



Iowa Department of
REVENUE

2018 Retailers Fuel Gallons
Annual Report

April 2019

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Introduction

In 2006, the Iowa General Assembly enacted H.F. 2754, an act pertaining to the regulation of renewable fuels and energy and providing incentives for the installation of biofuels infrastructure and the promotion of biofuels sales. This legislation established a goal that biofuels replace 25 percent of all petroleum used in the formulation of gasoline by 2020.

To measure the State's progress toward achieving this goal, new reporting requirements for fuel retailers, administered by the Department of Revenue, were established in 2007 (Iowa Code section 452A.33). In consultation with the Renewable Fuels Infrastructure Board, motor fuel retailers, and other interested parties, the Department established an annual reporting requirement by administrative rule (701 IAC 67.27). Fuel retailers filed the first annual report for sales made during calendar year 2007.

The Retailers Fuel Gallons Annual Report is due to the Department by January 31st in the following year. Despite a requirement for retailers to complete the report, the participation rate for retail locations across the state has typically been under 90 percent.

In 2015, in response to the changing patterns of biofuel sales and recent law changes, the data collected on the Retailers Fuel Gallons Annual Report was updated. The current report specifically tracks B11 or higher biodiesel blends, which were subject to a lower fuel excise tax rate beginning July 1, 2015. The ethanol blend tracking was also changed to better account for the growing E15 market. Ethanol blended gasoline comprised of 15 percent ethanol is now reported as one of two types: Registered E15 or Flex Fuel E15. Registered E15 is sold by retailers that have registered with the U.S. Environmental Protection Agency to sell E15 to consumers with cars built in 2001 or later. However, during June 1st through September 15th of each year, retailers can only continue to sell Registered E15 if they obtain low volatile gasoline for blending, which is not piped into Iowa. Without taking these steps, registered retailers can only sell E15 fuel as a Flex Fuel. Flex Fuel E15 (15% to 19% ethanol) also includes gallons sold by retailers through a blender pump at any time during the year.

Along with the report redesign, the Department made report submission available online via a webform that allows retailers to electronically report their sales by station. For any retailer using the webform, the need for data entry by the Department is eliminated, which increases the accuracy and efficiency of reporting.

The 2018 report reveals the overall biofuel distribution percentage remained unchanged from 2017. While retailers reported higher sales of Registered E15, their reported sales of all other ethanol blends declined. Lower sales of clear B20-B49 fuel were offset by higher sales for all other clear biodiesel blends.

Reporting Requirements

Fuel retailers were directed to complete the Department's webform to report 2018 annual fuel sales. Retailers indicating a lack of technology could report annual sales by completing and returning the paper form. Retailers with a large number of locations could securely email an electronic file with annual fuel sales by location. The Retailers Fuel Gallons Annual Report requires retailers to provide information on retail gasoline gallons sold for the following fuel types:

- 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)

Gallons of clear and dyed diesel sales are also required. The distinction between clear diesel and dyed diesel reflects whether the fuel is subject to State and federal fuel excise taxes. Dyed diesel fuel is not subject to fuel excise taxes and is sold for use in farm, construction, and other types of equipment that do not travel under their own power on public roads, except for short distances such as between farm fields.

For biodiesel sales, additional detailed information is required:

- 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 49% biodiesel) B20-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 49% biodiesel) D20-D49
- Dyed Biodiesel (50% to 100% biodiesel) D50-D100

Statistical Summary for 2018

The Department identified 2,429 potential retail locations at which fuel may have been sold at retail during 2018. Emails with a link to the webform were sent to 529 retailers who provided email addresses on their calendar year 2017 annual reports. Postcards with directions for completing the online report were mailed to another 710 retailers, identified using Department of Agriculture and Land Stewardship motor fuel license information and the Department of Revenue eligible purchaser's database. Electronic files were emailed to 20 large fuel retailers with 1,181 locations, providing an option other than station-by-station webform reporting. Paper reports were mailed to 9 locations where operators indicated a lack of online access.

The Department received webform reports, paper forms, or electronic files representing 2,133 retail locations, a response rate of 87.8 percent compared to 88.0 percent in 2017(Revised).¹ The 2,133 locations reported 2.39 billion gallons of retail fuel sales (see Table 1.

Of the reporting 2,133 Iowa retail locations, 1,975 (92.6%) reported selling at least one type of ethanol blend and 792 (37.1%) reported selling one or more blend of clear or dyed biodiesel. Of the locations selling ethanol, 1,968 (92.3%) reported selling E10 fuel, 305 (14.3%) reported selling Registered E15, Flex Fuel E15 and/or E20 and 310 (14.5%) reported selling E85. Biofuel sales are summarized below and in Table 1.

Gasoline Fuel Sales

During 2018, the reported amount of E10 gasoline sold equaled 1,300.1 million gallons. E85 gasoline sold equaled 20.2 million gallons, E20 gasoline sold equaled 1.0 million gallons, and E15 gasoline sold equaled 35.5 million gallons, with 96.3 percent sold through registered pumps. Combined, ethanol blended fuel represented 87.0 percent of total reported gasoline fuel sales during the year. Blends of E15 or higher comprised 3.6 percent of total gasoline sales in 2018. Of the 2,042 locations that sold gasoline, 1,975 (96.7%) sold one or more ethanol blend while 335 (4.2%) sold E15 or higher blends.

