

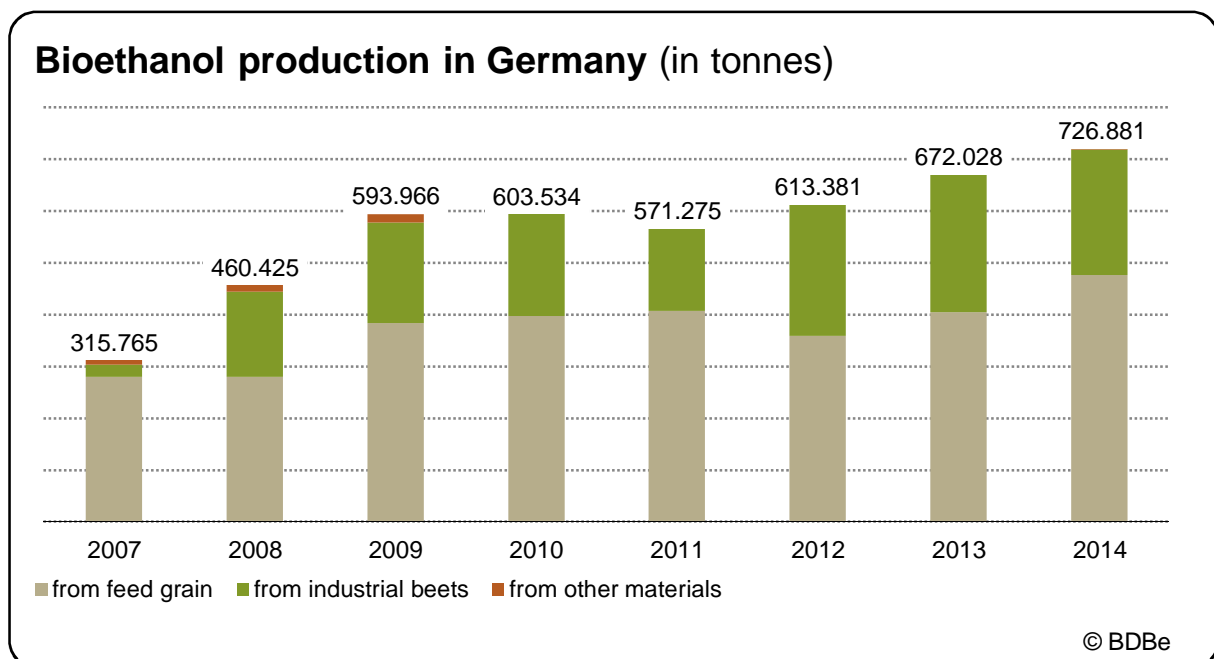
Date: July 2015

### Overview

German Bioethanol Industry Association (BDBe) gives a positive assessment of 2014: Bioethanol production in Germany rose by 8.2% to a total of 726,881 tonnes of bioethanol and consumption increased to a total of 1,299,289 tonnes (+1.9%). Consumption of the Super E10 fuel was higher than the previous year and amounted to 2,816,864 tonnes, which represents an increase of 55,514 tonnes (+0.6%). For 2015, the BDB<sup>e</sup> expects positive market development driven by the requirement to reduce greenhouse gas emissions which went into force on 1 January. This requirement will boost the competitiveness of bioethanol in preventing greenhouse gas emissions from fuels.

### 1. Production 2014

Bioethanol production in Germany once again increased. The bioethanol plants in Germany, which are mainly in the east and north of the country, produced a record quantity of 726,881 tonnes of bioethanol. Overall, production was up year-on-year by 54,853 tonnes, or +8.2%.



