rotations
- Inclusion of some fuels still under consideration: fossil fuels, fuels using fossil fuels for process power, nuclear, hydroelectric



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**Method 2A/2B Guidelines  
Revision Overview**

- Priority pathways to be developed by ARB (for inclusion in the Lookup Table):
  - Selection criteria:
    - Important to State rather than to individual fuel providers (e.g., uses in-state resources and creates in-state employment)
    - Fuels expected to be in relatively wide use
    - Could contribute to carbon intensity reductions over the course of the regulation
    - Likely to receive development support from the Alternative and Renewable Fuel and Vehicle Technology Program (AB 118)
  - Table in the Guidelines document not yet populated



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**Method 2A/2B Guidelines  
Revision Overview**

- Section on screening for high carbon intensity crude oil
- This section required under Resolution 09-31
- Petroleum fuels can use lookup table values if refined from
  - Crudes in the 2006 baseline crude mix or
  - Crudes that are not "high carbon intensity" (More than 15 gCO<sub>2</sub>e/MJ for production & transport)
- Fuels not meeting 1st condition must be screened to determine whether they meet the 2nd



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**Method 2A/2B Guidelines  
Revision Overview**

- 3-step crude oil screening process
  - Production process parameters (reservoir depth, flaring rate, API > 20, produced/injected water-to-oil ratio, produced/injected gas-to-oil ratio)
  - Crudes not meeting these criteria will receive more detailed screening
  - Crudes found to be "potentially high-carbon-intensity" will have carbon intensities set via method 2B
    - Will establish whether crude exceeds the 15 gCO<sub>2</sub>e/MJ threshold (for production and transport)



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**Method 2A/2B Guidelines  
Next Steps**

- A new draft reflecting the comments received following today's Workshop will be prepared
  - If few comments are submitted, we will revise and go final
  - If many comments are submitted, we will revise and solicit another round of comments
- Revisions will be made on an ongoing basis to reflect actual pathway approval experience



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**Questions/Comments**

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- Jim Duffy (Screening for HCICO)  
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**Air Resources Board**

**Low Carbon Fuel Standard  
Workshop:**

***Expert Workgroup***

*January 20, 2010*

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## LCFS Expert Workgroup

Resolution 09-31 directed staff to:

- Convene an expert workgroup to assist with land use and indirect effect analysis of transportation fuels
- Coordinate this effort with the U.S. EPA, European Union, and other agencies
- Target strength of the workgroup is about 20 members
- ARB staff (Robert Fletcher) will chair the workgroup (Jim Duffy, co-chair)
- Facilitator from California State University, Sacramento
- Meetings will be public and expected to be webcast



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## Member Selection

- Member solicitation released on September 17, 2009
- 61 applications received
  - Academic Institutes/National Labs: 28
  - Industry: 15
  - Consultants: 11
  - Govt. Agencies: 4
  - Enviro and Other Groups: 3
- 7 organizations sent recommendations
  - BP America, California Grain and Feed Association, Illinois Corn Growers Association, California Department of Food and Agriculture, Biotechnology Industry Organization, and UNICA



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## Member Selection (continued)

- ARB staff in consultation with the CEC staff shortlisted approximately 20 potential members from among 61 applicants
  - A balanced representation of technical expertise
- Government agency representatives



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**Next Steps**

- Members are being confirmed
- 1<sup>st</sup> meeting is tentatively scheduled for February 2010
- Additional meetings will be held every 4-6 weeks
- As appropriate, working subgroups with invited technical advisors to focus on specific topics
  - Subgroups will report back to the core group
- Draft report of findings by mid-October 2010
- Staff report to the Board in December 2010 with regulatory amendments or recommendations, if appropriate



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**Questions/Comments**

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**LCFS Sustainability Provisions**

Mike Waugh, Manager  
Program Assistance Section

*January 20, 2010*

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### LCFS Sustainability Provisions

Resolution 09-31 directs staff to:

- Present a sustainability workplan to the Board
- Provide reasonable and appropriate sustainability provisions for LCFS by no later than December 2011
- Work with IFWG, appropriate State agencies, environmental advocates, regulated parties, and other interested stakeholders



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### Draft Sustainability Workplan

- Distributed for comments on December 22, 2009
- Eight pages in length
- General outline
  - Importance of sustainability provisions
  - Key elements
  - Process commitments
  - Proposed schedule



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### Draft Sustainability Workplan (cont.)

- Work with national and international partners
- Regionalize, as appropriate, to address California resources:
  - Forest biomass
  - Water
  - Agriculture



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### Draft Sustainability Workplan (cont.)

A transparent, participatory process to develop sustainability provisions

- Workgroup
- Periodic public workshops



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### What Do We Need?