With just over 12 percent of locations failing to complete their Retailers Fuel Gallons Annual Report for 2018, gallons from the Department's Monthly Fuel Tax Reports were used to estimate the amount of gasoline sales underreported. The gallons presented in the Monthly Fuel Tax Reports reflect taxable fuel shipped from terminals rather than gallons sold at retail locations. Because the Monthly Fuel Tax Reports reflect fuel shipments made during the prior month, taxable gallons reported in the monthly reports covering February 2018 through January 2019 were compared with gallons reported as sold by retailers completing the 2018 annual report. During this period, fuel taxes were paid on a total of 1,667.3 million gallons of gasoline fuels. Comparatively, the 87.8 percent of retail locations that filed annual reports indicated 1,559.0 million gallons of gasoline fuels were sold, including all ethanol blends and non-ethanol gasoline. This reported amount equates to 93.5 percent of taxable gallons in 2018.

¹ Revisions in the 2017 data reflect updated information provided by a handful of retailers during the collection of 2018 data.

Diesel Fuel Sales

Based on annual reports submitted to the Department, 1,435 retail locations sold clear diesel fuel, with 771(53.7%) of these locations selling clear biodiesel fuel during 2018. Additionally, 348 retail locations sold dyed diesel fuel, with 126(43.9%) of these locations selling dyed biodiesel fuel during 2018.

During 2018, the reported amount of clear B1-B10 diesel sold equaled 120.9 million gallons, B11-B19 diesel sold equaled 232.7 million gallons, and B20 or higher blend diesel sold equaled 69.3 million gallons. Combined, biodiesel blended fuel represented 66.4 percent of total reported clear diesel sales during the year. Blends of B11 or higher comprised 47.4 percent of total clear diesel sales in 2018.

The amount of clear biodiesel sold in 2018 equaled 422.9 million gallons, or 66.4 percent of total clear diesel fuel sales. Retailers reported selling 637.1 million gallons of clear diesel fuel. In comparison, the number of taxable (clear) gallons of diesel fuel shipped during 2018, as reported on the Monthly Fuel Tax Reports, equaled 738.5 million. Therefore, retailers completing annual reports for 2018 accounted for 86.3 percent of diesel fuel on which fuel taxes were paid.

Annual reports for 2018 indicated 189.0 million gallons of dyed (non-taxed) diesel fuel were sold, including 35.9 million biodiesel gallons (19.0%). Dyed diesel gallons are not captured in the Monthly Fuel Tax Reports.

Total diesel gallons reported were 826.1 million, and total biodiesel gallons were 458.9 million; therefore, biodiesel blended gallons accounted for 55.5 percent of clear and dyed diesel gallons sold by reporting retailers.

Table 1. Iowa Gasoline, Diesel, and Biofuel Sales for Calendar Year 2018

Fuel Type	Locations	Gallons Sold	Pure Petroleum/Diesel	Pure Biofuel
Gasoline (Non-Ethanol)	1,646	202,314,938	202,314,938	0
Ethanol				
E10	1,968	1,300,064,120	1,170,057,708	130,006,412
E15 Registered	187	34,140,810	29,019,689	5,121,122
E15 Flex Fuel	33	1,323,764	1,125,199	198,565
E20	85	990,163	792,130	198,033
E85	310	20,161,858	4,233,990	15,927,868
Total Ethanol	1,975	1,356,680,715	1,205,228,717	151,451,999
Total Gasoline and Ethanol	2,042	1,558,995,653	1,407,543,655	151,451,999
Ethanol Share	96.7%	87.0%		9.7%
Clear Diesel (Non-Biodiesel)	1,148	214,128,219	214,128,219	0
Clear Biodiesel				
Clear B1-B4	83	11,573,276	11,111,502	461,774
Clear B5-B10	652	109,354,358	101,043,427	8,310,931
Clear B11-B19	480	232,710,967	199,666,010	33,044,957
Clear B20-B49	116	69,044,815	55,235,852	13,808,963
Clear B50-B100	12	255,693	127,847	127,847
Subtotal Clear Biodiesel	771	422,939,109	367,184,637	55,754,472
Total Clear Diesel	1,435	637,067,328	581,312,856	55,754,472
Clear Biodiesel Share	53.7%	66.4%		8.8%
Dyed Diesel (Non-Biodiesel)	318	153,056,755	153,056,755	0
Dyed Biodiesel				
Dyed D1-D4	27	1,334,603	1,281,352	53,251
Dyed D5-D10	97	30,133,617	28,626,936	1,506,681
Dyed D11-D19	34	3,536,388	3,034,221	502,167
Dyed D20-D49	24	854,781	683,824	170,956
Dyed D50-D100	14	71,922	35,961	35,961
Subtotal Dyed Biodiesel	126	35,931,310	33,662,295	2,269,016
Total Dyed Diesel	348	188,988,065	186,719,050	2,269,016
Dyed Biodiesel Share	43.9%	19.0%		1.2%
Total Biodiesel	792	458,870,419	400,846,932	58,023,487
Total Diesel and Biodiesel	1,450	826,055,393	768,031,906	58,023,487
Biodiesel Share	54.6%	55.5%		7.0%
Total Fuel	2,133	2,385,051,047	2,175,575,561	209,475,486
Pure Biofuel Share of Total Gasoline and Diesel Sales				8.8%
Biofuel Distribution Percentage				13.4%

Source: 2018 Retailers Fuel Gallons Annual Reports

Biofuel Distribution Percentage

The primary purpose of this report is to provide the information needed to determine the State's progress toward replacing 25 percent of petroleum-based motor fuels with biofuels by the year 2020. Table 1 provides estimates of the breakdown between petroleum or diesel and pure biofuel for each fuel type.

