



Department of Revenue

# 2023 Retailers Fuel Gallons Annual Report

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## Introduction

Iowa motor vehicle fuel retailers are businesses that offer a range of fuel options, including gasoline, diesel, ethanol, and biodiesel. Iowa Code section 452A.33 requires all Iowa fuel retailers to report motor fuel and diesel gallons to the Iowa Department of Revenue and for the Department to prepare and submit an annual report of fuel gallons to the Iowa Governor and Legislature. Since 2007, when this law became effective, the Department has published the Retailers Fuel Gallons Annual Report for each calendar year. The annual report is based on retailers' reports of gallons that are due to the Department by January 31<sup>st</sup> in the following year. The present report concerns fuel gallons sold in Iowa in 2023. Retail dealers who fail to file the report by January 31<sup>st</sup> are subject to a \$100 penalty for each retail site from which the retail dealer sells and dispenses gasoline or diesel fuel.

Over the years, the Retailers Fuel Gallons Annual Report has been updated to reflect changes in law and trends in biofuel sales. The current report includes data on B11 or higher biodiesel blends, which became subject to a lower fuel excise tax rate starting July 1, 2015. Additionally, the tracking of ethanol blended gasoline was updated to better capture the expanding E15 market. Ethanol blended gasoline with 15 percent ethanol is now classified as either Registered E15 or Flex Fuel E15. Registered E15 is sold by retailers who have registered with the U.S. Environmental Protection Agency to sell E15 to consumers with vehicles manufactured in 2001 or later, enabling year-round sale of E15. Flex Fuel E15, which includes gallons sold by retailers through a blender pump at any time during the year, also encompasses ethanol blends ranging from 15 percent to 19 percent.

## Reporting Requirements

Fuel retailers were instructed to report their 2023 annual fuel sales to the Department via GovConnectIowa ([govconnect.iowa.gov](http://govconnect.iowa.gov)). Retailers with a significant number of locations were able to upload an electronic file with annual fuel sales by location within GovConnectIowa. If a retailer lacked the necessary technology or was otherwise unable to file electronically, the retailer would need to request and receive an exception from the electronic filing requirement; the retailer could then submit their annual sales by completing and returning a paper form. The Retailers Fuel Gallons Annual Report mandates that retailers provide information on the retail gasoline gallons sold for the following types of fuel:

- Gasoline (non-ethanol blend)
- Ethanol E10 blend (10% to 14% ethanol)
- Ethanol Registered E15 blend (15% ethanol)
- Ethanol Flex Fuel E15 blend (15% to 19% ethanol)
- Ethanol E20 blend (20% to 69% ethanol)
- Ethanol E85 blend (70% to 85% ethanol)

In addition to gasoline sales, the Retailers Fuel Gallons Annual Report requires retailers to provide information on the gallons of clear and dyed diesel sold. The differentiation between clear diesel and dyed diesel is based on whether the fuel is subject to state and federal fuel excise taxes. Dyed diesel fuel is not subject to these taxes and is primarily sold for use in farm, construction, and other types of equipment that do not travel on public roads under their own power, except for short distances such as between farm fields.

For biodiesel sales, information is collected for the following fuel types:

- Clear Biodiesel (1% to 4% biodiesel) B1-B4
- Clear Biodiesel (5% to 10% biodiesel) B5-B10
- Clear Biodiesel (11% to 19% biodiesel) B11-B19
- Clear Biodiesel (20% to 29% biodiesel) B20-B29
- Clear Biodiesel (30% to 49% biodiesel) B30-B49
- Clear Biodiesel (50% to 100% biodiesel) B50-B100
- Dyed Biodiesel (1% to 4% biodiesel) D1-D4
- Dyed Biodiesel (5% to 10% biodiesel) D5-D10
- Dyed Biodiesel (11% to 19% biodiesel) D11-D19
- Dyed Biodiesel (20% to 29% biodiesel) D20-D29
- Dyed Biodiesel (30% to 49% biodiesel) D30-D49
- Dyed Biodiesel (50% to 100% biodiesel) D50-D100

## Statistical Summary for 2023

The Department identified 2,264 retail locations that potentially sold fuel at retail during 2023. To provide instructions for completing the online report, the Department mailed postcards to 766 retailers at their main business address. The Department identified these retailers using information from the Iowa Department of Agriculture and Land Stewardship's motor fuel license database and the Department's internal records.

Out of these potential locations, the Department received electronic files or paper forms for 1,898 retail locations, representing a response rate of 84.0 percent, which is higher than the 71.0 percent in 2022. These 1,898 locations reported a total of 2.17 billion gallons of retail fuel sales, as shown in Table 1.

### Gasoline Fuel Sales

Amongst the 1,873 retail locations that sold gasoline in 2023, 1,797 of them (or 95.9%) sold at least one ethanol blend. E10 gasoline was the most frequently sold ethanol blend, with a reported total of 979 million gallons sold. Additionally, E15 gasoline sales were reported to be 178 million gallons, E20 gasoline sales were 0.99 million gallons, and E85 gasoline sales totaled 19 million gallons. In total, ethanol blends of E15 or higher constituted 13.3 percent of all gasoline sales in 2023. In comparison, the number of taxable gallons of gasoline fuels shipped during 2023, as reported on the Monthly Fuel Tax Reports, equaled 1.6 billion gallons. Therefore, retailers completing annual reports for 2023 accounted for 82 percent of gasoline fuels on which fuel taxes were paid.

