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Biofuels Market Outlook in Poland 2015

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Report Highlights:
In 2014 Poland's total production amounted to 0.7 MMT of biodiesel and 0.14 MMT of bioethanol. For the last few years, imports of bioethanol from other EU countries increased significantly, while local production went down. There is a significant surplus of current domestic production capacity in both biodiesel and bioethanol markets in Poland and further investments in this area are not expected. For the year 2015, the National Indicative Target (NIT) for Poland was set at 7.1 percent. It will remain at the same level until 2016. In April 2014 Poland completed the process of RED (Renewable Energy Directive) transposition into national legislation.

General Information:

Policy

Poland, as a member of the European Union, has implemented EU law on biofuels with a number of regulations. The basic requirements of two EU directives: Renewable Energy Directive (RED) (2009/28/EC) and Fuel Quality Directive (2009/30/EC), were transposed into Polish legislation with two acts:

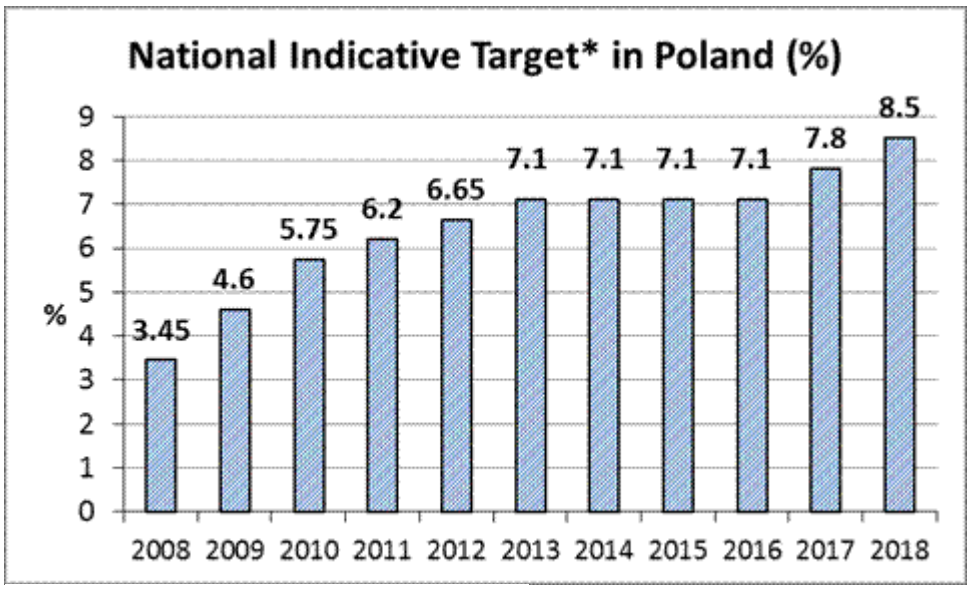
1. The Act of August 25, 2006. Bio-components and liquid biofuels. OJ 2006 No. 169, item. 1199 with further amendments.
2. The Act of August 25, 2006. On monitoring and controlling the quality of fuels. OJ 2006 No. 169, item. 1200 with further amendments.

The consolidated version of the act was published as: Announcement of the Republic of Polish Marshal of the Sejm on November 19, 2014 on the publication of the consolidated text of the Law on the monitoring and control of fuel quality. OJ 2014 item for the Act 1728 for OJ 2006 No. 169, item. 1200. The acts are available on web site: http://isap.sejm.gov.pl (Polish language)

RED obliges Member States to achieve a general target of 20 percent renewables in all energy used by 2020 and a sub-target of 10 percent renewables in the transport sector. EU Member States are required to meet a minimum target of 10 percent renewable energy share in the transport sector by 2020. Fuel suppliers are also required to reduce the greenhouse gas intensity of the EU fuel mix by 6 percent by 2020 in comparison to 2010.