Based on blend details provided by a small number of biofuel retailers in 2015, the following blend assumptions were used to measure the progress of meeting the goal of biofuel replacing 25 percent of gasoline by 2020:

- 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-B49 blend diesel fuel gallons were multiplied by 0.20
- 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-D49 blend diesel fuel gallons were multiplied by 0.20
- D50-D100 blend gallons were multiplied by 0.50

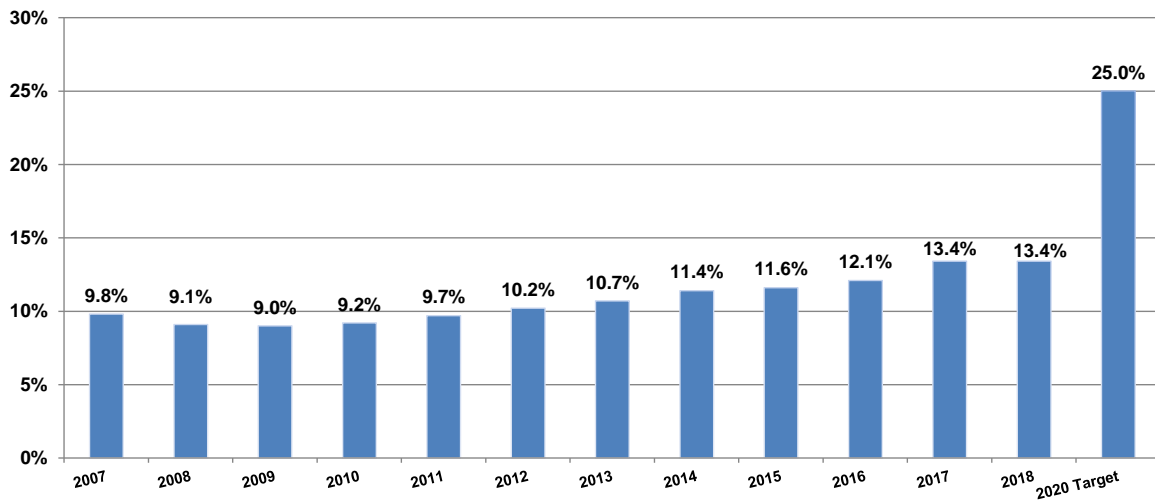
These calculations indicate that in 2018, pure ethanol comprised 9.7 percent of the volume of total gasoline and ethanol fuel sales. The aggregate ethanol gallonage, which is the number of pure ethanol gallons sold by retailers in 2018, was 151.5 million gallons. Pure biodiesel comprised 7.0 percent of total diesel and biodiesel sales. The aggregate biodiesel gallonage, which is the number of pure biodiesel gallons sold by retailers in 2018, was 58.0 million gallons. Pure biodiesel sold in clear diesel comprised 8.8 percent of gallons sold while pure biodiesel sold in dyed diesel comprised only 1.2 percent of gallons sold. Together, pure ethanol and pure biodiesel comprised 8.8 percent of all fuel sales reported by retailers in Iowa. However, the formula specified in Iowa Code section 452.31(8) for the biofuel distribution percentage used to determine progress toward meeting the 25 percent biofuels goal does not include diesel fuel in its denominator. The formula is as follows:

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

Using this formula, biofuels accounted for 13.4 percent of Iowa retail motor fuel sales in 2018. This level is unchanged from the percentage calculated for 2017(Revised) (see Appendix).

Figure1 presents the biofuel distribution percentage calculated for the 2007 through the 2018 calendar years. Between 2010 and 2013, the State percentage increased 0.5 percentage points each year, solely as a result of higher biodiesel usage. The 0.7 percentage point jump in 2014 reflected a change in the octane level of gasoline piped into Iowa, which occurred in late 2013; this resulted in higher ethanol sales throughout the following calendar year. The 0.5 percentage point gain in 2016 reflected both higher ethanol and biodiesel sales. In 2017, retailers reported the largest increase in state-wide biofuel usage, mostly reflecting higher sales of E15, E85, and B20. Higher gallons of pure ethanol accounted for 30 percent of the growth with gains in pure biodiesel gallons accounting for the other 70 percent.