### Diesel Fuel Sales

According to the annual reports submitted to the Department, a total of 1,381 retail locations sold clear diesel fuel in 2023. Out of these locations, 801 (or 58%) sold clear biodiesel fuel as well. In addition, 307 retail locations sold dyed diesel fuel during this period, and 149 (or 41%) of these locations also sold dyed biodiesel fuel.

In 2023, the reported amount of clear B1-B10 diesel sold equaled 67 million gallons, B11-B19 diesel sold equaled 286 million gallons, and B20 or higher blend diesel sold equaled 91 million gallons. The amount of clear biodiesel sold in 2023 equaled 444 million gallons, or 71.4 percent of total clear diesel fuel sales. Retailers reported selling 622 million gallons of clear diesel fuel. In comparison, the number of taxable (clear) gallons of diesel fuel shipped during 2023, as reported on the Monthly Fuel Tax Reports, equaled 775 million gallons. Therefore, retailers completing annual reports for 2023 accounted for 80 percent of diesel fuel on which fuel taxes were paid.

Annual reports for 2023 indicated 206 million gallons of dyed (non-taxed) diesel fuel were sold, including 42 million gallons of dyed biodiesel (20% of total dyed diesel sold). Dyed diesel gallons are not captured in the Monthly Fuel Tax Reports. Total diesel gallons reported were 829 million, and total biodiesel gallons 486 million; therefore, biodiesel blended gallons accounted for 58.6 percent of clear and dyed diesel gallons sold by reporting retailers.

**Table 1. Iowa Gasoline, Diesel, and Biofuel Sales for Calendar Year 2023**

Fuel Type	Locations	Gallons Sold	Pure Petroleum/Diesel	Pure Biofuel
Gasoline (Non-Ethanol)	1,513	166,675,096	166,675,096	0
Ethanol				
E10	1,755	979,884,684	881,896,204	97,988,485
E15 Registered	457	177,662,880	151,013,456	26,649,424
E15 Flex Fuel	32	866,224	736,288	129,936
E20	90	990,142	792,114	198,028
E85	325	19,008,288	3,991,736	15,016,552
<b>Total Ethanol</b>	<b>1,797</b>	<b>1,178,412,218</b>	<b>1,038,429,798</b>	<b>139,982,425</b>
Total Gasoline and Ethanol	1,873	1,345,087,314	1,205,104,894	139,982,425
Ethanol Share	95.9%	87.61%		
Gasoline Share	80.8%			
Clear Diesel (Non-Biodiesel)	779	178,343,693	178,343,693	0
Clear Biodiesel				
Clear B1-B4	54	4,849,015	4,655,540	193,475
Clear B5-B10	330	62,345,648	57,607,374	4,738,275
Clear B11-B19	598	286,268,227	245,618,160	40,650,067
Clear B20-B29	200	89,743,386	71,794,705	17,948,681
Clear B30-B49	4	144,733	101,313	43,420
Clear B50-B100	27	1,143,758	571,881	571,881
<b>Subtotal Clear Biodiesel</b>	<b>801</b>	<b>444,494,767</b>	<b>380,348,973</b>	<b>64,145,799</b>
Total Clear Diesel	1,381	622,838,460	558,692,666	64,145,799
Clear Biodiesel Share	58.0%	71.37%		
Dyed Diesel (Non-Biodiesel)	307	164,475,881	164,475,881	0
Dyed Biodiesel				
Dyed D1-D4	22	1,750,543	1,680,697	69,846
Dyed D5-D10	88	24,960,429	23,712,405	1,248,024
Dyed D11-D19	52	9,297,841	7,977,545	1,320,296
Dyed D20-D29	37	5,221,624	4,177,299	1,044,325
Dyed D30-D49	5	686,401	480,480	205,920
Dyed D50-D100	9	108,885	54,443	54,443
<b>Subtotal Dyed Biodiesel</b>	<b>149</b>	<b>42,025,723</b>	<b>38,082,869</b>	<b>3,942,854</b>
Total Dyed Diesel	367	206,501,604	202,558,750	3,942,854
Dyed Biodiesel Share	40.6%	20.35%		
Total Biodiesel	817	486,520,490	418,431,842	68,088,653
Total Diesel and Biodiesel	1,399	829,340,064	761,251,416	68,088,653
Biodiesel Share		58.66%		
<b>Total Fuel</b>	<b>1,898</b>	<b>2,174,427,378</b>	<b>1,966,356,310</b>	<b>208,071,078</b>
<b>Pure Biofuel Share of Total Gasoline and Diesel Sales</b>				9.6%
<b>Biofuel Distribution Percentage</b>				15.47%

Source: 2023 Retailers Fuel Gallons Annual Reports

## Biofuel Distribution Percentage

The Department used the following assumptions concerning blends to estimate the total amount of biofuel sold in Iowa 2023:

