

2015 Report on Ethanol Mar

714. HHIs are substantially unchanged from a year ago, with three of the four HHIs for 2015 slightly lower (ranging from 11 to 72 points lower) than in 2014 and the other 10 points higher.

The low level of concentration and large number of market participants in the U.S. ethanol production industry continue to suggest that the exercise of market power to set prices, or coordination on price or output levels, is unlikely. As has been the case each year since the Commission began reporting, each of the 2015 HHIs indicates that the industry is unconcentrated.⁶ At this level of concentration, a single ethanol producer or marketer likely lacks market power. Successful anticompetitive coordination would require agreement among a very large number of competitors and thus would be unlikely. Moreover, imports and the possibility of entry would impede the exercise of market power by any group of domestic firms.

II. Recent Industry Developments

A. Renewable Fuel Standard

Since 2005, Congress has required that the national transportation fuel supply contain a minimum annual volume of renewable fuels, including fuel ethanol.⁷ This mandate, known as the Renewable Fuel Standard (“RFS”), increases every year. In 2007, Congress revised the RFS, significantly increasing the minimum volumes of ethanol and adding requirements for advanced biofuels.⁸ For 2015, the RFS mandates 20.5 billion gallons of renewable fuel, 15 billion gallons of which can be conventional corn ethanol.⁹

⁶ The Commission and U.S. Department of Justice characterize markets in which the HHI is below 1500 as unconcentrated. U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines (2010) (“Horizontal Merger Guidelines”) § 5.3, available at <https://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf>.

⁷ See Energy Policy Act of 2005 § 1501, 119 Stat. 1069.

⁸ “Advanced biofuel” refers to a renewable fuel, other than ethanol derived from corn starch, that has lifecycle greenhouse gas emissions that are at least 50 percent less than the average greenhouse gas emissions of the baseline

The annual use of renewable fuels has not kept pace with the Congressional RFS. In 2014, the United States used 15.93 billion gallons of renewable fuels,¹⁰ 2.22 billion gallons less than the target of 18.15 billion gallons.¹¹ The United States consumed 13.44 billion gallons of the 14.4 billion gallons of conventional corn ethanol that could have counted

Market participants believe that the U.S. ethanol industry will produce more than the 13.4 billion gallons of conventional corn ethanol that can count toward the EPA's total renewable fuels requirement for 2015.¹⁹ Additional capacity will be necessary, however, to meet the EPA's proposed requirement for cellulosic ethanol, an advanced biofuel. Only three major commercial-scale cellulosic ethanol plants, with a combined nameplate capacity of 75 million gallons per year, are producing or plan to begin producing cellulosic ethanol in the near future.²⁰ Alone, these plants' combined capacities fall short of the EPA's proposed 2015 requirement of 106 million gallons of cellulosic ethanol. Because of U.S. producers' limited cellulosic ethanol capacity, importers acquired 10.6 million gallons of cellulosic ethanol from Brazil immediately following the EPA's announcement of its 2015 proposed requirement for advanced biofuels.²¹ Unless U.S. producers' combined cellulosic ethanol capacity increases in future years, obligated parties will have to continue to import cellulosic ethanol to meet future cellulosic ethanol requirements.

B. Margins

The U.S. ethanol industry recorded positive margins through the first nine months of 2015. E

Source: Iowa State University, Agricultural Marketing Resource Center.

III. Summary of Market Trends

Domestic ethanol production and exports increased since last year's Report, while domestic capacity remained the same. Domestic ethanol production from July 2014 through June 2015 increased approximately five percent from the prior 12 months, from 13.9 billion to 14.6 billion gallons.²⁷ Over that same period, U.S. ethanol exports also increased, climbing from 762 million gallons to 865 million gallons.²⁸ Domestic ethanol production capacity (including capacity under construction) remained constant at approximately 15.6 billion gallons per year.²⁹

²⁷ U.S. Energy Info. Admin., 4-Week Avg U.S. Oxygenate Plant Production of Fuel Ethanol, http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pets&s=w_epooxe_yop_nus_mbbld&f=4 (last modified Oct. 15, 2015).

²⁸ *Id.*

²⁹ Staff's total capacity estimate takes into account information obtained through interviews with market participants and publicly available information, including information published online by the Renewable Fuels Association ("RFA"). *See, e.g.,*

blending components, HHIs based on a fuel ethanol market would understate the amount of competition in the industry. This assumption also precludes consideration of a broader or narrower relevant geographic market than the United States that could provide further insight about competition in ethanol.

This Report presents four HHIs for the ethanol industry, calculated using two different measures of market share – production capacity and actual production – and two different methods of allocating those market shares. First, staff calculated market shares based on domestic ethanol production capacity. Staff then attributed the producer’s market share to (1) the producer itself, and (2) the producer or the third-party firm that actually marketed the producer’s ethanol output.³⁴ Staff relied on publicly available information and interviews with producers, marketers, and other industry participants to determine the production capacity of each ethanol plant and to calculate the market shares based on marketing arrangements.

Second, EIA staff calculated market shares based on actual production, attributing the market shares as described in the preceding paragraph. Due to the confidential nature of the ethanol production data the EIA collects, staff provided to EIA staff the information necessary to allocate market shares.³⁵ EIA staff performed each of the two HHI calculations and provided the resulting production-based HHIs.³⁶

³⁴ In Reports published before December 2014, staff also attributed the producer’s market share to third-party marketing firms that marketed the producer’s volumes pursuant to a pooling agreement. *See, e.g.*, 2013 Ethanol Report, *supra* note 1, at 11. As with the 2014 Report, this year staff did not attribute market share in this manner because ethanol marketers have largely abandoned the use of pooling agreements. *See* 2014 Ethanol Report, *supra* note 1, at 1-2.

³⁵ For production-based HHIs, EIA staff used the production data from the Ethanol Industry Report, EIA-542, Table 1.1, and the Ethanol Industry Report, EIA-542, Table 1.2.

A. Concentration with Market Shares Based on Production Capacity

For each of the HHI calculations described below, staff first calculated producers' market shares based on their fuel ethanol production capacity.³⁷ Production capacity provides a useful

in operating their plants.⁴⁵ In this respect, actual production may reflect a market participant's competitive significance more accurately than would its plants' capacities.

There are some limitations on

marketer or a group of such firms could exercise market power to set prices or coordinate on price or output levels.

Figure 1: Domestic Fuel Ethanol Concentration⁴⁹

Concentration Based on Capacity	2014 HHI	2015 HHI
Shares attributed to each producer	333	343
Shares attributed to marketers for all marketing agreements	693	621
Concentration Based on Production	2014 HHI	2015 HHI
Shares attributed to each producer	343	332
Shares attributed to marketers for all marketing agreements	743	714

Source: Production HHIs from EIA

Note: Capacity for 2014 includes the current capacity as of September 2014 and the capacity additions under construction and expected to be completed within 12 to 18 months after September 2014. Capacity for 2015 includes the current capacity as of September 2015 and the capacity additions under construction and expected to be completed within 12 to 18 months after September 2015. Production data for 2014 are from July 2013 through June 2014; production data for 2015 are from July 2014 through June 2015.

⁴⁹ As discussed in note 41, *supra*, the Commission and the Department of Justice characterize markets with HHIs below 1500 as unconcentrated. HHIs between 1500 and 2500 indicate moderately concentrated markets, and HHIs over 2500 indicate highly concentrated markets that are more likely to pose competitive concerns. An increase in the HHI of less than 100 points is unlikely to have adverse competitive effects. Horizontal Merger Guidelines, *supra* note 6, § 5.3.