Figure1. Statewide Biofuel Distribution Percentage, 2007-2018



Source: Retailers Fuel Gallons Annual Reports, 2007-2018

Although the biofuel distribution percentage did not change between 2017 and 2018, Table 2 indicates pure ethanol gallons decreased by 0.6 million gallons. Offsetting that decline was a 0.7 million gallons increase in clear pure biodiesel and a 0.2 million gallons increase in dyed pure biodiesel. The changes were not uniform across ethanol and biodiesel blends. The only ethanol blend that recorded growth was registered E15, with reported sales 8.1 million gallons (30.9%) higher than 2017. That 1.2 million gallons gain in pure ethanol was not enough to offset the 1.5 million gallons drop in pure ethanol sold as E10 and the 0.2 million gallons drop in pure ethanol sold as E85. The gains in pure clear biodiesel were experienced in all blends except B20-B49.

Table 2. Change in Biofuel and Pure Biofuel Sales Between 2017 and 2018

Fuel Type	Change in Biofuel Gallons Sold	Percent Change in Biofuel Gallons	Change in Pure Biofuel Gallons Sold	Percent Change in Pure Biofuel Gallons
Ethanol				
E10	-15,147,531	-1.2%	-1,514,753	-1.2%
E15 Registered	8,058,477	30.9%	1,208,771	30.9%
E15 Flex	-302,374	-18.6%	-45,356	-18.6%
E20	-185,424	-15.8%	-37,085	-15.8%
E85	-264,145	-1.3%	-208,674	-1.3%
Total Ethanol	-7,840,997	-0.6%	-597,097	-0.4%
Clear Biodiesel				
Clear B1-B4	4,470,791	62.9%	178,385	62.9%
Clear B5-B10	43,252,429	65.4%	3,287,185	65.4%
Clear B11-B19	2,770,526	1.2%	393,415	1.3%
Clear B20-B49	-16,044,338	-18.9%	-3,208,868	-17.9%
Clear B50-B100	30,116	13.4%	15,058	13.4%
Total Clear Biodiesel	34,479,523	8.9%	665,174	1.2%
Dyed Biodiesel				
Dyed D1-D4	-2,123,754	-61.4%	-84,738	-61.4%
Dyed D5-D10	-2,164,877	-6.7%	-108,244	-4.7%
Dyed D11-D19	3,020,561	585.6%	428,920	585.6%
Dyed D20-D49	378,592	79.5%	75,718	79.5%
Dyed D50-D100	-245,035	-77.3%	-122,518	-77.3%
Total Dyed Biodiesel	-1,134,513	-3.1%	189,139	6.8%
Total Change	25,504,012	1.4%	257,216	0.1%

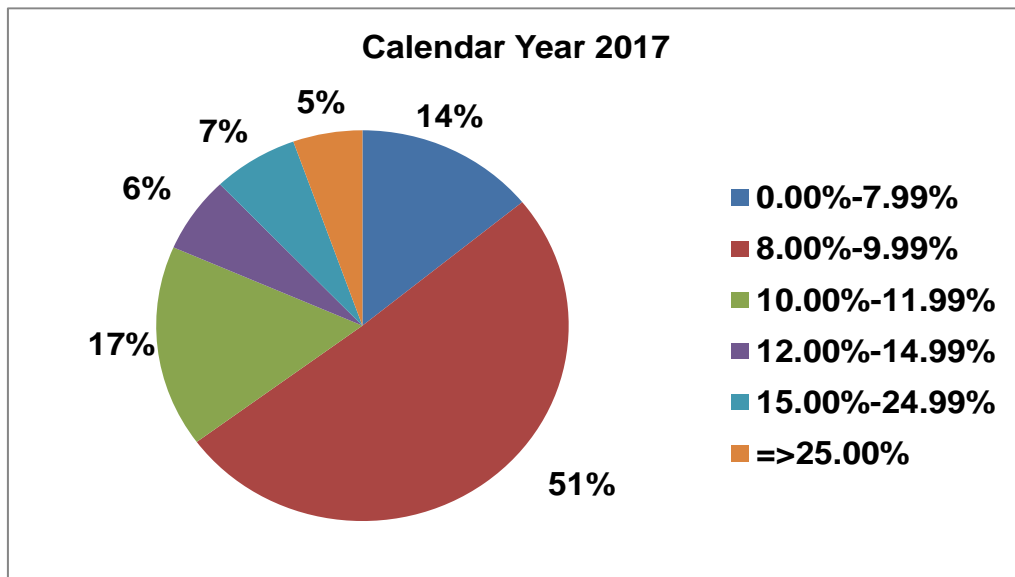
Source: 2018 and 2017(Revised) Retailers Fuel Gallons Annual Reports

Although the 25 percent goal is for the state as a whole, it is instructive to consider that same measure at the retailer and county level. Figure 2 illustrates the breakdown of retail locations by biofuel distribution percentage, calculated using the sales reported by each retail location for which annual reports were filed in 2017 or 2018. The data includes only the retail locations that reported gasoline or ethanol sales in the respective calendar year, excluding those with only diesel sales reported. However, as noted above, the calculation of the biofuel distribution percentage includes any pure biodiesel reported at those locations.