E10 blend gasoline fuel gallons were multiplied by 0.10  
E15 Registered blend gasoline fuel gallons were multiplied by 0.15  
E15 Flex blend gasoline fuel gallons were multiplied by 0.15  
E20 blend gasoline fuel gallons were multiplied by 0.20  
E85 blend gasoline fuel gallons were multiplied by 0.79  
B1-B4 blend diesel fuel gallons were multiplied by 0.0399  
B5-B10 blend diesel fuel gallons were multiplied by 0.076  
B11-B19 blend diesel fuel gallons were multiplied by 0.142  
B20-B29 blend diesel fuel gallons were multiplied by 0.20  
B30-B49 blend diesel fuel gallons were multiplied by 0.30  
B50-B100 blend gallons were multiplied by 0.50  
D1-D4 blend diesel fuel gallons were multiplied by 0.0399  
D5-D10 blend diesel fuel gallons were multiplied by 0.05  
D11-D19 blend diesel fuel gallons were multiplied by 0.142  
D20-D29 blend diesel fuel gallons were multiplied by 0.20  
D30-D49 blend diesel fuel gallons were multiplied by 0.30  
D50-D100 blend gallons were multiplied by 0.50

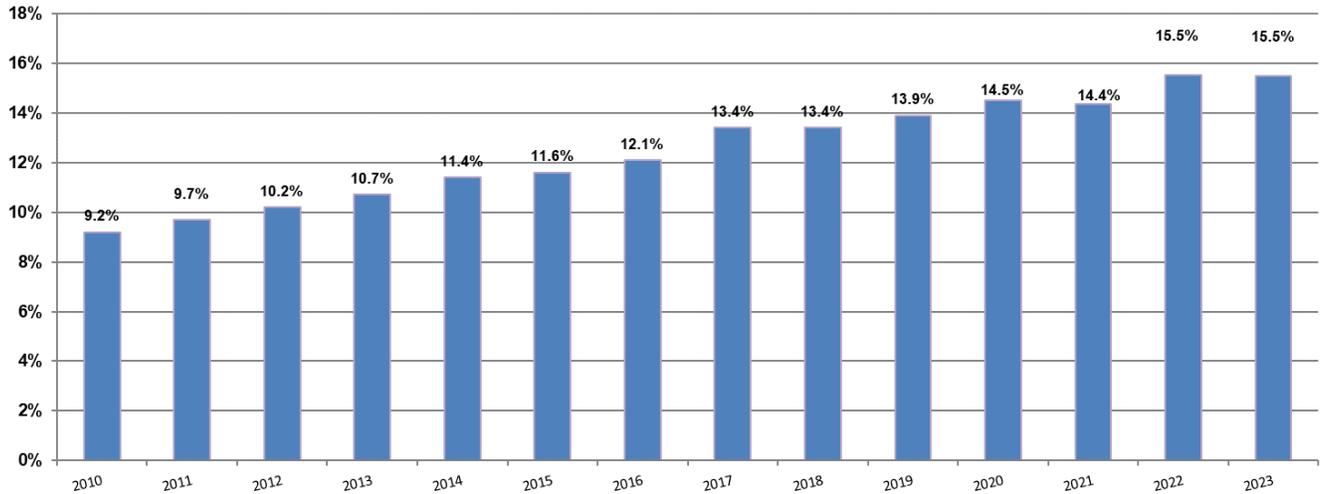
These calculations indicate that in 2023, pure ethanol comprised 10.4 percent of the volume of total gasoline and ethanol fuel sales. The aggregate ethanol gallonage, which is the number of pure ethanol gallons sold by retailers in 2023, was 139 million gallons. Pure biodiesel comprised 8.2 percent of total diesel and biodiesel sales. The aggregate biodiesel gallonage, which is the number of pure biodiesel gallons sold by retailers in 2023, was 68 million gallons. Pure biodiesel sold in clear diesel comprised 10.3 percent of gallons sold, while pure biodiesel sold in dyed diesel comprised only 1.9 percent of gallons sold. Together, pure ethanol and pure biodiesel comprised 9.6 percent of all fuel sales reported by retailers in Iowa.

However, note that the formula specified in the Iowa Code to determine the biofuel distribution percentage does not include diesel fuel in its denominator. The formula is as follows:

Biofuel Distribution Percentage =  
$$\frac{\text{Pure Ethanol Gallons} + \text{Pure Biodiesel Gallons}}{\text{Total Gasoline Gallons}}$$

Using this formula, biofuels accounted for 15.47 percent of Iowa retail motor vehicle fuel sales in 2023. This level is a slight decrease compared to the percentage calculated for 2022 (see Appendix).

