

State of California  
AIR RESOURCES BOARD

**Fourth Notice of Public Availability of Modified Text and  
Additional Documents and Information**

**PUBLIC HEARING TO CONSIDER ADOPTION OF A REGULATION TO IMPLEMENT  
THE LOW CARBON FUEL STANDARD**

Public Hearing Date: April 23, 2009  
First Public Availability Dates: July 20, 2009 – August 19, 2009  
Second Public Availability Dates: September 23, 2009 – October 8, 2009  
Third Public Availability Dates: December 15, 2009 – January 14, 2010  
Fourth Public Availability of Modified Text Date: February 1, 2010  
Deadline for Public Comment: February 16, 2010

This Notice is part of the continuation of a rulemaking in which the Air Resources Board (Board or ARB) is establishing a regulation implementing California's Low Carbon Fuel Standard (LCFS). On November 25, 2009, ARB's Executive Officer adopted the LCFS regulation, noting that it was complete with two limited exceptions pertaining to (1) a severability provision, and (2) identification of two pathways and their associated carbon intensity values for biodiesel and renewable diesel made from Midwest soybeans, as work on those pathways had not yet been completed. The adopted regulation was submitted to the Office of Administrative Law (OAL) on the same day, along with the required documentation including the Final Statement of Reasons (FSOR) covering the regulation as adopted. The FSOR explained that modified regulatory language adding the two incomplete elements would be made available for supplemental comment as soon as possible; after considering the comments the Executive Officer would adopt the final two elements and submit them to OAL along with the necessary supporting documents before March 4, 2010. On January 12, 2010, OAL approved the adopted regulation, and it went into effect on the same day. This notice solicits comment on the proposed modifications to the OAL-approved regulatory text relating to the two elements and on additional documents and information supporting those elements.

At its April 23, 2009 public hearing, the Board in Resolution 09-31 approved the adoption of the LCFS regulation to be contained in California Code of Regulations (CCR), title 17, sections 95480, 95480.1, 95481, 95482, 95483, 95484, 95485, 95486, 95487, 95488, 95489, and 94590. The LCFS regulation applies to any transportation fuel, as defined in the regulation, which is sold, supplied, or offered for sale in California, and to any regulated party, as defined in the regulation, which is responsible for a transportation fuel in a calendar year. The proposed LCFS regulation was described in detail in the Initial Statement of Reasons (ISOR) released to the public on March 5, 2009, along with a public notice informing the public of the proposed rulemaking (45-Day Notice).

At the hearing on April 23, 2009, the staff presented, and the Board approved, modifications proposed in response to comments received during the public comment period that began on March 5, 2009, and ended at the hearing on April 23, 2009. Those proposed modifications were described in Attachment B, which was appended to Resolution 09-31. As a result, on July 20, 2009, the first Notice of Public Availability of Modified Text and Availability of Additional Documents (First 15-Day Change Notice) was issued, along with the proposed modified regulatory text. The public comment period for the First 15-Day Change Notice ended August 19, 2009.

As a result of comments received, additional modifications to the regulatory text were proposed in the Second Notice of Public Availability of Modified Text and Additional Documents and Information (Second 15-Day Change Notice) issued September 23, 2009, with a comment deadline of October 8, 2009. That notice also expressed ARB's intent that a Third Notice of Public Availability of Modified Text and Additional Documents and Information (Third 15-Day Change Notice) would be issued covering the carbon intensity values and supporting pathway documents for biodiesel and renewable diesel processed from Midwest soybeans ("soy biodiesel and renewable diesel").

Since ARB was able to prepare all necessary rulemaking documents before work on the two additional pathways was completed, the rulemaking was bifurcated as noted above so that the entire regulation except for the incomplete elements could be submitted to OAL in November 2009. The OAL approved the submitted regulation on January 12, 2010, and the regulation went into effect on the same day.

As noted, a Third 15-Day Change Notice was issued December 14, 2009, covering the carbon intensity values and supporting pathway documents for soy biodiesel and renewable diesel, along with the previously-noted severability clause. Excerpts of the regulation showing the text of the modified regulatory language were appended to the Third 15-Day Change Notice. For ease of viewing, the regulatory language that was adopted and submitted to OAL November 25, 2009 was shown in plain text. The proposed modifications made public with the Third 15-Day Change Notice were shown in ~~double strikethrough italics~~ and double underline italics, respectively. The complete text of the LCFS regulation with the proposed modifications shown was posted on ARB's website for the LCFS rulemaking:  
<http://www.arb.ca.gov/regact/2009/lcfs09/lcfs09.htm>.