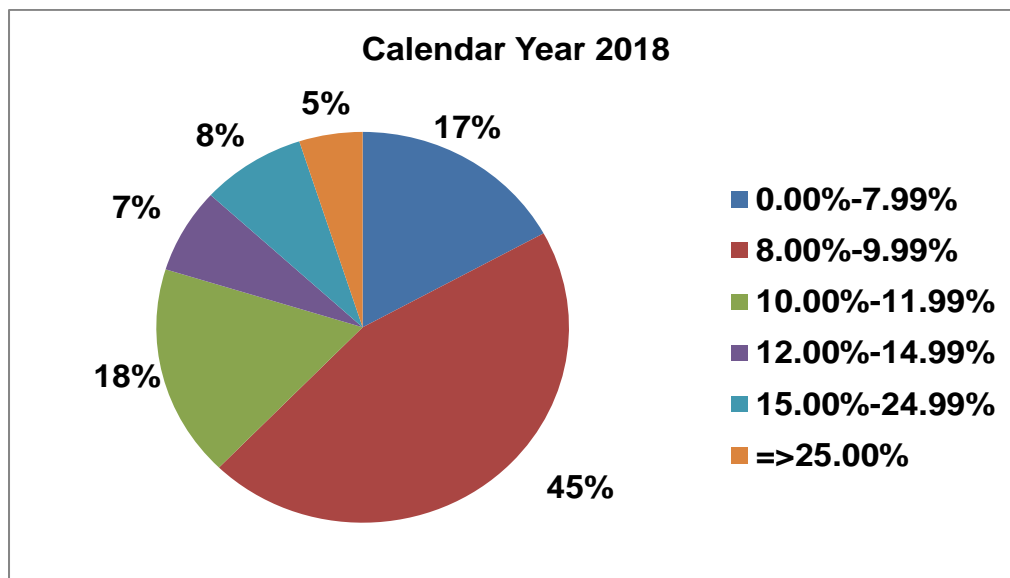
The share of stations reporting a biofuel distribution percentage equal to or greater than 25 percent remained unchanged in 2018 at 5 percent. The percent of retailers reporting from 0 percent to 7.99 percent increased from 14.0 percent in 2017 to 17.0 percent in

2018. The share of retailers in the 8.0 to 9.99 percent range declined 6 percentage points from 51.0 percent in 2017 to 45.0 percent in 2018. The share with a biofuel distribution percentage between 10.0 and 11.99 percent increased by one percentage point from 17.0 percent in 2017 to 18.0 percent in 2018. The share of retailers with a biofuel distribution percentage between 12.0 and 14.99 percent increased from 6.0 to 7.0 percent and the share between 15.0 and 24.99 percent increased from 7.0 to 8.0 percent.

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



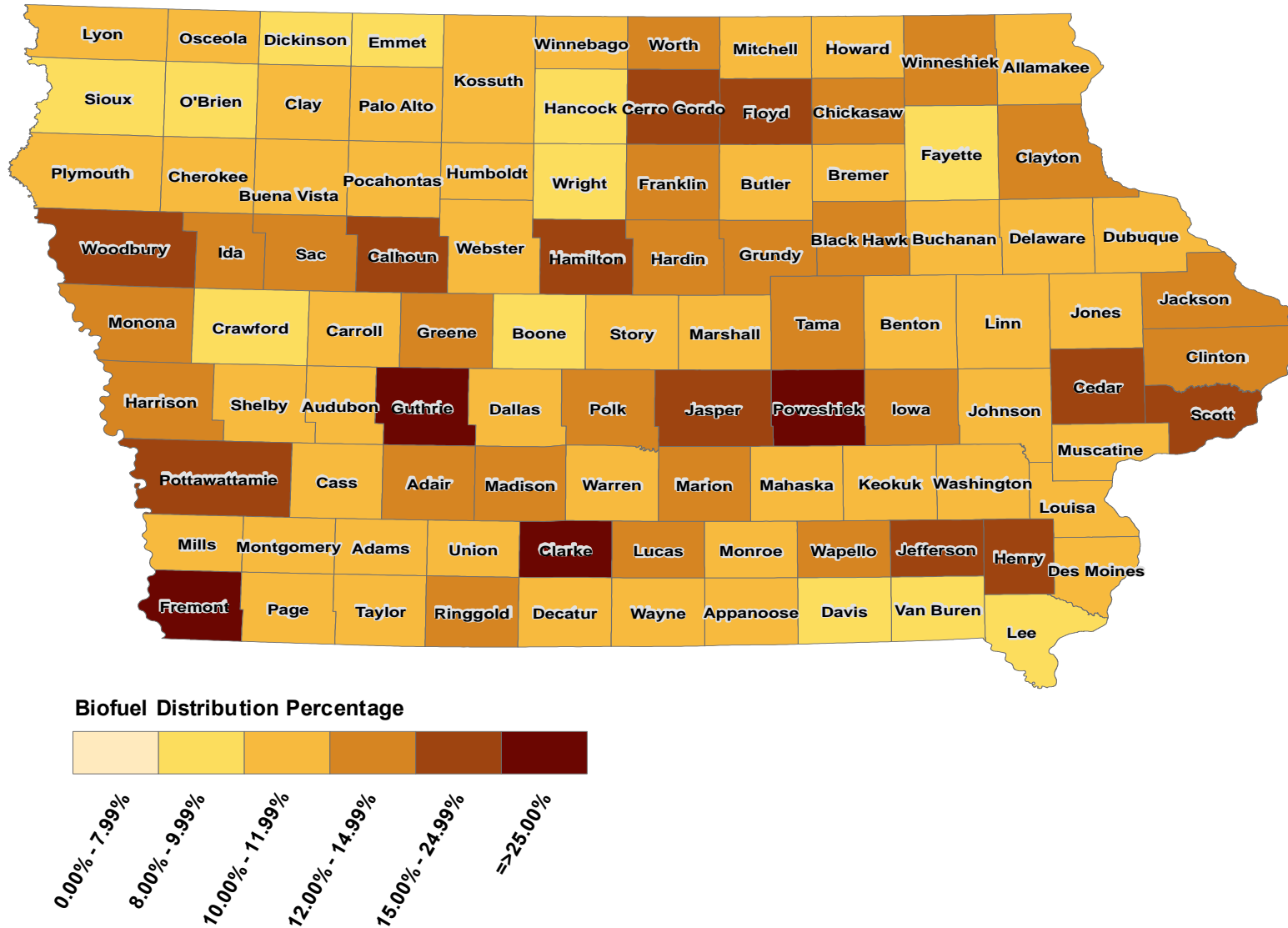
Source: 2017 Retailers Fuel Gallons Annual Reports