**Figure 1. Statewide Biofuel Distribution Percentage, 2010-2023 Calendar Years**



Source: Retailers Fuel Gallons Annual Reports, 2010-2023

**Table 2: Comparison of Fuel and PureBiofuel Gallons sold in 2023 Vs 2022**

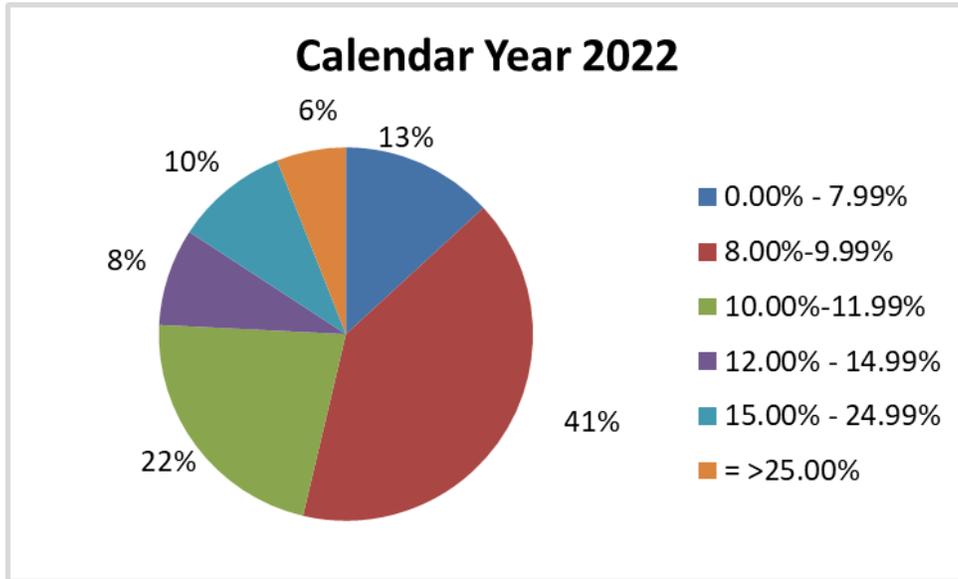
<b>Fuel Type</b>	<b>Change in Biofuel Gallons Sold</b>	<b>Percent Change in Biofuel Gallons</b>	<b>Change in Pure Biofuel Gallons Sold</b>	<b>Percent Change in Pure Biofuel Gallons</b>
<b>Ethanol</b>				
E10	7,851,539	0.8%	785,180	0.8%
E15 Registered	58,550,531	49.2%	8,782,578	49.2%
E15 Flex	-1,151,675	-57.1%	-172,750	-57.1%
E20	-196,123	-16.5%	-39,228	-16.5%
E85	-610,683	-3.1%	-482,435	-3.1%
<b>Total Ethanol</b>	<b>64,443,589</b>	<b>5.7%</b>	<b>8,873,345</b>	<b>6.8%</b>
<b>Clear Biodiesel</b>				
Clear B1-B4	-1,693,833	-25.8%	-67,584	-25.9%
Clear B5-B10	-26,656,234	-29.9%	-2,025,862	-30.0%
Clear B11-B19	34,931,305	13.8%	4,960,231	13.9%
Clear B20-B29	-17,294,656	-16.1%	-3,458,931	-16.2%
Clear B30-B49	-270,414	-100.0%	-37,704	-46.5%
Clear B50-B100	891,702	353.7%	445,852	353.8%
<b>Total Clear Biodiesel</b>	<b>-9,947,397</b>	<b>-2.1%</b>	<b>-183,998</b>	<b>-0.3%</b>
<b>Dyed Biodiesel</b>				
Dyed D1-D4	-56,776	-3.1%	-2,264	-3.1%
Dyed D5-D10	701,633	2.8%	35,086	2.9%
Dyed D11-D19	1,247,835	15.5%	177,197	15.5%
Dyed D20-D49	4,399,707	535.2%	878,707	530.6%
Dyed D50-D100	375,213	120.5%	50,325	32.3%
<b>Total Dyed Biodiesel</b>	<b>6,667,612</b>	<b>18.9%</b>	<b>1,139,051</b>	<b>41.4%</b>
<b>Total Change</b>	<b>61,163,804</b>	<b>3.8%</b>	<b>9,828,398</b>	<b>5.0%</b>

Source: 2023 and 2022 Retailers Fuel Gallons Annual Reports

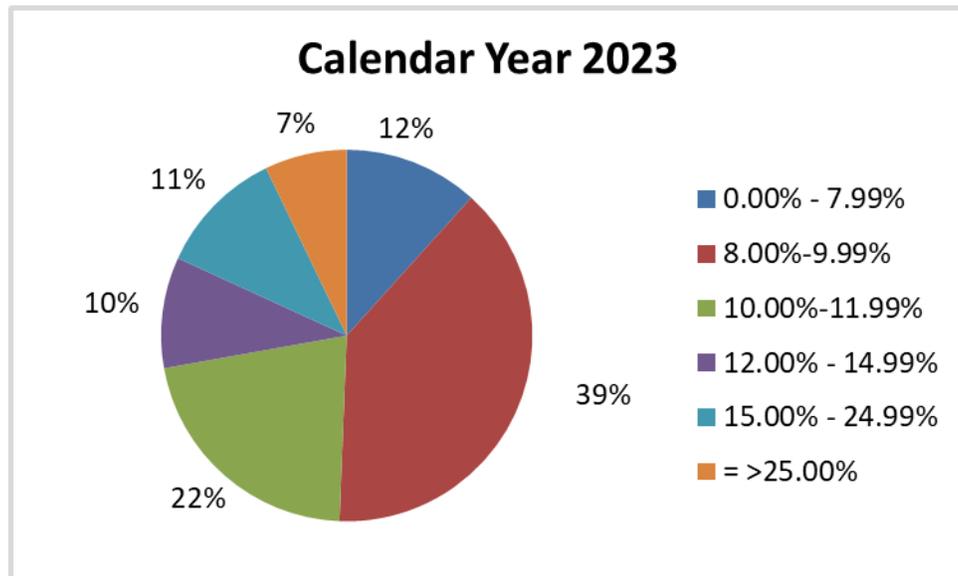
Figure 1 presents the biofuel distribution percentage calculated for calendar years 2010 through 2023. Due to the implementation of penalties in 2022, retailers are submitting at an increased rate from 2021. For 2023 the biofuel distribution percentage is at 15.47%.