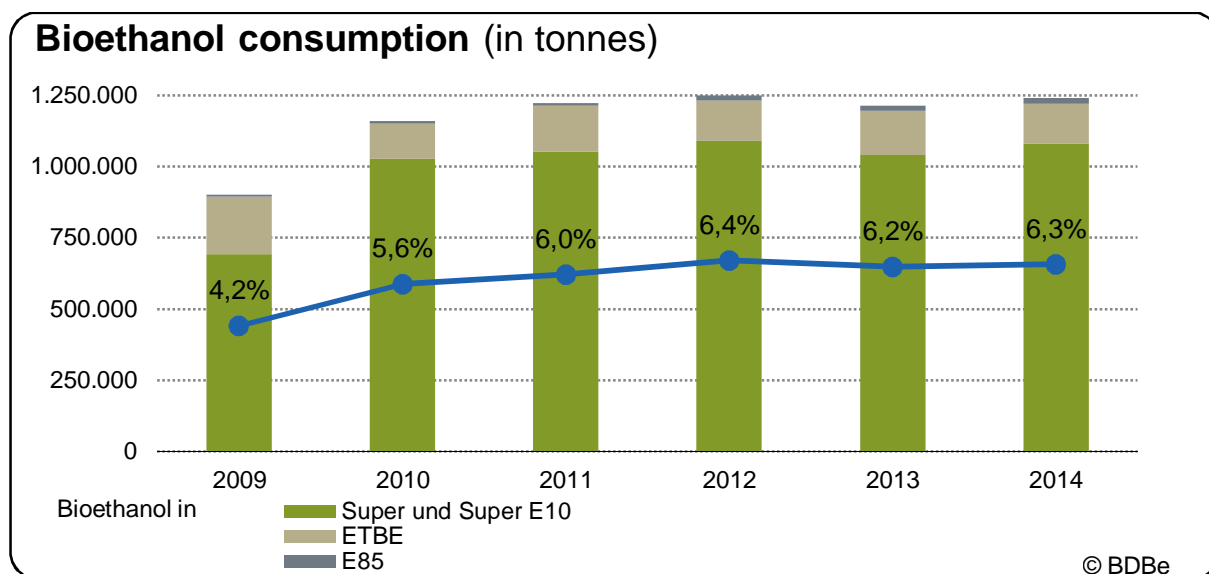
## Use of raw materials in 2014

Thanks to the excellent grain harvest in 2014, the amount of bioethanol produced from feed grain increased further to 475,962 tonnes (+17.5%). Bioethanol production from industrial beets was down from the previous year, reaching a level of 242,714 tonnes (-9.1%). Overall, approx. 2.6 million tonnes of industrial beets and 1.5 million tonnes of feed grain were processed to make bioethanol. Other materials, e.g. residues from the food industry, were used to make 8,205 tonnes of bioethanol.

Bioethanol production (in tonnes)					
Bioethanol	2011	2012	2013	2014	%
from feed grain	406,838	359,030	404,954	475,962	+17.5
from industrial beets	164,438	253,866	267,074	242,714	-9.1
from other materials	0	486	0	8,205	
<b>Total</b>	<b>571,275</b>	<b>613,381</b>	<b>672,028</b>	<b>726,881</b>	<b>+8.2%</b>

## 2. Consumption 2014

1.23 million tonnes of bioethanol were consumed in 2014. This represents an increase of 1.9% from the 2013 level of 1.21 million tonnes. Bioethanol is most commonly used in Germany as an admixture with petrol for E5 and E10 fuels, followed by use as a petrol additive called ETBE (ethyl tert-butyl ether). The amount of bioethanol used as an admixture rose by 4.0% to 1.08 million tonnes. Consumption of ETBE declined from 154,481 tonnes to 138,775 tonnes (-10.2%).