Source: 2018 Retailers Fuel Gallons Annual Reports

To further illustrate the variation in sales of biofuels among Iowa retailers, Figure 3 maps the biofuel distribution percentage calculated by county. These percentages are based on the total sales reported by retailers within each county who remitted the 2018 annual gallons report. All counties had a calculated biofuel distribution percentage of 8.0 percent or higher. Four counties (Clarke, Fremont, Guthrie, and Poweshiek) exceeded the 25 percent; eleven counties had pure biofuel sales comprising between 15.0 and 24.99 percent of total gasoline sales. Twenty-seven counties fell into the 12.0 to 14.99 percent category. Aggregated retail sales in ten counties fell in the 8.0 to 9.99 percent category, and forty-seven fell into the 10.0 to 11.99 percent category. Table 3 provides the total gallons of non-ethanol gasoline, ethanol, clear and dyed non-biodiesel, clear and dyed biodiesel, and pure biofuel gallons for all counties with at least five retailers reporting sales to the Department.

Figure 3. Biofuel Distribution Percentage by County for 2018



Source: 2018 Retailers Fuel Gallons Annual Reports

Table 3. Calendar Year 2018 Total Gallons by County

County	Number of Retailers Reporting	Gasoline Sales	Ethanol Sales	Clear and Dyed Diesel Sales	Clear and Dyed Biodiesel Sales	Pure Biofuel Sales	Biofuel Distribution Percentage
Adair	16	1,577,678	8,095,649	2,691,406	3,899,475	1,371,227	14.18%
Allamakee	16	1,026,861	5,204,653	2,495,267	1,028,528	683,549	10.97%
Appanoose	13	508,459	4,675,725	2,130,451	490,763	526,743	10.16%
Audubon	6	179,302	2,012,770	2,094,837	337,214	262,556	11.98%
Benton	21	1,682,402	8,398,231	3,751,101	2,040,621	1,115,754	11.07%
Black Hawk	64	8,380,984	47,373,559	5,950,034	14,337,434	7,465,003	13.39%
Boone	11	1,077,028	8,282,330	3,167,410	546,495	883,494	9.44%
Bremer	15	2,158,858	9,594,852	1,556,083	1,733,809	1,346,934	11.46%
Buchanan	13	1,416,813	7,560,312	4,177,735	1,643,505	969,983	10.81%
Buena Vista	26	1,068,712	8,868,390	3,735,178	451,722	1,063,036	10.70%
Butler	14	917,569	5,722,562	1,053,822	1,470,426	739,146	11.13%
Calhoun	14	351,885	4,656,692	1,453,065	3,443,652	926,409	18.50%
Carroll	29	1,537,438	8,631,492	11,231,372	297,070	1,042,567	10.25%
Cass	15	853,632	7,340,243	5,013,563	644,364	892,277	10.89%
Cedar	16	1,366,610	9,376,042	5,383,370	10,682,734	2,284,580	21.27%
Cerro Gordo	25	4,090,648	27,221,857	3,944,758	16,413,857	5,284,249	16.88%
Cherokee	16	676,449	4,326,269	3,541,826	488,722	536,146	10.72%
Chickasaw	13	1,388,944	6,039,272	5,763,110	3,830,771	1,101,995	14.84%
Clarke	9	1,220,210	6,431,950	1,521,992	8,191,873	1,917,562	25.06%
Clay	23	994,757	5,568,870	3,276,629	698,674	700,469	10.67%
Clayton	22	1,281,085	7,158,813	856,828	1,345,756	1,073,731	12.72%
Clinton	27	1,846,689	20,905,722	5,575,234	3,237,818	2,840,937	12.49%
Crawford	11	768,377	4,857,757	2,135,814	340,144	561,641	9.98%
Dallas	39	6,580,128	37,879,579	6,136,243	4,321,056	4,669,910	10.50%
Decatur	6	532,276	2,572,677	322,362	290,248	317,889	10.24%
Delaware	16	1,421,016	5,915,316	5,091,474	708,241	745,360	10.16%
Des Moines	16	1,175,933	11,703,020	1,040,450	103,313	1,308,426	10.16%
Dickinson	24	2,280,941	7,908,105	1,787,924	151,637	872,673	8.56%
Dubuque	57	11,751,430	73,445,453	7,821,968	22,839,883	9,405,429	11.04%
Emmet	8	361,494	3,117,223	318,345	88,472	332,853	9.57%
Fayette	13	866,509	5,059,688	787,162	452,321	556,477	9.39%
Floyd	13	696,203	7,442,404	2,852,773	8,855,177	1,970,250	24.21%
Franklin	14	436,844	4,348,548	4,513,298	880,054	658,884	13.77%
Fremont	6	241,261	4,359,430	1,249,049	10,157,498	1,901,549	41.33%
Greene	11	230,588	3,493,259	853,719	1,077,010	486,918	13.08%
Grundy	12	539,724	5,298,453	4,972,975	2,979,724	725,569	12.43%
Guthrie	12	388,988	5,122,054	904,536	7,427,999	1,722,780	31.26%
Hamilton	15	699,185	8,384,126	3,588,102	10,949,044	2,111,938	23.25%
Hancock	14	932,017	5,022,567	5,270,668	598,382	594,025	9.98%
Hardin	24	723,338	7,757,629	5,713,557	1,070,766	1,034,351	12.20%
Harrison	15	957,202	7,452,017	2,940,702	3,480,072	1,139,342	13.55%
Henry	11	855,214	9,068,265	2,085,780	6,027,017	1,899,505	19.14%
Howard	8	739,917	3,413,514	2,156,151	1,224,716	497,434	11.98%
Humboldt	12	649,212	4,734,929	3,803,183	554,295	615,022	11.42%
Ida	12	375,874	2,874,104	2,855,894	50,425	402,957	12.40%
Iowa	128	6,444,665	51,691,026	15,646,300	19,935,628	7,842,124	13.49%
Jackson	13	1,088,637	6,985,937	3,169,101	1,833,327	977,025	12.10%
Jasper	28	1,959,379	16,531,370	2,962,354	15,837,360	3,962,328	21.43%

