RENEWABLE FUELS ASSOCIATION

E15 Sales Set Another Record in 2023 But Are at Risk Again This Summer

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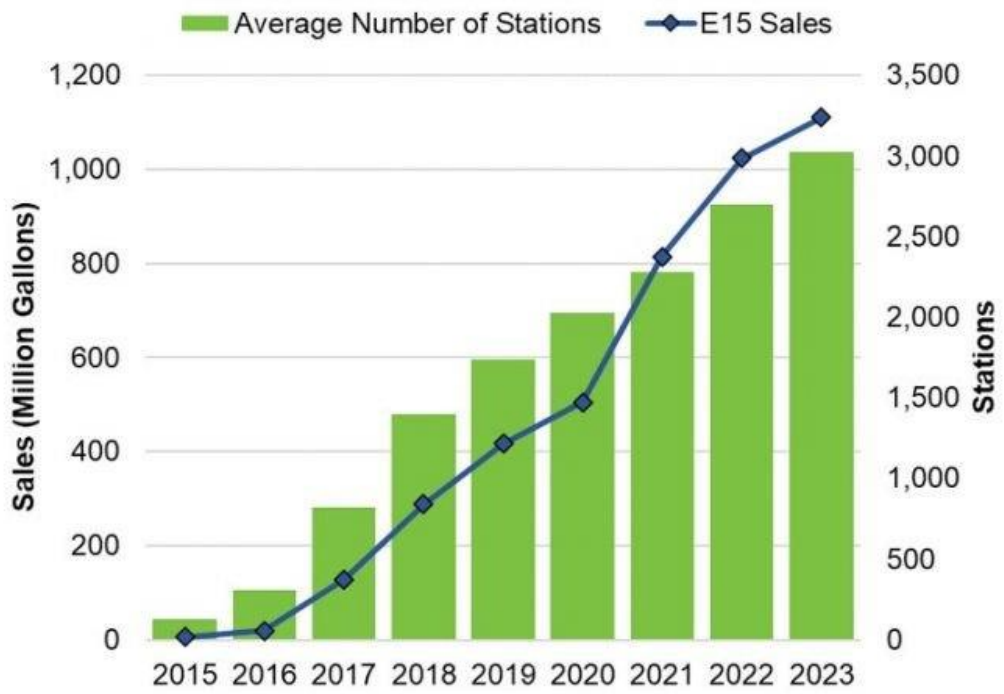
U.S. sales of E15, a blend of 15% ethanol and 85% gasoline, are estimated to have hit a record 1.11 billion gallons in 2023, an increase of 8% over 2022, according to a Renewable Fuels Association analysis of data released by state agencies in Minnesota and Iowa (Exhibit 1). The increase was due to a combination of an expansion in the number of retail stations offering E15—in both states and the U.S. overall—and the savings that E15 continued to offer to consumers. In Minnesota, E15 prices were $0.16/gallon less expensive than regular unleaded gasoline (E10) at the pump, on average.

Exhibit 1: Number of Stations Offering E15 and Estimated U.S. Volumes



Source: RFA

E15 sales by stations that reported to the state agencies increased 21% in Minnesota and 49% in Iowa (Exhibit 2). However, not all stations that sell E15 report their volumes. Accordingly, the RFA used supplemental information from the Minnesota Dept. of Commerce and the Iowa Dept. of

Revenue to estimate total statewide sales (i.e., including those by stations that sold E15 but did not report their volumes).