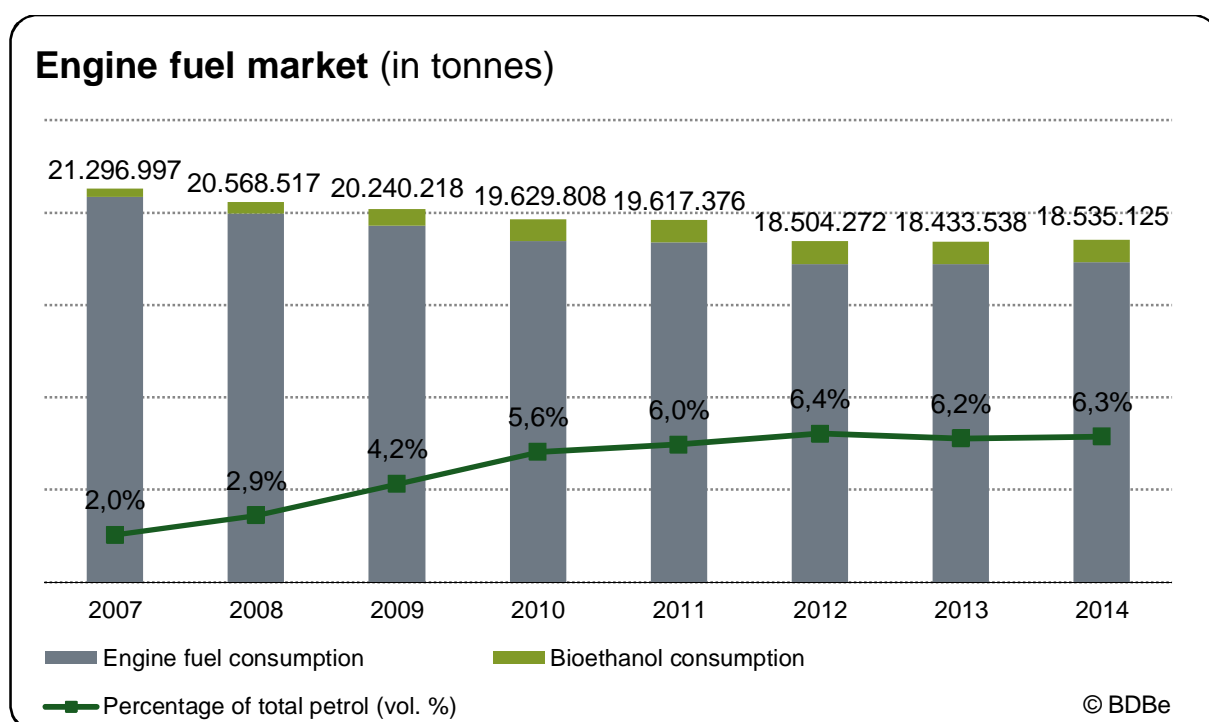


Sales of E85 fuel also fell significantly in 2014. Consumption of E85 decreased for the first time in 2013, and fell even lower in 2014 from 13,588 tonnes to 10,243 tonnes (-24.6%). The pure fuel is available at around 300 petrol stations in Germany. The tax concession for the

percentage of bioethanol in E85 will be eliminated in 2016, making the prospects for competitive sales of this fuel type uncertain.

Domestic consumption (in tonnes)						
	2009	2010	2011	2012	2013	2014
E85 (percentage of bioethanol 70-90%)	8,953	18,103	19,723	20,925	13,588	10,243

For the first time in many years, the German petrol market did not shrink and generated sales of 18.5 million tonnes, a small increase of 0.6%. Bioethanol accounted for 6.3% (vol.) of the total petrol market compared to last year's level of 6.2% (vol.).



In 2014, Super E5 was once again the most common fuel pumped at filling stations, with sales of around 14.6 million tonnes and a market share of nearly 80%. Sales of Super E10 rose 5.4% from 2013 to reach a total of 2.82 million tonnes, giving it a market share of 15.2% just three years after its introduction to the market. Sales of Normal+ and Super Plus+ fuels, which can contain up to 5% bioethanol, experienced a downturn.

Development of fuels on the petrol market (in tonnes)				
	2011	2012	2013	2014
Normal	199,533	36,788	4,240	2,011
Super Plus	2,404,534	1,109,554	1,063,504	1,061,242
<b>Super E10</b>	<b>1,817,206</b>	<b>2,618,505</b>	<b>2,761,350</b>	<b>2,816,864</b>
Super E5	15,186,559	14,721,990	14,593,179	14,646,518
<b>Engine fuel market share of E10</b>	<b>9.3%</b>	<b>14.2%</b>	<b>15.0%</b>	<b>15.2%</b>

### **3. Greenhouse gas saving**

Biofuels are required by law to reach minimum savings of 35% compared to fossil fuels. In 2014, German bioethanol production . just like biodiesel - achieved certified average minimum savings of more than 50% and thus already exceeds the legally required minimum savings for 2017.

#### **Outlook**

The BDBe expects the bioethanol market to develop positively in 2015. Growing sales of Super E10 and increasing percentages of additives in all types of fuels will allow German bioethanol to increase its market share in the future. This expectation is backed by rising petroleum prices which will boost biofuel's competitiveness vis-à-vis fossil fuels. The reduction in CO<sub>2</sub> emissions of bioethanol which increased in the first half of 2015 from 60% to 70% will have a particularly positive impact on meeting the legal requirement to lower carbon emissions of fuels. Starting on 1 January 2015, the CO<sub>2</sub> emissions of fuels must be reduced by 3.5%, by 4% as of 2017 and 6% as of 2018. Consumer uncertainty about whether Super E10 can be used in their vehicles must end. General warning signs on Super E10 filling pumps can no longer be justified. Of the more than 300 million cars with petrol engines in Germany, only a few still depend on Super E5.