Table 3. Calendar Year 2018 Total Gallons by County (continued)

County	Number of Retailers Reporting	Gasoline Sales	Ethanol Sales	Clear and Dyed Diesel Sales	Clear and Dyed Biodiesel Sales	Pure Biofuel Sales	Biofuel Distribution Percentage
Jefferson	11	746,432	4,287,688	1,071,119	3,209,285	811,711	16.12%
Johnson	54	7,731,403	45,971,704	2,725,159	3,138,589	5,595,720	10.42%
Jones	13	990,798	8,042,350	2,106,999	1,716,844	1,034,818	11.46%
Keokuk	7	359,942	2,716,269	1,470,939	341,929	323,291	10.51%
Kossuth	18	787,186	6,876,657	8,840,346	482,673	819,781	10.70%
Lee	20	1,663,580	10,276,627	1,322,140	703,082	1,088,665	9.12%
Linn	94	14,152,821	86,090,590	13,858,223	13,397,983	11,548,990	11.52%
Louisa	8	468,160	3,835,693	44,199	819,810	515,164	11.97%
Lucas	8	389,706	2,681,149	639,457	2,410,636	438,880	14.29%
Lyon	14	758,399	4,459,486	2,901,636	564,628	540,847	10.37%
Madison	11	863,601	8,044,826	19,732,217	2,087,294	1,172,202	13.16%
Mahaska	15	708,862	9,340,559	1,459,362	2,188,574	1,149,111	11.43%
Marion	21	1,713,270	13,120,286	5,000,384	1,603,851	1,797,262	12.12%
Marshall	22	2,490,273	12,701,161	2,226,148	2,373,206	1,572,638	10.35%
Mills	10	624,194	5,099,491	1,893,064	724,895	597,159	10.43%
Mitchell	9	619,259	3,550,147	412,076	425,693	484,768	11.63%
Monona	11	920,279	5,192,836	1,576,166	2,818,662	905,224	14.81%
Monroe	5	349,645	3,306,179	85,329	466,799	404,515	11.06%
Montgomery	9	628,268	3,962,431	2,705,684	538,846	538,011	11.72%
Muscatine	15	1,575,509	12,754,660	430,340	939,123	1,600,935	11.17%
O'Brien	16	789,270	5,471,812	1,541,373	225,751	612,226	9.78%
Osceola	8	227,979	2,420,485	3,214,234	62,635	296,433	11.19%
Other	7	562,548	2,519,137	989,223	236,438	288,481	9.36%
Page	6	374,977	4,699,375	951,681	677,833	555,940	10.96%
Palo Alto	10	599,581	3,123,112	2,372,180	96,945	384,040	10.32%
Plymouth	16	2,493,039	10,452,671	13,910,498	1,964,929	1,335,317	10.31%
Pocahontas	9	329,485	2,687,541	6,682,556	65,087	304,671	10.10%
Polk	191	34,079,471	196,268,737	25,459,401	42,241,981	28,059,217	12.18%
Pottawattamie	57	8,406,046	54,468,006	11,100,747	50,957,955	13,284,293	21.13%
Poweshiek	21	1,600,909	12,737,139	3,236,216	21,058,988	4,800,251	33.48%
Ringgold	6	139,508	1,245,228	425,642	483,123	206,798	14.93%
Sac	15	510,870	4,645,797	1,587,676	1,080,938	631,644	12.25%
Scott	91	6,012,589	88,505,697	5,086,030	57,367,695	17,721,447	18.75%
Shelby	14	485,963	4,567,431	2,351,336	1,254,734	594,968	11.77%
Sioux	22	1,965,425	8,620,739	8,010,066	1,000,639	1,013,748	9.58%
Story	42	4,717,073	34,832,274	1,112,230	3,592,248	4,213,724	10.65%
Tama	17	789,638	6,753,530	3,312,459	1,371,491	936,155	12.41%
Taylor	8	203,647	1,774,519	911,797	118,019	200,961	10.16%
Union	14	551,005	5,230,335	1,304,314	962,373	641,874	11.10%
Van Buren	5	149,550	1,149,460	679,061	152,471	127,048	9.78%
Wapello	24	1,966,433	14,573,697	421,869	3,518,438	2,102,485	12.71%
Warren	29	2,816,295	20,638,248	1,155,881	2,359,609	2,465,148	10.51%
Washington	14	1,674,515	6,558,716	3,801,356	1,787,961	940,757	11.43%
Wayne	9	445,181	2,009,152	1,097,592	1,293,916	278,996	11.37%
Webster	31	1,680,376	16,242,192	2,716,271	1,670,269	2,012,272	11.23%
Winnebago	16	522,486	4,051,596	1,861,450	490,572	533,429	11.66%
Winneshiek	19	1,236,465	8,840,117	7,530,865	1,483,148	1,242,830	12.33%
Woodbury	52	7,929,896	39,579,123	9,110,235	18,859,807	7,160,159	15.07%
Worth	8	415,913	4,499,214	626,643	1,492,187	654,777	13.32%
Wright	19	797,856	5,320,144	2,778,150	500,745	594,705	9.72%
Total	2,133	202,314,938	1,356,680,715	367,184,974	458,870,417	209,475,486	13.44%

