

Sector Case Study: Ethanol

As more countries mandate the blending of ethanol, new export opportunities for U.S. ethanol producers are emerging. While exports to Europe are expected to decrease over the short term due to antidumping duties, countries in Latin America remain reliable trading partners. In addition, ethanol exports to Asian countries like the Philippines and Korea are likely to increase as well. Through 2015, however, Canada and Brazil should remain the two largest export destinations for U.S. ethanol, as most exports will likely be destined for one of these two markets.

The United States is the world's largest single producer and consumer of ethanol, followed by Brazil. Ethanol is a biofuel that is produced from a variety of sources (feedstocks), such as corn, wheat, sugar cane, sugar beet, and molasses. Less common feedstocks for ethanol include wood, municipal solid waste, and cellulosic materials from agricultural waste.

Ethanol trade is growing across the globe, as countries either mandate or incentivize blending with gasoline. These policies are often motivated partly by the need to reduce greenhouse gas emissions or air pollution, and partly by the desire to be less dependent on oil imports.

Overview of Global Export Market Opportunities

The overall volume of ethanol exports decreased over the 2011-2012 timeframe due to an extreme drought. However, in 2013, corn production had a complete rebound and there is expected to be a significant supply of ethanol in the immediate future. Nevertheless, due to the fragmented and diverse ethanol resources produced globally, U.S. exports in 2014-2015 will likely only capture 6 percent of non-U.S. global consumption. Over the next two years, exports of U.S. ethanol to Europe are expected to be limited. Formerly one-third of all U.S. ethanol exports, by the end of 2013 only seven percent of exports were shipped to Europe (and an even smaller percentage to the EU member states). This decline is attributed by U.S. industry to the imposition in February 2013 of antidumping duties, which are being challenged in the EU courts.

Nevertheless, total exports of ethanol in 2013 were valued at over \$1.5 billion. Over half of U.S. ethanol exports in 2013 were shipped to Canada, and industry is developing other markets such as Mexico, Peru, and the Philippines.

The Ethanol Export Opportunity in the Near-Term

Through 2015, Canada and Brazil are expected to import more ethanol than any other market. Both markets have historically been key export destination for ethanol producers in the United States, and several firms enjoy considerable commercial relationships with producers, suppliers, and other parts of the ethanol supply chain in these locations.

Top Ethanol Export Markets to 2015

1. **Canada**
(large share; large market)
2. **Brazil**
(large share; large market)
3. **Nigeria**
(large share; large market)
4. **Peru**
(large share; large market)
5. **Mexico**
(large share; small market)
6. **Philippines**
(large share; large market)
7. **Jamaica**
(large share; small market)
8. **Netherlands**
(small share; large market)
9. **Finland**
(large share; small market)
10. **Korea**
(small share; large market)

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ITA, however, also strongly encourages U.S. exporters to position themselves for opportunities that are emerging in Asia. In particular, India is beginning to enforce its blending requirements and thus far does not have sufficient domestic ethanol supply to meet its expected demand. The end of 2013 saw significant shipments to China for the first time, despite a *de facto* bias towards the domestic industry. Exporters will likely experience strong competition in Asia from suppliers in Thailand, where the Thai Government is aggressively pursuing policies to increase ethanol production. In 2012, Thai producers exported over 300 million liters of ethanol, mostly to other Asian destinations like the Philippines, Singapore, and Korea.

However, U.S. exporters should remain mindful of several barriers to continued long-term growth, including antidumping duties, sustainability certification requirements, and protectionist policies that require buyers to purchase ethanol from local producers. In some markets, such as South Africa, blending is limited to domestically produced ethanol.

Consumption of ethanol in the EU is expected to continue to rise in the near term, but exports from the United States remain stymied by antidumping duties in Europe. In addition, some U.S. ethanol exporters will face sustainability certification requirements under the Renewable Energy Directive that may limit their access to the market, as all biofuels producers importing product into the EU must provide evidence that they have reduced greenhouse gas emissions by at least 35 percent compared to fossil fuels. The mandate increases after 2017, requiring a verified reduction of at least 50 percent, and at least 60 percent for new installations.

On top of this, several EU member states have developed national voluntary systems, in addition to the 13 voluntary schemes adopted by the European Commission.ⁱ And even more regulation could be on the way, as the EU continues to debate limits on crop-based ethanol as part of the EU's overall 10 percent mandate, causing uncertainty even for European producers. As a result, ITA anticipates significant difficulty for U.S. ethanol exporters in the EU and possibly a further reduction in market share through 2015.

Planning for the Long-Term

Demand for ethanol is expected to increase into the medium-and-long-term. Several countries have intensifying mandates for ethanol use, particularly to limit the carbon emissions associated with vehicle fleets. As the world's leading producer of ethanol, this expected growth should provide considerable export opportunities. Companies are encouraged to work closely with ITA and the Foreign Agricultural Service of the U.S. Department of Agriculture to ensure they are ready and able to take advantage of export opportunities when they arise.

2014 Renewable Energy Top Markets Report



This *Top Markets* case study is part of a larger report that includes rankings of 75 different markets in terms of overall U.S. renewable energy exports through 2015, as well as specific rankings for the ethanol, geothermal, hydropower, biomass pellets, solar and wind sectors. To access the full report, visit <http://export.gov/reee/topmarkets>.

ⁱ EU Biofuels Annual, August 2013, USDA Foreign Agricultural Service, http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Biofuels%20Annual_The%20Hague_EU-27_8-13-2013.pdf (page 7)

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