

2016 Top Markets Report **Renewable Fuels** Country Case Study

China

The outlook for U.S. fuel ethanol exports to China in 2016-2017 is dramatically different than last year’s report. At the same time that the Chinese Government has encouraged greater use of ethanol to address climate change concerns, feedstock prices have been artificially high. This has resulted in a sudden increase in imports, which -- even with high tariffs – are more affordable. Because ethanol importers are regulated by the Chinese Government and many are state owned enterprises, there is some concern that the phenomenon is only temporary and will also depend on whether China expands the blending and use of ethanol in gasoline in the future. In the short term at least, the expansion of fuel ethanol use in China will depend on imports.

Ethanol Rank

Wood Pellet Rank

2

N/A

Market Overview

Although China produced nearly 18 billion liters of ethanol in 2015, only about one-fifth of its domestic production is used for fuel purposes. China consumes an estimated 8.2 billion liters of non-beverage ethanol and industrial ethanol combined per year.ⁱ Out of this amount, China’s demand for fuel ethanol in 2015 was 3.6 billion liters, which was met largely by production from the country’s seven fuel ethanol plants.ⁱⁱ The government sets both production amounts and prices, which are determined as a percentage of current gasoline prices.ⁱⁱⁱ Sinopec and PetroChina, China’s state-owned petroleum companies, are the major blenders of gasoline and ethanol.^{iv}

The Chinese Government has been decreasing subsidies for domestic grain-based production steadily since 2009, with the goal of phasing them out completely by 2016.^v Combined with a low price for ethanol, which is pegged to gasoline prices,

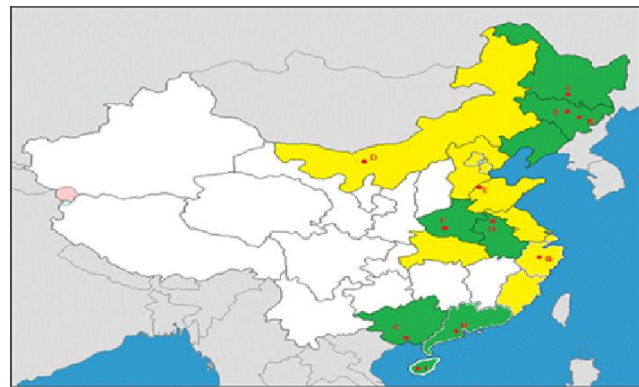


Figure 1: Green provinces have implemented E10, yellow provinces have limited implementation in certain cities. [source: USDA Foreign Agricultural Service]

domestic producers have suffered from falling revenue.

U.S. ethanol exports to China reached nearly 280 million liters in 2015, compared to only 11,451 liters in 2012.^{vi} China became the largest U.S. denatured

ethanol export market in the first few months of 2016.^{vii}

The implementation of 10 percent blending (E10) in China has been geographically fragmented by province or city and tended to be seen as experimental. (See map in Figure 1) Some influential policy advisors have also advocated for E15 or E20. However, there are signs that E10 will eventually become a nationally accepted standard. In early 2016, the National Development and Reform Commission (NDRC) issued a “Notice of Fuel Quality Upgrade and Strengthening of Market Regulation,” which elevated emission standards in the eastern region, with expansion nationwide by 2017. At present, the so-called “Chn V standard” gasoline is only provided for consumption in 11 provinces and cities in the China eastern regions (Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hainan). Further, according to the NDRC notice, by 2017, only Chn V standard gasoline (including E10 gasoline) will be provided for consumption nationwide.

The regulation aims to curb the number of old vehicles on the road. Newer vehicles are designed to accommodate E10 blends and will have lower nitrogen oxide, carbon monoxide and hydrocarbon emissions. This may indicate that China is willing to adopt E10 gasoline standards in more provinces and prepare for a nationwide E10 coverage, but how long this process will take remains uncertain.

Challenges and Barriers

Despite the need to produce and use cleaner gasoline in order to address climate change issues, China’s policy makers are hesitant to be more aggressive in stimulating domestic fuel ethanol production because of food security concerns. Yet they also fear becoming dependent on ethanol imports. The unclear nature of China’s ethanol blending policy will continue to pose challenges to fuel ethanol exporters, as it is difficult to predict with certainty what the future demand will be.

U.S. denatured fuel ethanol exports to China are taxed at 5 percent import duty, and undenatured fuel ethanol is taxed at 40 percent import duty, while other countries, such as Pakistan, China’s top exporter, enjoy duty-free access to the Chinese market through a bilateral arrangement.^{viii}

The high import duty for undenatured fuel ethanol means that U.S. exports must be denatured before being shipped to avoid high costs at customs. Fuel ethanol producers in China have commented that there are no clear guides to import regulations regarding the definition of a denatured product, leading to a relatively murky regulatory landscape for exporters to decipher.^{ix}

Only designated businesses are allowed to import ethanol, and the Chinese Government also tightly controls fuel distribution, including the use of ethanol in transportation. Given that the government has not taken a clear-cut policy to either encourage or prohibit the import of ethanol in 2015-2016, it is theorized that the activities are basically a trial to study the economics and feasibility of supplementing domestic supply.

Opportunities for U.S. Companies

The large size of the Chinese market offers significant potential for U.S. exporters. There is room to expand capacity in provinces that have municipal E10 pilot programs as well as other provinces.

Brazilian exporters have also enjoyed the recent surge in ethanol demand in China. However, as sugar prices rise in Brazil (see Brazil case study), the incentives to export decrease, resulting in opportunity for U.S.-based producers.

COFCO Biochemical and Sinopec – both of which are large state-owned enterprises – are the two most active Chinese importers of foreign ethanol in the past year’s surge. U.S. producers are encouraged to develop direct relationships with companies such as these in order to position themselves for future business opportunities if the Chinese market continues to expand.

ⁱ USDA Foreign Agricultural Service estimate.

ⁱⁱ Platts. (2015, August 15). *Monthly Biofuels Editorial*.

ⁱⁱⁱ Ibid.

^{iv} Ibid.

^v Ibid.

^{vi} U.S. Census trade data.

^{vii} Renewable Fuels Association. (2016, June 3). U.S. net ethanol exports hit 52-month high; China is top market for second straight month.

^{viii} Platts, 2015.

^{ix} Ibid.