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Japan to accept U.S. corn ethanol in bio-ETBE

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Report Highlights:

Japan is likely to finalize a determination in January 2018 that will allow the use of U.S. corn-based ethanol in the production of bio-Ethyl Tert-Butyl Ether (ETBE) from 2018. The determination is the conclusion of several expert committee meetings to assess the greenhouse gas (GHG) emission value of U.S. corn ethanol, and a method to ensure that it meets Japan's 50 percent GHG reduction requirement. The final decision will be followed by a public comment period, allowing implementation of the new regulation as early as Japanese fiscal year 2018 (April 2018 to March 2019).

General Information:

Background

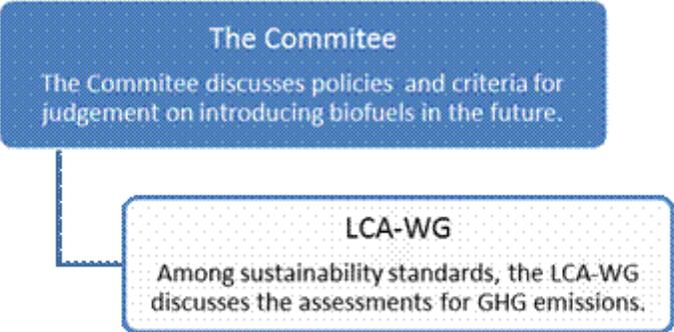
In 2016, Japan imported 757 million liters of ethanol for transportation, consisting of 696 million liters of ethanol imported as ETBE and 61 million liters of ethanol used in domestic ETBE production. All the ethanol that Japan imported was produced from Brazilian sugarcane, as it is the only source of first generation bioethanol that currently fulfills Japan’s GHG emission standard (50 percent reduction from gasoline emissions).

In 2016, Japan’s Ministry of Trade, Economy and Industry (METI) began the assessment of Japan’s biofuels policy from 2018 to 2022. METI proposed to diversify the sources of fuel ethanol to improve energy security and to lower the overall cost of sourcing fuel ethanol. To this end, METI suggested allowing the use of U.S. corn-based ethanol, in addition to Brazilian sugar cane ethanol in the production of imported bio-ETBE.

Discussion on Japan’s future biofuel policy is underway

In March 2016 METI called a meeting of an Expert Committee to Discuss the Future of Biofuel Introduction in Japan (hereinafter, the Committee) to begin discussing the details of the future biofuels policy. The Committee is comprised of ten members from academia, non-profit organizations, and industry. The Committee formed a Life Cycle Assessment Working Group (LCA-WG) to discuss technical aspects in determining GHG emission values for biofuels. The LCA-WG consists of members of the Committee whose area of expertise includes the life cycle assessment of biofuels. At the conclusion of four Committee meetings and two LCA-WG meetings held during Japanese fiscal year 2016¹, the members nearly confirmed a policy that would allow the use of U.S. corn-based ethanol.

Figure 1 - Framework of the Committee to Discuss the Future of Biofuel Introduction in Japan



Source: Ministry of Economy, Trade and Industry
New proposed GHG emission values for gasoline and Brazilian and U.S. ethanol

¹ April 2016 – March 2017

In Japanese fiscal year 2017, the focus of the Committee’s discussion began to look at the LCA methods and the GHG emission values of Brazilian and U.S. corn ethanol and gasoline. The Committee held three meetings since August 2017, and in the last meeting held on November 10, 2017, the committee proposed new GHG emission values. The new GHG value for gasoline is 84.11 grams of CO2 equivalent per megajoule (gCO2eq/MJ), where those for Brazilian and U.S. ethanol were 35.26gCO2eq/MJ and 43.15gCO2eq/MJ respectively.

Japan requires that biofuels reduce the GHG emissions by at least 50 percent from the emissions of gasoline. For the time being, however, it also allows the use of the GHG emission value calculated by the weighted average when a refiner used different sources of ethanol².

For example, in the case of the latest proposed GHG emission values of gasoline and Brazilian and U.S. corn ethanol, the maximum share of U.S. ethanol by volume allowed in the Japanese market will be 86.25 percent, based on the following calculation:

GHG emission value of

- Gasoline: 84.11 gCO2eq/MJ
- Brazilian ethanol: 35.26 gCO2eq/MJ
- U.S. ethanol: 43.15 gCO2eq/MJ

$$\left(\frac{43.15 \times \text{Volume of U.S. ethanol}}{\text{Total volume of ethanol}} + \frac{35.26 \times \text{Volume of Brazilian ethanol}}{\text{Total volume of ethanol}} \right) \times 2 < 84.11$$

According to an industry source who was allowed to observe the meeting on November 10, the Committee discussed what methods can be applied to assure the sustainability of ethanol. For U.S. ethanol, the Committee proposed the use of International Sustainability and Certification (ISCC) certificates and Renewable Identification Numbers (RINs) to ensure traceability. The Committee noted that the RIN can be used to trace ethanol back to ethanol plants, and also agreed that ISCC certificates can be used to verify land use change and some other sustainability factors. The Committee, however, suggested further study on how land use change is verified.

Table 1 - Meeting Schedule of the Committee and LCA-WG

Month/Year	The Committee	LCA Working Group
Japanese fiscal year 2016		
October	The first meeting (Oct 17)	-
November	The second meeting (Nov 25)	The first meeting (Nov 8)
December	-	The second meeting (Dec 26)
January	The third meeting (Jan 30)	-
February	The fourth meeting (Feb 27)	-
Japanese fiscal year 2017		
August	The first meeting (Aug 4)	

² “Hikaseki Enerugi Gen No Riyo Ni Kansuru Sekiyu Seisei Gyosha No Handan Kijun”
http://www.enecho.meti.go.jp/notice/topics/017/pdf/topics_017_002.pdf

September	The second meeting (Sep 19)	
November	The third meeting (Nov 10)	
January	The fourth meeting of the Committee is planned to be held in late January 2018.	

Source: FAS Japan created based on the information provided by METI.

The Committee is planning to hold another meeting in late January 2018. The final decision to allow the import of U.S. ethanol, its GHG emission value, and a method to verify traceability and sustainability would likely be made at that meeting. According to some sources, prior to the meeting, METI might notify the public of the regulatory change and invite public comments. In that case, the new regulation could be implemented as early as April 2018. FAS/Tokyo is in communication with the U.S. Grains Council's local office in Tokyo, and will continue to follow the development of the Committee's discussion.