For the year 2015, the National Indicative Target (NIT) for Poland was set at 7.1 percent. It will remain at the same level until 2016. NIT will grow up to 7.8 percent in 2017and to 8.5 percent in 2018. For 2012-2015 a reduction factor on the level 0.85 was set. In Poland demand for biofuels was created by policy and by implementation of the European Union law regulations. It has been not driven by free market demand. Consumption of biofuels in Poland will depend solely on the dynamics in the conventional fuels demand and directly in proportion to the changes in NIT.

Poland meets the NIT through consumption of biofuels sourced from domestic production and from imports - mainly from the European Union. The basic feedstock for biodiesel production is produced in Poland. The basic raw material for bioethanol production is domestic corn (80 percent of the feedstock input), and grain.



Source: Energy Regulatory Office (URE)

Companies which operate in the biofuel sector and want to be eligible for government support or count towards mandatory national renewable energy targets must comply with sustainability criteria. They can prove their compliance through national systems or so-called voluntary schemes which have to be confirmed by the European Commission. The most popular voluntary systems among Polish producers and distributors are Red Cert, ISCC and the KZR INIG System. The last one was invented, registered and administrated by The Oil and Gas Institute in Warsaw Poland.

EU member states were obliged to implement the full text of the two directives until the end of 2010. Until 2010 Poland met the obligation only partly as some EU requirements, mostly connected with sustainable development, were not met. The sustainable criteria required by the EU were introduced into Poland's legislation with amendments to the act on biofuels (August 26, 2006, Dz.U.2013, pos. 1164) published on April 8, 2014 (Act of March 21, 2014 amending the Act on components and liquid biofuels and other acts -Journal of Laws 2014 pos. 457). They came into force on May 9, 2014 but some of the provisions of the Act took effect from January 1, 2015 because of the time needed to create implementing regulations, and the time needed to market operators to adapt to the new regulations. The amendment completed the process of Poland's EU biofuel directives transposition.

According to the new regulations, biofuels produced from wastes and non-food products will get bonus on the basis of sustainable development. The share of biofuels in transport fuel domestic consumption will reach the level of 10 percent in the year 2020.

*) However reduction factor was set on the level 0.85 for 2012-2015, according to Art. 4 of the Act of 27 May 2011 amending the Act on monitoring and controlling the quality of fuel and other acts (Journal of Laws No. 153, item. 902) and the Council of Ministers of 13 August 2013 on the amount of coefficients reduction for the years 2014 and 2015 (Journal of Laws item. 1052),

The amended act contains detailed regulations concerning the certification of raw materials, components, reporting rules, etc., which are associated with the introduction of sustainability criteria and with establishing the mechanisms of verification. The list of the biofuel components has been expanded.

Biofuels of first generation are being produced in Poland currently - ethanol, added to gasoline, and FAME fatty acid esters - added to diesel fuel. The new rules will also cover such products as biogas (methane, propane, butane), alcohols produced from biomass - other than ethanol (methanol, butanol) and other substances. The new list brings a whole group of other new products, defined as liquid bio-hydrocarbons, first of all, hydro-refined oils, such as HVO (hydrogenated vegetable fat). On this list there are also synthetic fuels produced by the Fischer- Tropsch method. In addition, bio-components from non-food raw materials (mainly cellulose and lignocellulose and waste residues materials) are promoted. Their contribution to the implementation of NIT (National Indicative Target) is counted twice over traditional bio-components.

The Polish Minister of Economy submitted an application to the European Commission to withdraw a complaint against Poland from the European Court of Justice on the incomplete implementation of the Renewable Energy Directive. The amended law on biofuels and final implementation of sustainability criteria to polish legislation should ensure that Poland will avoid the penalty of EUR133, 000 per day of delay.

In May 2015 the EU executive asked Poland to ensure the correct implementation of RED with respect to sustainable rules set in European law. According to the EU Commission, Polish law treats sustainable biofuels and raw materials of different geographical origins differently in an unjustified manner, contrary to what is stated in the Directive. The Polish authorities are obliged to respond and the case is pending.

