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GAIN Report

Global Agricultural Information Network

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POLICY

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Japan Opens Doors to U.S. Ethanol

Report Categories:

Biofuels

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Report Highlights:

On April 17, 2018, Japan's Ministry of Economy, Trade and Industry (METI) announced a revision to its biofuel policy that creates a market opportunity for up to 366 million liters of U.S. corn-based ethanol valued at approximately \$170 million at 2017 export prices. The revision is effective immediately.

Keywords: JA8026, Corn, Ethanol, Biofuels

General Information:

On April 17, 2018, Japan's Ministry of Economy, Trade and Industry (METI) announced a revision to the Sophisticated Methods of Energy Supply Structure Act (Energy Supply Act), setting new greenhouse gas (GHG) emissions reduction values for gasoline, Brazilian sugarcane-based ethanol, and creating a value for U.S. corn-based ethanol. As a result, Japan may import U.S. ethanol for the first time.

The Energy Supply Act requires the use of 500 million liters crude oil basis of biofuel (equal to 824 million liters of ethanol) annually between Japan fiscal year (JFY, March to April) 2018 and 2022. Japan meets virtually all of this mandate through the use of ethanol in the production of bio-Ethyl Tert-Butyl Ether (ETBE), which is imported and blended with Japanese gasoline. Domestically-produced ETBE (using only imported ethanol since 2014) is extremely limited, as is the domestic market for biodiesel. The ethanol market for direct blending as E3 is even smaller. Until this revision, Brazilian sugarcane-based ethanol has been the only source of ethanol that met Japan's requirements.

However, in 2016, METI began reviewing the latest statistics and data available for the GHG emissions of bioethanol and gasoline. For more information about METI's evaluation of this data, please see the Japan Biofuels Annual 2017 (JA7100).

Key points from METI's April 17, 2018 announcement include:

- A new emissions value for gasoline, raising the value from 81.7 to 84.11 grams of carbon dioxide equivalent per megajoule (gCO₂eq/MJ).
- A revised emissions value of Brazilian sugarcane-based ethanol from 32.7 to 33.61 gCO₂eq/MJ.
- Establishing an emissions value for U.S. corn-based ethanol of 43.15 gCO₂eq/MJ.
- Raising the emissions reduction target for ethanol introduced into the fuel supply from 50 to 55 percent compared to emissions of gasoline.
- An incentive for oil refiners¹ to use bioethanol produced from non-food feedstocks (such as cellulosic ethanol).

METI is allowing the import of a maximum volume of U.S. ethanol relative to the volume of Brazilian ethanol that meets the 55 percent emissions reduction target. Based on METI's calculation to determine the volume of ethanol that meets the GHG reduction target (see Calculation below), U.S. corn-based ethanol may supply up to 44.44 percent (or 366 million liters) of Japan's mandate for bio-ethanol. The value of this volume is approximately \$170 million at 2017 U.S. export prices.

Calculation:

$$43.15 \text{ (gCO}_2\text{eq/MJ)} \times \frac{\text{Volume of U.S. ethanol}}{\text{Total volume of ethanol}} + 33.61 \text{ (gCO}_2\text{eq/MJ)} \times \frac{\text{Volume of Brazilian ethanol}}{\text{Total volume of ethanol}} < 84.11 \text{ (gCO}_2\text{eq/MJ)} \times 45\%$$

References:

¹ Those oil refiners that produced or supplied 600 million liters or more of gasoline in the previous fiscal year (April to March).

Revisions made to the Basic Policy on Biofuel (pp1-4) (Japanese only)

<http://kanpou.npb.go.jp/20180417/20180417g00086/20180417g000860001f.html>

Criteria for Judgement for Oil Refiners to use Biofuel for the Next Five Years from FY2018 (pp15-20)
(Japanese only)

<http://kanpou.npb.go.jp/20180417/20180417g00086/20180417g000860015f.html>