While the overall biofuel distribution percentage decreased, there were variations in the sales of different ethanol and biodiesel blends. As shown in Table 2, there was a small increase of 7.9 million gallons in E10 gallons between 2022 and 2023. However, E15 Registered saw tremendous growth, with reported sales increasing by 58.6 million gallons (49.2%). It's worth noting that E15 is a blend of gasoline and ethanol that contains 15 percent ethanol, while E10 contains 10 percent ethanol. Additionally, E20 and higher saw decreases in gallons sold. The table shows significant increases in total amongst ethanol and dyed biodiesel.

**Figure 2: Breakdown of Retail Locations by Reported Biofuel Distribution Percentage**

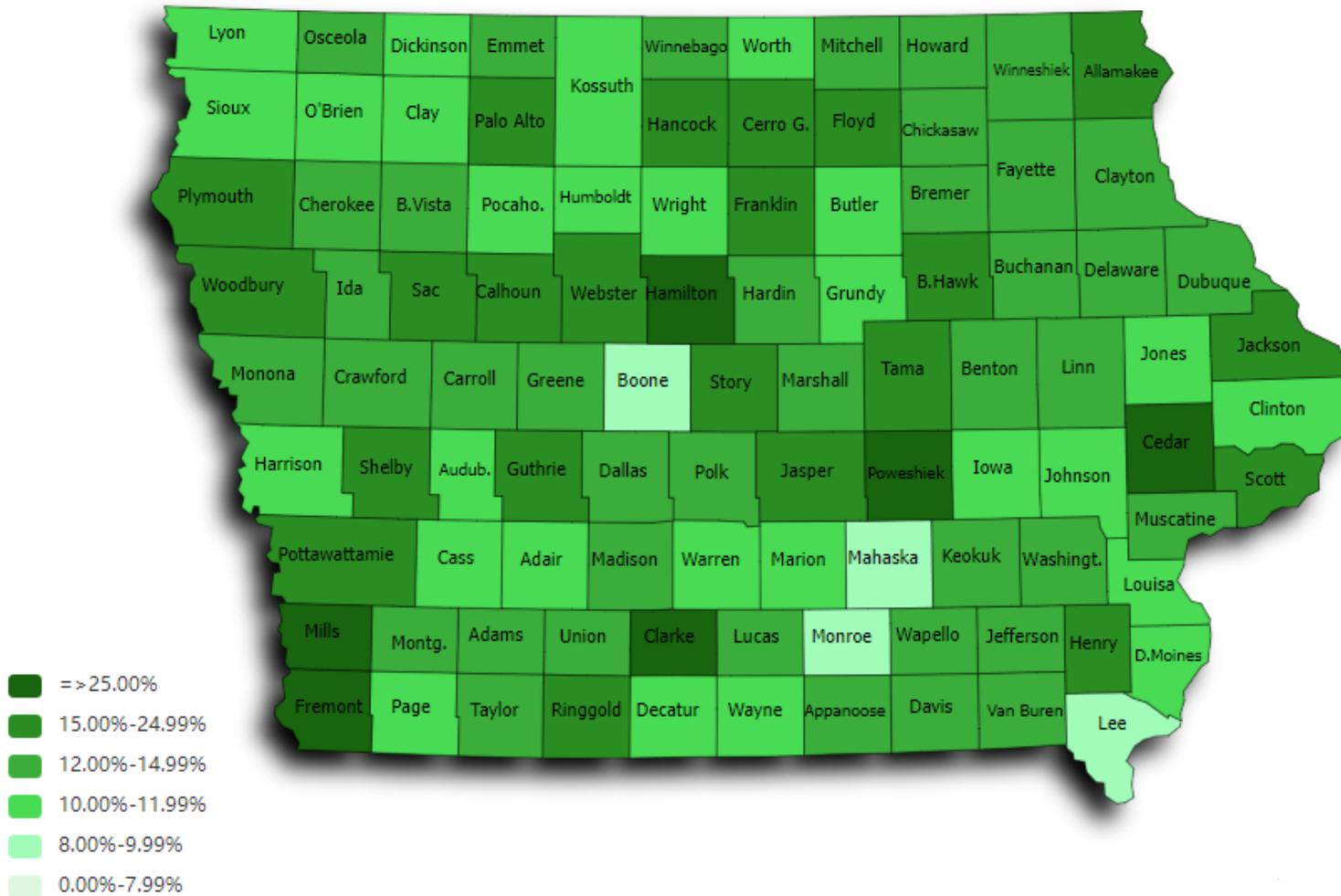


Source: 2022 Retailers Fuel Gallons Annual Reports



Source: 2023 Retailers Fuel Gallons Annual Reports

**Figure 3. Biofuel Distribution Percentage by County for 2023**



Source: 2023 Retailers Fuel Gallons Annual Reports

In 2023, there were some changes in the percentage of retailers reporting their biofuel distribution percentages within certain ranges. The share of retailers reporting biofuel distribution percentages equal to or greater than 25 percent increased from 6 percent in 2022 to 7.0 percent in 2023. The share of retailers reporting biofuel distribution percentages between 15.0 and 24.99 percent increased to 11.0 percent. Additionally, the share of retailers reporting biofuel distribution percentages between 12.0 and 14.99 percent increased to 10.0 percent.

However, the percentage of retailers reporting biofuel distribution percentages between 0 percent and 7.99 percent decreased to 12 percent in 2023. The share of retailers reporting biofuel distribution percentages between 8.0 and 9.99 percent decreased to 39 percent in 2023. The share of retailers reporting biofuel distribution percentages between 10.0 and 11.99 percent maintained at 22.0 percent.

Figure 3 depicts the biofuel distribution percentage across Iowa retailers, highlighting the variation in sales by county. These percentages were computed based on the total sales reported by retailers who submitted the 2023 Retailers Fuel Gallons Annual Report. It is worth noting that every county had a biofuel distribution percentage of 9.3 percent or higher. A total of 6 counties reported biofuel distribution percentages exceeding 25.0 percent.

Concurrently, 22 counties recorded pure biofuel sales between 15.0 and 24.99 percent of total gasoline sales, with 40 counties falling within the 12.0 to 14.99 percent category. Moreover, 27 counties had biofuel distribution percentages of 10.0 to 11.99 percent, while only four counties had biofuel distribution percentages of 8.00 to 9.99 percent. To provide more detailed information on fuel sales, Table 3 presents data on the total gallons of different fuel types sold in each county.

**Table 3. Calendar Year 2023 Total Gallons by County**

County	Locations	Gasoline	Ethanol Sales	Clear and Dyed Diesel Sales	Clear and Dyed Biodiesel Sales	Pure Biofuel Sales	Biofuel Distribution Percentage
Adair	*	470,902	2,816,022	9,356	600,018	365,109	11%