Biodiesel and bioethanol

General

In 2014 Poland's total production of bio-components diminished by 1 percent in comparison with 2013. A sharp decrease of 23 percent in bioethanol production was not offset by the intensively growing production of biodiesel (7 percent up to the level of 2013).
There is a significant surplus of current domestic production capacity in both biodiesel and bioethanol markets in Poland and further investments in this area are not expected. Capacity in biodiesel production is currently at around 70 percent and in bioethanol production it is below 30 percent.

Production and sales of biodiesel in Poland, (000) Metric Tons

Poland	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change

										2014/2013 (%)
Biodiesel										
Production	91.0	43.8	167.1	364.7	370.6	363.8	592.0	648.0	692.2	6.8
In-country sales of domestic production	51.7	17.3	157.1	355.7	361.3	356.1	553.4	548.6	488.7	(10.9)
Out of country sales of domestic production	9.9	21.6	1.5	0.0	3.9	15.8	17.8	22.7	14.8	(34.8)

Source: Energy Regulatory Office (URE)

Production and sales of bioethanol in Poland, (000) Metric Tons

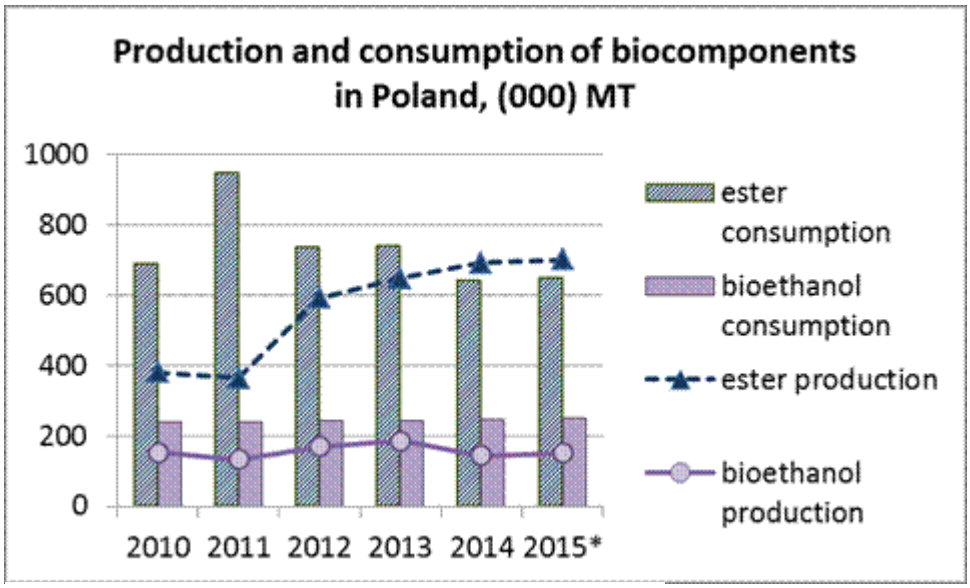
Poland	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change 2014/2013 (%)
Bioethanol										
Production	127.8	94.1	87.0	130.7	161.7	131.9	167.8	185.7	142.8	(23.1)
In-country sales of domestic production	38	62.6	70.4	56.2	51.3	86.8	98.8	37.7	19.5	(48.3)
Out of country sales of domestic production	93.3	1.7	5.6	24.4	73.9	21.4	3.2	0.0	0.0	0.0

Source: Energy Regulatory Office (URE)

Transport fuels and biofuels consumption in Poland (000) Metric Tons and the level of National Indicative Target (%)

	Gasoline	Diesel	Bioethanol	Biodiesel	NIT realized
2012	3,459	10,752	241	737	5.32
2013	3,310	10,058	241	742	5.67
2014	3,358.6	9,992	246	643	5.11

Source: Ministry of Agriculture and Rural Development



Source: Ministry of Agriculture and Rural Development

Biodiesel

For the past few years the number of biodiesel installations decreased while the installed capacity increased. These tendencies show the ongoing consolidation processes in the bio-components sector in Poland. In 2014 the number of units remained stable and amounted to 10 installations. This was the first year when production capacity decreased by 15 percent to 1 million metric tons (MMT). The drop was connected with modernization processes and the withdrawal of old technology installations. Despite the decrease in production capacity there is s by 8 percent till a thirty percent margin of unused capacities in biodiesel production sector. In 2014 Poland's total production amounted to 0.7 MMT of biodiesel, which exceeded the country's consumer demand by 8 percent.

