CAT Working Group Overview: The Low Carbon Fuel Standard (LCFS) will reduce GHG emissions in California over the short term by reducing the carbon intensity of transportation fuels used by at least 10 percent. The LCFS regulation was approved and went into effect on April 15, 2010.

Working Group Agencies: The California Air Resources Board (ARB) is the lead agency. The California Energy Commission, and the California Department of Forestry and Fire Protection (CAL FIRE) will be part of the Working Group.

Measure / Strategy
A) Description: On April 23, 2009, the California Air Resources Board (ARB/Board) issued Board Resolution 09-31, approving the Low Carbon Fuel Standard (LCFS) for transportation fuels sold in California. The LCFS regulation will reduce greenhouse gas (GHG) emissions in California by reducing the carbon intensity of transportation fuels used in the State by at least 10 percent—as measured on a full lifecycle basis—by the year 2020. The LCFS applies to all transportation fuel providers, including refiners, producers, blenders and importers of transportation fuels in California. Gasoline, diesel, ethanol, biodiesel, renewable biodiesel, natural gas, LPG (propane), electricity, hydrogen, and all blends are regulated. The Office of Administrative Law (OAL) reviewed the LCFS regulation, and approved it effective April 15, 2010. As specified in the regulation, 2010 is a reporting year. Firms must begin complying on January 1, 2011.

B) Agencies Involved: Air Resources Board, California Environmental Protection Agency, California Energy Commission (CEC), California Department of Food and Agriculture (CDFA), and California Department of Forestry and Fire Protection (CAL FIRE).


D) Metrics: The metric for this action is to reduce the carbon intensity of transportation fuels used in the State by at least 10 percent, or about 16 MMT CO₂e by 2020.

E) Crosscutting Issues:
   – Forest biomass
   – Water
   – Agriculture

Issues related to direct emissions associated with producing, transporting, and using the fuel.
• Farming practices (e.g., frequency and type of fertilizer used):
  • Crop yields
  • Harvesting of the crop
  • Collection and transportation of the crop

• Fuel production:
  • Type of fuel production process
  • Fuel used in the production process (e.g. coal/CNG/biomass)
  • Energy efficiency of the production process
  • The value of the co-products generated (e.g. distillers grain)

• Transport and distribution of the fuel
  • Combustion of the fuel in vehicles

• Indirect effects, including such market-mediated impacts as indirect land use change

F) Tasks and Deliverables:

Task 1: Expert Workgroup
1. Description: An Expert Workgroup is currently meeting. This group considers the land use and other indirect effects associated with biofuel production, and reports to the Board no later than January 1, 2011 with regulatory amendments or recommendations, if appropriate, on approaches to address the issues identified. Eight subgroups are evaluating key factors that might impact the land use values for biofuels including:
  • Elasticity Values
  • Co-Product Credits
  • Land Cover Types
  • Uncertainty
  • Indirect Effects of Fuels Other than Biofuels
  • Carbon Emission Factors
  • Time Accounting
  • Comparative and Alternative Modeling Approaches

2. Deliverables: Present a report to the Board no later than January 01, 2011.

3. Agency Roles: Staff is coordinating this effort with similar efforts by the U.S. Environmental Protection Agency (U.S. EPA), other States, the European Union, and other agencies pursuing a low carbon fuel standard.

4. Timeline: The first meeting was held on February 26, 2010. Additional meetings of the workgroup will be held every 4 to 6 weeks through the end of the year.

Task 2: Establish New Fuel Pathways
1. Description: The Board directed the staff to develop guidelines to assist fuel providers in applying for new pathways and sub-pathways. Regulated parties must report the carbon intensities of the fuels they provide using a table of Board-approved carbon intensity values (a “lookup table”) found in §95486(b)(1) of the LCFS Regulation. Carbon intensities outside of the core set developed by staff, however,
will primarily be the responsibility of fuel providers. Regulated parties may use one of two methods to determine the fuel carbon intensities they report under the LCFS. Under Method 1, regulated parties select carbon intensity values from the fuel carbon intensity lookup table found in §95486(b)(1) of the LCFS Regulation. Under Method 2, any person or group, whether a regulated party or not, may seek Board or Executive Officer approval of additional fuel pathways or sub-pathways. If a proposed pathway or sub-pathway is approved, it is added to the lookup table, and becomes available to all regulated parties. The use of a new pathway or sub-pathway may begin as soon as it has been added to the lookup table.

2. **Deliverables**: Procedures and guidelines to establish new fuel pathways.
   - ARB develop priority pathways and incorporate in lookup table
   - Approve application for additional pathways developed by stakeholders/fuel producers and incorporate in lookup table
   - Table of fuels with little or no land use change, develop pathways and incorporate in lookup table
   - Develop a screening process for high carbon intensity crude and evaluate new crudes that may be used in California.

3. **Agency Roles**: Produce guidelines, develop screening process, and evaluate/review pathway applications submitted for approval.

4. **Timeline**: On going basis.

**Task 3: Compliance Reporting Tool**

1. **Description**: Development of the Compliance Reporting Tool. Work with stakeholders to establish procedures for reporting information that is required for compliance starting in 2011. As part of the compliance reporting process, ARB will be providing the regulated parties an online, web-based tool to submit information for the determination of compliance. The regulated party is required to submit four quarterly reports and one annual report per year for the duration of the LCFS program between 2010 and 2020.

2. **Deliverables**: A) Registration of biofuel production facilities with appropriate fuel pathway. B) LCFS web-based Reporting Tool

3. **Agency Roles**: A) Register biofuel producers. B) Work with outside contractors to develop the web-based Reporting.

4. **Timeline**: A) Register biofuel producers on an ongoing basis. B) The web-based Reporting Tool is to be operational by July 2010 and fully implemented by January 1, 2011.

**Task 4: Sustainability Workgroup**

1. **Description**: Board Resolution 09-31 directs staff to work with stakeholders to develop sustainability provisions for the LCFS and to bring recommendations back to the Board no later than December 2011.

2. **Deliverables**: A report to the Board on issue of sustainability provisions.

3. **Agency Roles**: Work with stakeholders to develop such provisions.

4. **Timeline**: Recommendation back to the Board no later than December 2011.
G) SUMMARY TABLE:

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Agencies</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCFS Adoption</td>
<td>ARB</td>
<td>April 23, 2009 -- Completed</td>
</tr>
<tr>
<td>OAL approval of LCFS Regulation</td>
<td>ARB</td>
<td>April 15, 2010 -- Completed</td>
</tr>
<tr>
<td>Expert Workgroup Report to the Board</td>
<td>ARB</td>
<td>No later than January 1, 2011</td>
</tr>
<tr>
<td>Establishing New Fuel Pathways</td>
<td>ARB</td>
<td>In progress</td>
</tr>
<tr>
<td>Compliance Reporting Tool: Register biofuel producers</td>
<td>ARB</td>
<td>In progress</td>
</tr>
<tr>
<td>Compliance Reporting Tool: Web-based Reporting Tool</td>
<td>ARB</td>
<td>Reporting only phase: July 1, 2010 Full implementation: January 1, 2011</td>
</tr>
<tr>
<td>Sustainability Workgroup Report</td>
<td>ARB, CEC, CDFA and CAL FIRE</td>
<td>December 2011</td>
</tr>
</tbody>
</table>