- Input on the draft Sustainability Workplan
- Thoughts on workgroup
  - Size
  - Meeting frequency
  - Tasks
  - Coordination with other workgroups (CEC)
  - Coordination with international efforts



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### Contact Info and Link

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



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California Environmental Protection Agency  
**Air Resources Board**

**Low Carbon Fuel Standard  
 Workshop:**

***Reporting Tool***

***January 20, 2010***

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**LCFS Reporting Tool**

- Reporting tool development in progress
  - Currently undergoing ARB internal testing and verification
  - Early February next Beta testing with industry users
  - ARB working with contractor to establish testing environment for industry users
- Working Group meeting January 21, 2010
- Industry User Acceptance Testing to begin in late January to early February
- Tool expected to launch in March

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**Main Log-In Page**

**Low Carbon Fuel Standard Reporting Tool**

**Regulated Party Sign On**

User Name

Password

**Login**

Forgot your username or password?

**FIRST TIME USERS**

**If this is your first time using the system, contact your organization's administrator(s).**

Each organization must designate administrators who will be responsible for creating and maintaining the organization's profile and user accounts. If you are an administrator, you must do the following to register your organization and users with ARB.

- > Enter Organization and facility details
- > Create user accounts for each user under your organization, including yourself
- > Create user roles and assign role to each user
- > Determine who can view or edit information and who has signatory authority to submit reports

Once a user account is created, give the username and password information to the user. The password can be changed when the user logs in.

**Register Organization and Users**

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**Questions/Comments**

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**Air Resources Board**

**Low Carbon Fuel Standard  
Workshop:**

***Biorefinery Registration***

*January 20, 2010*

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**Biofuel Producer Registration**

- Biofuel Producers identify carbon intensity and physical pathway based on facility data
- Biofuel producer registration data will be used by regulated parties for LCFS reporting and compliance



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### Biofuel Producer Registration

Registration includes:

- Providing information on plant processes, feedstocks, and co-products
- Choosing carbon intensities from lookup table
- Physical pathway – how fuel gets to California



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### Biofuel Producer Registration

Physical Pathway determination:

- Map showing most likely route for fuel to get to California
- Method of transportation (eg: rail, marine transport, truck)



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### Biofuel Producer Timeline

- Draft form posted - comments due January 25, 2010
- Ongoing registration February – May 2010
- Carbon Intensity and Facility ID on Product Transfer Document
- Regulated parties start reporting July 2010



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**Questions/Comments**

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**Air Resources Board**

**Low Carbon Fuel Standard  
Workshop:**

***Provisions for Regulated  
Parties of Electricity***

*January 20, 2010*

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**Provisions for Regulated Parties - Electricity**

- Regulation language modified in 15 day package
  - require meters if installed
  - allow approved alternative estimation method prior to 2015
- ARB held meetings/workshop with CEC, CPUC, CalETC, third party electricity providers, refiners, utilities, public
- CPUC rulemaking in process
- Status
  - No regulation changes necessary at this time
  - Will evaluate changes needed based on CPUC rulemaking



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**Questions/Comments**

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**Air Resources Board**

**Low Carbon Fuel Standard  
Workshop:**

***Credits for Off-Road Electric  
Vehicles***

*January 20, 2010*

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**Credits for Off-Road Electric Vehicles**

- Develop criteria for LCFS credits from off-road electric transportation
  - Forklifts
  - Scrubbers, Sweepers
- Work to date
  - Presentation at August 5, 2009 LCFS workshop
  - Evaluating inventory information
  - Reviewing regulatory and grant program requirements
  - Received information from Industrial Truck Association



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**Off-Road Regulation and Program Review**

- Carl Moyer Program eligibility requirements and exclusions
- Large Spark Ignition (LSI) Engine Emission Standards
- LSI Fleet Rules for Forklifts and Non-Forklift Equipment



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**Benefits of LCFS Credits for Off-Road**

- Promote use of lower carbon intensity fuels for off-road transportation
- Encourage development and use of electric technologies
- Diversify fuel pool
- Reduce GHG emissions



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**LCFS Credits for Off-Road Electric Vehicles**

**Forklift Inventory**

- ARB OFFROAD estimated inventory (population)  
Forklifts
  - 51,280 in 2010
  - 56,060 in 2020



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**Questions/Comments**

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**Air Resources Board**

**Low Carbon Fuel Standard  
Workshop:**

***Air Quality Guidance for  
Siting Biorefineries***

*January 20, 2010*

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**Biorefinery Air Quality Guidance**

- Informational, non-regulatory document
- Compilation of lowest emission levels identified for process equipment at biorefineries
- Compilation of references for assessing and mitigating mobile source emissions



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### Report Progress

- Released proposed Report outline
- Formed Workgroup (6 meetings so far)
- Collecting and analyzing information
  - Permits and EIRs
  - Rules and policies
  - Planning documents
  - Emissions testing
  - Vendor guarantees



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### Questions/Comments

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### Air Resources Board

### Low Carbon Fuel Standard Workshop:

### *Rulemakings for Fuel Specifications*

*January 20, 2010*

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### Rulemakings for Fuel Specifications & Standards

- CNG (compressed natural gas)
  - New performance standards (Spring 2010)
- Biodiesel/renewable diesel
  - New fuel specifications (tent. June 2010)
- E85 (gasoline with 85% ethanol)
  - Update existing specifications (tent. June 2010)



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### Questions/Comments

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<b>Feedback Requested</b>
<ul style="list-style-type: none"> <li>• We request your comments</li> <li>• Feedback requested by February 5, 2010</li> </ul>




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