Sustainability and Carbon Intensity Requirements for Global Ethanol Markets

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A global network of professionals building worldwide demand and developing markets for U.S. grains and ethanol.
European Union

- Set binding 10% renewable energy target in transport sector through 2020;

September 2015– Indirect Land Use Change Directive (ILUC)
- Capped use of crop-based biofuels at 7% and mandated advanced biofuels comprise min of 0.5% by 2020

November 2016– Clean Energy for All Europeans Initiative; framework for RED II
- Revised 10% target in transport sector up to 14% through 2030; Implemented sustainability criteria; Adopted in 2018
European Union

Sustainability Criteria

• 50 percent GHG reductions relative to fossil fuels which increases to 60 percent for plants built after January 1, 2017

• Covers all aspects of biofuel production
  • Feedstock
  • Processing
  • Transport

2019* Fuel Ethanol Consumption by Member State (Mil Liters)

Source: Biofuels Annual, USDA, 2019; (*) denotes projection
Japan

July 2009-- Sophisticated Methods of Energy Supply Structure Act

November 2010-- METI revised the sustainable standard guidelines for bioethanol

April 2018-- METI revised the 2010 sustainable standard guidelines.

Encouraged the use of renewable energy/reduce reliance on fossil fuels

Set gasoline CI 81.7 g-CO2e/MJ and Brazilian ethanol at 32.7 g-CO2e/MJ with annual biofuel target of 500 LOE

Increased Brazilian ethanol CI to 33.61 and U.S. corn-based ethanol at 43.15; increased reduction target to 55%
Japan

Policy Moving Forward

• Maintain volumes of ETBE blending
• Potential review of
  • direct ethanol blending
  • CI score of gasoline to be more in-line with EU/US standards

Japanese Imports of Ethanol

Source: Biofuels Annual, USDA, 2019
Brazil

December 2015 – Joined COP 21

December 2016 – Adoption of RenovaBio by MME

January 2020 – Implementation of RenovaBio

Committed to 37 percent emissions reductions by 2025 and 43 percent by 2030

Goal to assist with COP 21 commitments in part by reducing GHG emissions in the production and use of biofuels

Decade-long reduction of GHG emissions; certification of GHG reductions in biofuels with CBIOs used as compliance
Key Aspects of RenovaBio

- Will greatly increase consumption of biofuels through 2030
- Distributors will be required to purchase Emission Reduction Certificates (CBIOs) from fuel producers on open market
- Extensive data requirements for compliance for entire biofuels supply chain
- Gradual phase-in of program

Carbon Intensity of Brazilian Fuel Mix

Source: National Agency of Petroleum, Natural Gas and Biofuels and Petrobras
Colombia – Sustainability Measure or Non-Tariff Barrier to Trade?

September 2005 – Law 693 was issued mandating 10% ethanol blends in all gasoline

May 2017 – MME lifts ban on fuel ethanol imports as means of supporting COP 21 goals

December 2017 – Resolution 1962 becomes effective

Policy has fluctuated and in some cases even been removed entirely during times of limited domestic production

Must still comply with quality and CI standards

Created a maximum CI score for ethanol that can be used in Colombian gasoline; only modeled sugarcane based ethanol
Conclusion

• Hotly contested issues that have been discussed at the highest level of international government

• With increased concern surrounding global warming and scarce natural resources, transport policies will likely become more focused on sustainability criteria

• Importance of policies being transparent and scientifically-based
Questions