Pursuant to the Board's direction in Resolution 09-31, ARB staff provided a 30-day comment period for the modifications and pathway documents made available by the Third 15-Day Change Notice.

Comments received from stakeholders during the 30-day period, as well as staff's own analysis, identified a number of issues related to the land-use change modeling for the soy biodiesel and renewable diesel pathways covered by the Third 15-Day Change Notice. These issues include a time discrepancy between the GTAP database (2004) and the land use database (2001) used in the modeling covered by the Third 15-Day

Change Notice. This discrepancy resulted in an inconsistency with the modeling work that was done for corn ethanol using GTAP-BIO (Feb. 2009). Thus, as a result of the comments received and staff's analysis, staff concluded that a complete reevaluation of the land-use change effects portion of the supporting documents for soy biodiesel and renewable diesel was warranted. For consistency with the modeling done for corn ethanol, staff took the GTAP-BIO model for corn ethanol as a starting point and modified its inputs and parameters to generate a customized GTAP model for soy biodiesel and renewable diesel. This new customized model, GTAP-SOY (January 2010), along with its component files, replaces the previous customized model (GTAP-SOY, Dec. 2009) that was released for public comments pursuant to the Third 15-Day Change Notice.

Because of time constraints on completing the pathway reevaluation, it was necessary for this latest modeling development to be conducted independently from the prior analysis in December 2009 using a different contractor. Nevertheless, it should be noted that, despite the use of two different contractors applying two different GTAP approaches, the modeling done by both contractors yielded essentially identical values for carbon intensity from land-use changes associated with soy biodiesel and renewable diesel.

Other comments received pursuant to the Third 15-Day Change Notice raised fundamental structural issues with the basic GTAP model itself. Because the Board has already determined in Resolution 09-31 that GTAP represents the best available land-use change model at this time, we are proposing no modifications to the regulatory text to address those fundamental structural issues. However, in recognition that the science of land use change analysis is continually evolving, the Board directed in Resolution 09-31 that staff convene an expert workgroup specifically to assist the Board in refining and improving the land use and indirect effects analysis of transportation fuels. The Board further directed staff to return to the Board no later than January 1, 2011 with regulatory amendments or recommendations, if appropriate, on approaches to address issues identified. Staff expects that the fundamental structural issues raised by the commenters would be within the scope of work to be done by the expert workgroup.

This Fourth 15-Day Change Notice covers the reevaluation of the land-use change effects for soy biodiesel and renewable diesel noted above, the analysis and results of which are described in the attached document, "Land Use Change Effects for Soy Biodiesel and Renewable Diesel" (dated January 29, 2010) (Attachment 2), and incorporated into "GTAP-SOY (January 2010)," which is a compressed electronic file containing a version of the GTAP model customized for Midwest soybeans. The compressed file, GTAP-SOY (January 2010), contains both the customized GTAP model and its supporting files; GTAP-SOY (January 2010) is available for download at ARB's internet site as described below.

As noted, the reevaluation yielded no changes in the carbon intensity value for the direct emissions and indirect land-use change effects for both soy biodiesel and

renewable diesel. Accordingly, staff is not proposing modifications to the Carbon Intensity Lookup Table 7 in section 95486(b). The only modification to the regulatory text would be in section 95481(a)(20.5) to reflect the new GTAP-SOY (January 2010) model. Excerpts of the regulation showing the text of the modified regulatory language are appended to this Fourth 15-Day Change Notice as Attachment 1. For ease of viewing, the regulatory language that was approved by OAL is shown in plain text. The proposed modifications made public with this Fourth 15-Day Change Notice are shown in ~~double strikethrough bold italics~~ and double underline bold italics, respectively. The complete text of the LCFS regulation with the proposed modifications shown is posted on ARB's website for the LCFS rulemaking: <http://www.arb.ca.gov/regact/2009/lcfs09/lcfs09.htm>.

### **Summary of Proposed Modifications**

The following is a summary of the proposed modifications to the LCFS regulation made available with this Fourth 15-Day Change Notice along with the rationale for making them.