Biodiesel production capacity and its use in the years 2013-14

Biodiesel	Number of units	Production capacity of installations, (000)MT	Production*, (000)MT	Use of production capacity (%)
2013	10	1,144	648	57
2014	10	968	692	72

Source: Agricultural Market Agency, * Energy Regulatory Office (URE)

Biodiesel, (000) MT

	Total Supply	Country Production	Total Import (EU and non EU countries)	Country production in total supply (%)
2012	737	592	145	80
2013	742	648	94	87
2014	643	692	0.0	108

Source: Ministry of Agriculture and Rural Development

Bioethanol

In Poland there are 11 bioethanol plants with a total production capacity of 511, 000 MT. In 2014 two bioethanol plants were closed. Total production capacity of Polish bioethanol industry decreased by 73, 000 MT (12.5 percent), to 511, 000 MT. Over the past years the decreasing tendency in bioethanol capacity production has been observed with a decreasing number of units and diminished total capacity. A great surplus of total capacity increases fixed costs for bioethanol producers. In 2014 the share of production in total production capacity amounted to less than 30 percent. Total production of bioethanol amounted to 143, 000 MT, 23 percent less than in 2013. Due to higher price competitiveness of imported bioethanol, Polish production met 58 percent of total supply. For the last few years, imports of bioethanol from other EU countries increased significantly, while local production went down.

Bioethanol production capacity and its use in the years 2013-14

Bioethanol	Number of units	Production capacity of installations, (000)MT	Production*, (000)MT	Use of production capacity (%)
2013	13	584	186	32
2014	11	511	143	26

Source: Agricultural Market Agency, * Energy Regulatory Office (URE)

Bioethanol, (000) MT

	Total Supply	Country Production	Total Import (EU and non EU countries)	Country production in total supply (%)
2012	241	168	73	70
2013	241	186	55	77
2014	246	143	103	58

Source: Ministry of Agriculture and Rural Development

<u>Biogas production</u>

Biogas production capacity and output

	No. of biogas plants (using agricultural feedstock)	Total capacity in MW	Agricultural biogas production in million m3	Electricty production GWh	Heat Production GWh
2013	42	Electrical power 49.28 MW Heat power 50.80 MW	112.38	227.88	246.56
2014	58	Electrical power 65.85 MW Heat power 67.74 MW	173.93	354.92	373.70

Source: Agricultural Market Agency

In 2014 biogas from agricultural raw material was produced in 58 biogas plants with a total installed capacity of 134 MW, belonging to 50 companies. Polish biogas plants are designed to produce both electricity and electrical energy to produce heat. The most common plants in Poland are small electricity or electro-heat biogas plants sourcing from landfill sites. They account for more than half of this type of installation. In 2011 the share of electricity from all biogas in the balance of total electricity generated from renewable sources amounted to 3.4 percent.

Number of energy companies and their installations

	2011	2012	2013	2014
Number of registered companies	4	21	35	50
Number of installations	8	28	42	58

Source: Agricultural Market Agency

In order to support the production of energy from renewable sources (implementation of Directive 2001/77/EC of the European Parliament and of the Council of September 27, 2001) Poland has approved so-called green certificates. Green certificate, or certificate of origin, is a document that confirms the origin of renewable energy sources. The system of green certificates has been in force in Poland since 1 October 2005. This mechanism promotes all sources of biogas regardless type of technology. Energy produced from landfills or sewage sludge brings manufacturers the same revenue as energy from agricultural raw materials. Under these conditions agricultural biogas is uncompetitive in relation to almost costless biogas from municipal waste and sewage. The final shape of Poland's regulations, aimed at supporting green energy, was given by in the Act on Renewable Energy Sources. According to the Act system of green certificates will be replaced by the auction system from January1, 2016.

End of Report