Adams	*	146,303	1,307,078	130,644	167,032	215,688	15%
Allamakee	16	842,379	5,510,794	1,706,495	1,409,031	976,280	15%
Appanoose	9	545,584	4,395,465	516,611	570,949	682,140	14%
Audubon	7	158,672	1,758,832	994,878	120,560	225,680	12%
Benton	22	1,523,584	8,211,227	1,079,417	3,193,847	1,359,494	14%
Black Hawk	59	5,931,541	50,207,601	2,136,515	21,677,765	9,813,948	17%
Boone	12	822,295	7,059,678	2,316,697	514,695	772,800	10%
Bremer	13	1,573,023	8,989,385	1,300,826	2,206,576	1,412,285	13%
Buchanan	11	763,431	6,135,338	1,336,970	1,841,461	998,804	14%
Buena Vista	25	1,040,468	7,914,527	3,546,966	529,098	1,147,470	13%
Butler	14	848,520	5,054,705	1,535,211	1,044,531	707,742	12%
Calhoun	20	364,165	4,699,626	1,873,397	1,901,913	767,233	15%
Carroll	24	1,202,829	9,452,098	14,114,194	1,007,773	1,296,654	12%
Cass	9	778,582	6,443,793	4,389,516	500,794	800,539	11%
Cedar	12	752,843	6,517,905	4,778,337	10,196,303	2,070,532	28%
Cerro Gordo	30	3,093,459	22,511,315	7,387,602	14,314,175	5,136,691	20%
Cherokee	12	501,242	3,764,983	1,329,209	941,821	555,508	13%
Chickasaw	10	1,458,734	5,409,346	5,265,524	3,224,082	978,176	14%
Clarke	8	1,141,140	6,065,581	388,627	9,019,554	2,035,257	28%
Clay	23	815,568	6,912,070	1,334,975	641,327	911,035	12%
Clayton	20	1,052,208	6,461,962	1,906,504	1,662,057	1,027,576	14%
Clinton	32	9,325,993	17,148,004	4,739,165	4,320,213	2,648,306	10%
Crawford	10	442,347	3,421,405	1,461,426	1,392,910	496,250	13%
Dallas	37	4,667,512	33,254,298	7,923,365	8,042,174	4,963,327	13%
Davis	*	177,839	1,513,861	206,102	120,368	238,833	14%
Decatur	*	162,773	1,679,630	1,195,154	211,564	220,039	12%
Delaware	10	1,310,324	5,338,653	4,287,533	2,293,018	966,697	15%
Des Moines	21	1,351,326	15,571,661	1,440,338	1,392,456	1,977,496	12%
Dickinson	24	1,925,157	7,752,474	915,004	741,810	1,012,277	10%
Dubuque	47	5,618,957	37,405,618	3,044,506	14,910,891	5,475,543	13%
Emmet	12	530,433	4,779,602	2,702,361	770,392	750,870	14%
Fayette	16	702,515	6,303,650	431,467	1,337,216	985,651	14%
Floyd	13	601,643	8,108,482	3,032,922	7,238,216	2,164,950	25%
Franklin	8	899,889	3,599,756	1,250,013	1,584,978	766,095	17%
Fremont	8	1,132,060	6,383,424	1,294,585	14,340,136	2,755,261	37%
Greene	12	219,311	3,450,021	1,294,153	941,266	474,334	13%
Grundy	11	548,921	4,698,254	1,668,542	2,021,507	609,704	12%
Guthrie	14	819,507	5,069,783	608,837	4,183,632	1,246,311	21%
Hamilton	16	534,410	9,296,360	2,474,429	17,155,198	3,748,612	38%
Hancock	11	519,861	3,831,359	4,177,400	1,189,967	679,382	16%
Hardin	21	667,914	6,826,675	5,109,237	1,370,840	1,008,948	13%
Harrison	12	593,780	5,187,547	1,326,577	658,786	640,823	11%
Henry	18	1,240,946	17,830,717	3,106,385	6,654,680	3,081,000	16%
Howard	13	764,716	4,499,076	1,740,740	1,787,994	780,150	15%
Humboldt	11	486,325	4,079,151	3,534,591	428,066	540,129	12%
Ida	11	663,271	3,219,593	1,391,188	894,737	491,152	13%
Iowa	32	1,435,244	9,948,225	6,671,105	1,245,798	1,223,868	11%
Jackson	15	729,979	6,564,574	400,177	2,389,312	1,156,320	16%
Jasper	29	1,995,156	17,494,918	1,033,382	17,158,213	4,742,767	24%
Jefferson	12	782,270	4,749,425	520,037	1,271,531	750,158	14%
Johnson	41	5,423,165	34,203,068	3,546,431	2,064,401	4,043,845	10%