Source: 2018 Retailers Fuel Gallons Annual Reports

Note: Other includes Adams County and Davis County where less than five retailers reported sales.

Appendix
Iowa Gasoline, Diesel, and Biofuel Sales for Calendar Year 2017(Revised)

Fuel Type	Locations	Gallons Sold	Petroleum/Diesel	Pure Biofuel
Gasoline (Non-Ethanol)	1,675	199,189,021	199,189,021	0
Ethanol				
E10	1,989	1,315,211,651	1,183,690,486	131,521,165
E15 Registered	180	26,082,334	22,169,984	3,912,350
E15 Flex Fuel	46	1,626,138	1,382,217	243,921
E20	84	1,175,587	940,470	235,117
E85	298	20,426,003	4,289,461	16,136,542
Total Ethanol	2,003	1,364,521,713	1,212,472,617	152,049,095
Total Gasoline and Ethanol	2,053	1,563,710,734	1,411,661,638	152,049,095
Ethanol Share	97.6%	87.3%		9.7%
Clear Diesel (Non-Biodiesel)	1,262	242,689,614	242,689,614	0
Clear Biodiesel				
Clear B1-B4	83	7,102,486	6,819,096	283,389
Clear B5-B10	316	66,101,929	61,078,183	5,023,747
Clear B11-B19	262	229,940,441	197,288,898	32,651,543
Clear B20-B49	194	85,089,153	68,071,323	17,017,831
Clear B50-B100	10	225,577	112,789	112,789
Subtotal Clear Biodiesel	507	388,459,586	333,370,288	55,089,298
Total Clear Diesel	1,417	631,149,200	576,059,902	55,089,298
Clear Biodiesel Share	35.8%	61.5%		8.7%
Dyed Diesel (Non-Biodiesel)	312	159,962,549	159,962,549	0
Dyed Biodiesel				
Dyed D1-D4	36	3,458,357	3,320,368	137,988
Dyed D5-D10	92	32,298,494	30,683,569	1,614,925
Dyed D11-D19	23	515,827	442,580	73,247
Dyed D20-D49	15	476,189	380,951	95,238
Dyed D50-D100	13	316,957	158,479	158,479
Subtotal Dyed Biodiesel	127	37,065,824	34,985,947	2,079,877
Total Dyed Diesel	338	197,028,373	194,948,496	2,079,877
Dyed Biodiesel Share	62.8%	18.8%		1.1%
Total Biodiesel	538	425,525,410	368,356,235	57,169,174
Total Diesel and Biodiesel	1,434	828,177,573	771,008,398	57,169,174
Biodiesel Share	37.5%	51.4%		6.9%
Total Fuel	2,083	2,391,888,306	2,182,670,037	209,218,270
Pure Biofuel Share of Total Gasoline and Diesel Sales				8.7%
Biofuel Distribution Percentage				13.4%

Source: 2017 Retailers Fuel Gallons Annual Reports
Revised January 2019