#### **Definitions (section 95481)**

Section 95481(a)(20.5) of the adopted regulation contains the definition for "GTAP" or "GTAP Model." The definition includes the computer files for the GTAP model customized for corn ethanol (GTAP-BIO (February 2009)) and for sugarcane ethanol (GTP-SGR (February 2009)), which are incorporated by reference in the regulation. In the Third 15-Day Change Notice, this definition was modified to incorporate by reference GTAP-SOY (December 2009). The proposed modification in this Fourth 15-Day Change Notice revises the incorporation by reference of GTAP-SOY to reflect the updated version date (January 2010). The revised GTAP-SOY package was posted at <http://www.arb.ca.gov/fuels/lcfs/lcfs.htm> on February 1, 2010 and available with its components as a .zip file for download at <http://www.arb.ca.gov/fuels/lcfs/gtap-soy.zip>.

### **Supporting Documents and Information**

In accordance with Government Code section 11347.1, staff has added the following documents and information to the rulemaking record in support of the proposed action:

- GTAP-SOY (January 2010), the zip file containing the GTAP model customized for Midwest soybeans, along with its component files;
- Stationary Source Division, "Land Use Change Effects for Soy Biodiesel and Renewable Diesel," January 29, 2010 (appended to this Notice as Attachment 2);
- Taheripour, F., T. Hertel, and W. Tyner. 2009. "Implications of the Biofuels Boom for the Global Livestock Industry: A Computable General Equilibrium Analysis"; and
- USDA Foreign Agricultural Service, Production, Supply, and Distribution Online (<http://www.fas.usda.gov/psdonline/psdhome.aspx>), last visited Jan. 25, 2010.

The computer model, its supporting files, and supporting documents and information identified above are being relied upon solely as support for the modified regulatory text as described in this notice.

### **Availability of the Attachments and Other Materials**

By this notice, the modified regulatory text and supplemental documents and information added to the rulemaking record and identified above are being made available for public comment prior to the final action by the Board's Executive Officer. As noted above, the documents listed above as attachments to this notice can be obtained from ARB's website at the following address: <http://www.arb.ca.gov/regact/2009/lcfs09/lcfs09.htm>, or from the Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, 1<sup>st</sup> Floor, Sacramento, California, 95814. If you would like a paper copy of any of these attachments sent to you through postal mail, please call Ms. Manisha Singh at (916) 323-0014 and give your name, company name, if any, and mailing address.

### **Comments and Subsequent Action**

In accordance with section 11346.8 of the Government Code, the Board directed the Executive Officer to adopt the approved LCFS regulation after making the modified regulatory language available to the public for a supplemental written comment period of at least 15 days. The Board further provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make such modifications as may be appropriate in light of comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted. As noted below, this notice covers only the two elements that were not in the regulation approved by OAL on January 12, 2010.

Written may be submitted by postal mail or electronic mail submittal as follows:

Postal mail: Clerk of the Board, Air Resources Board  
1001 I Street, Sacramento, California 95814

Electronic submittal: <http://www.arb.ca.gov/lispub/comm/bclist.php>

Please note that under the California Public Records Act (Gov. Code § 6250 et seq.), your written and oral comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request. Additionally, this information may become available via Google, Yahoo, and any other search engines.

In order to be considered by the Executive Officer, comments must be directed to ARB in one of the two forms described above and received by ARB by 5:00 p.m., on the deadline date for public comment listed at the beginning of this notice. Only comments

relating to the above-described modifications to the text of the regulation will be considered by the Executive Officer.

If you need this document in an alternate format (i.e., Braille, large print, etc.) or another language, please contact the Clerk of the Board at (916) 322-5594 or by facsimile at (916) 322-3928 no later than five (5) business days from the release date of this notice. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

Si usted necesita este documento en un formato alterativo (es decir, sistema Braille, letra grande, etc.) u otro idioma, por favor llame a la oficina del Consejo a (916) 322-5594 o envíe un fax al (916) 322-3928 no menos de cinco días de la fecha de comunicado de este aviso. TTY/TDD/Personas que necesitan este servicio pueden marcar el 711 para el Servicio de Retransmisión de Mensajes de California.

Attachments (2)

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see ARB's website at [www.arb.ca.gov](http://www.arb.ca.gov).*