Exhibit 2: Minnesota and Iowa E15 Sales and Estimated U.S. Volumes
(Million Gallons, Except for Station Count)

	2015	2016	2017	2018	2019	2020	2021	2022	2023
E15 Sales Volume									
As Reported (Based on Reporting Stations)									
Minnesota	3	6	19	60	79	75	87	106	128
Iowa	2	6	28	35	49	61	87	119	179
Estimated Total									
Minnesota (Based on Operating Stations)	5	9	27	76	98	93	130	171	168
Iowa (Based on Sum of Monthly Gallons)	2	6	31	38	52	67	97	156	217
E15 Sold per Reporting Station									
Minnesota	0.06	0.09	0.19	0.25	0.28	0.26	0.32	0.39	0.37
Iowa	0.03	0.04	0.13	0.16	0.20	0.24	0.39	0.37	0.37
United States Estimate									
Average Number of Stations	130	310	820	1,400	1,740	2,030	2,280	2,700	3,025
Estimated E15 Sales Volume	6	20	128	289	417	504	815	1,024	1,110
Ethanol Content of E15	1	3	19	43	63	76	122	154	166

Source: RFA analysis of data from the Minnesota Dept. of Commerce and Iowa Dept. of Revenue

There are no official statistics on U.S. E15 volumes, but national sales can be estimated using Minnesota and Iowa data, given that the two states account for nearly 30% of all U.S. stations offering E15. RFA estimates national sales by multiplying its count of U.S. E15 stations by the average estimated volume per station in the two states. More than 3,000 stations offered E15 on average over the course of 2023, compared to 2,700 in 2022.

It should be noted that the Minnesota and national estimates were affected by a change in reporting requirements in the state. A statute went into effect on July 1, 2023 requiring reporting by companies that sold “intermediate blends” (i.e., gasoline blends in which the biofuel content is greater than 10% and no more than 50% by volume) at more than ten retail locations. The result was that the number of stations reporting intermediate-blend volumes increased by 37% in the first three months after the change was implemented compared to the three prior months, but the E15 volume per reporting station fell 11%. Yet, nearly a quarter of the operating stations identified by the Dept. of Commerce as selling such blends still did not report their volumes. It can be inferred that the characteristics of the sample that reported volumes during the second half of the year differed materially from the sample in the first half, but the nature of the changes and whether the latter sample better represents the “population” of stations selling such blends are unclear.

Given this, it is worth mentioning that if the national E15 sales volume estimate were based only on per-station volumes for Iowa rather than the average of Iowa and Minnesota volumes, the U.S. total would have increased 11% in 2023.

A key reason why the average E15 volume per station has increased over the last five years is that sales have been allowed during the summer months in conventional gasoline areas. In 2019 the

Environmental Protection Agency issued a rule allowing E15 to be sold year-round, whereas many retailers had previously found it difficult or impossible to offer E15 in the summertime due to an arcane and outdated regulatory requirement.* However, in 2021 the D.C. Circuit Court of Appeals vacated that rule, ruling in favor of oil refiners who argued the EPA had exceeded its authority. The decision did not affect E15 sales that summer, and for the last two summers the Biden administration has granted waivers for E15 from the regulatory requirement, which can be done when "extreme and unusual fuel or fuel additive supply circumstances exist," such as has been the case since Russia invaded Ukraine.

However, if the administration does not take action within the next month, E15 sales will drop precipitously in most of the country this summer, as occurred in conventional gasoline areas prior to 2019. The governors of eight Midwest states petitioned the EPA in 2022 to allow them to opt out of more-lenient fuel volatility specifications that apply to E10 but not E15, and the agency finally granted the request this year but deferred implementation to 2025. The only practical solution this summer is for waivers to be issued again, which is merited by conditions in the fuel market, as reflected in a **letter** sent to the EPA Administrator last week by a group of biofuel and agriculture organizations. For the longer term, the best solution for both fuel supply chain participants and consumers would be a legislative fix of the outdated regulation—specifically the Nationwide Consumer and Fuel Retailer Choice Act (**S. 2707**).

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* EPA limits the volatility of gasoline during the "high ozone season" every summer (Jun. 1-Sep. 15). Prior to EPA's 2019 rule change, the practical volatility limit for E10 sold in conventional gasoline areas was 10 pounds per square inch (psi) Reid vapor pressure (RVP), but E15 was held to a 9-psi limit. EPA's 2019 rule effectively extended the volatility limit for E15 to 10 psi, creating regulatory parity for E15 and E10.