Jones	10	788,853	6,070,028	1,834,608	1,296,258	791,072	12%
Keokuk	9	431,933	3,914,871	1,981,424	980,874	594,856	14%
Kossuth	17	438,183	5,429,928	2,880,918	153,769	663,451	11%
Lee	23	1,349,336	12,379,765	4,530,706	198,858	1,282,317	9%
Linn	87	10,923,319	77,540,343	8,996,504	25,561,062	13,161,072	15%
Louisa	7	387,788	2,286,715	872,062	509,214	313,700	12%
Lucas	9	412,452	2,653,593	2,180,285	637,640	382,277	12%
Lyon	12	499,139	4,540,256	3,213,391	396,840	519,157	10%
Madison	8	738,472	10,436,275	42,985,386	1,721,938	1,485,222	13%
Mahaska	11	634,443	7,456,868	271,884	267,666	796,810	10%
Marion	18	1,598,783	11,918,559	2,969,843	1,635,976	1,610,063	12%
Marshall	20	1,802,228	11,219,460	68,204	3,547,246	1,714,533	13%
Mills	9	685,715	6,877,641	2,288,086	7,031,942	2,056,572	27%
Mitchell	9	378,244	3,192,655	2,746,679	398,406	526,221	15%
Monona	9	509,290	4,115,411	1,836,369	782,592	572,282	12%
Monroe	*	319,480	2,584,869	0	175,230	283,370	10%
Montgomery	10	567,902	4,180,657	1,608,146	1,750,020	653,191	14%
Muscatine	18	1,210,592	13,402,928	1,027,855	3,426,872	2,157,016	15%
O'Brien	17	606,518	5,186,369	2,954,127	175,628	683,768	12%
Osceola	9	200,534	2,503,450	3,852,146	800,698	369,059	14%
Page	7	430,172	3,291,610	534,223	130,406	373,424	10%
Palo Alto	10	256,340	2,939,377	1,847,220	1,048,626	532,053	17%
Plymouth	18	1,936,057	12,760,245	17,016,457	6,022,177	2,451,880	17%
Pocahontas	10	585,152	4,969,368	12,210,531	401,868	658,168	12%
Polk	171	24,967,785	160,852,060	14,461,693	54,114,721	26,959,518	15%
Pottawattamie	44	5,377,470	41,482,799	6,865,746	36,167,524	10,041,993	21%
Poweshiek	18	844,073	7,351,868	276,443	16,321,182	2,947,146	36%
Ringgold	8	233,019	2,034,762	650,118	1,234,282	479,970	21%
Sac	14	434,238	4,358,625	1,310,819	2,404,384	783,430	16%
Scott	87	11,725,935	93,457,579	8,551,341	58,809,861	20,042,422	19%
Shelby	7	358,873	3,267,234	4,414,514	2,312,087	665,494	18%
Sioux	28	2,867,127	12,185,595	16,546,153	985,261	1,593,989	11%
Story	36	4,175,521	24,881,692	1,634,223	11,826,188	4,446,161	15%
Tama	17	789,018	7,196,171	942,592	4,418,811	1,338,486	17%
Taylor	8	213,318	1,991,432	1,280,032	394,855	320,119	15%
Union	11	586,684	4,764,663	574,783	996,358	786,556	15%
Van Buren	6	111,547	1,801,878	842,684	95,459	270,038	14%
Wapello	24	2,074,571	15,029,547	884,190	7,564,994	2,559,137	15%
Warren	24	2,036,918	15,213,712	2,611,049	1,560,562	1,779,602	10%
Washington	14	1,225,528	6,838,857	4,709,002	4,620,806	1,203,520	15%
Wayne	7	166,862	1,981,485	1,084,368	226,061	243,891	11%
Webster	31	1,499,294	15,369,574	1,050,229	4,953,314	2,563,149	15%
Winnebago	10	427,512	3,897,288	1,658,778	579,195	623,480	14%
Winneshiek	17	1,035,428	7,989,661	7,180,487	1,140,329	1,118,297	12%
Woodbury	46	4,873,121	37,316,837	8,433,333	18,976,758	7,029,532	17%
Worth	6	242,011	2,292,708	1,337,216	109,532	266,154	11%
Wright	13	617,302	4,196,355	2,907,104	258,528	481,715	10%

Source: 2023 Retailers Fuel Gallons Annual Reports

Note: \* Counties less than five retailers reported sales.

## Appendix

**Table 1: Iowa Gasoline, Diesel, and Biofuel Sales for Calendar Year 2022**

Fuel Type	Locations	Gallons Sold	Pure Petroleum/Diesel	Pure Biofuel
Gasoline (Non-Ethanol)	1,455	162,582,669	162,582,669	0
<b>Ethanol</b>				
E10	1,670	972,033,145	874,829,843	97,203,305
E15 Registered	291	119,112,349	101,245,503	17,866,846
E15 Flex Fuel	38	2,017,899	1,715,213	302,686
E20	85	1,186,265	949,009	237,256
E85	307	19,618,971	4,119,984	15,498,987
<b>Total Ethanol</b>	<b>1,682</b>	<b>1,113,968,629</b>	<b>982,859,552</b>	<b>131,109,080</b>
<b>Total Gasoline and Ethanol</b>	<b>1,768</b>	<b>1,276,551,298</b>	<b>1,145,442,221</b>	<b>131,109,080</b>
Ethanol Share	95.1%	87.26%		
Gasoline Share	82.3%			
<b>Clear Diesel (Non-Biodiesel)</b>	<b>763</b>	<b>206,151,043</b>	<b>206,151,043</b>	<b>0</b>
<b>Clear Biodiesel</b>				
Clear B1-B4	72	6,542,848	6,281,789	261,059
Clear B5-B10	407	89,001,882	82,237,748	6,764,137
Clear B11-B19	578	251,336,922	215,647,086	35,689,836
Clear B20-B29	476	107,038,042	85,630,430	21,407,612
Clear B30-B49	5	270,414	189,291	81,124
Clear B50-B100	21	252,056	126,029	126,029
<b>Subtotal Clear Biodiesel</b>	<b>713</b>	<b>454,442,164</b>	<b>390,112,373</b>	<b>64,329,797</b>
<b>Total Clear Diesel</b>	<b>1,291</b>	<b>660,593,207</b>	<b>596,263,416</b>	<b>64,329,797</b>
Clear Biodiesel Share	55.2%	68.79%		
<b>Dyed Diesel (Non-Biodiesel)</b>	<b>285</b>	<b>165,419,323</b>	<b>165,419,323</b>	<b>0</b>
<b>Dyed Biodiesel</b>				
Dyed D1-D4	23	1,807,319	1,735,209	72,110
Dyed D5-D10	86	24,258,796	23,045,858	1,212,938
Dyed D11-D19	56	8,050,006	6,906,907	1,143,099
Dyed D20-D29	31	809,589	647,669	161,920
Dyed D30-D49	3	12,328	8,630	3,698
Dyed D50-D100	8	311,188	155,595	155,595
<b>Subtotal Dyed Biodiesel</b>	<b>137</b>	<b>35,249,226</b>	<b>32,499,868</b>	<b>2,749,360</b>
<b>Total Dyed Diesel</b>	<b>321</b>	<b>200,668,549</b>	<b>197,919,191</b>	<b>2,749,360</b>
Dyed Biodiesel Share	42.7%	17.57%		
<b>Total Biodiesel</b>	<b>737</b>	<b>489,691,390</b>	<b>422,612,241</b>	<b>67,079,157</b>
<b>Total Diesel and Biodiesel</b>	<b>1,303</b>	<b>861,261,756</b>	<b>794,182,607</b>	<b>67,079,157</b>
Biodiesel Share		56.86%		
<b>Total Fuel</b>	<b>1,804</b>	<b>2,137,813,054</b>	<b>1,939,624,828</b>	<b>198,188,237</b>
<b>Pure Biofuel Share of Total Gasoline and Diesel Sales</b>				<b>9.3%</b>
<b>Biofuel Distribution Percentage</b>				<b>15.53%</b>

Source: 2022 Retailers Fuel Gallons Annual Reports