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Lithuania - Biofuel Market Outlook 2016.

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Biofuels

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Report Highlights:

It is estimated that in 2015 the share of Renewable Energy Sources (RES) in the final energy consumption in Lithuania amounted to 25 percent, with biomass (wood and wood wastes) being the largest contributor. Lithuania meets the National Indicative Target of use of biofuels in transport through consumption of biofuels sourced from domestic production and from imports, mainly from the European Union. Rapeseed oil, the basic feedstock for biodiesel production, is produced in Lithuania. Please Note: This report is to be read in conjunction with the Annual 2016 EU28 Consolidated Report on Biofuels (Biofuels Annual_The Hague_EU-28_6-29-2016) and provides further information on Lithuanian market of biofuels.

General Information:

Lithuania is now reliant on energy-generating raw materials that are imported from Russia but is actively developing renewable energy sources (RES) from biomass, wind and geothermal sources to gain energy independence again. In December 2009 Lithuania decommissioned the Ignalina Nuclear Power Plant which was the condition for EU accession as that facility employed the same nuclear technology as the Chernobyl facility. That facility previously satisfied 70 percent of the country's electricity demand.

Change in energy supplies in Lithuania

	2009	**2014**
Natural gas	25.1	29.4
Oil products	28.7	35.9
Coal	1.8	2.8
Electricity	0	9.3
Other local sources	2.6	4.4
Renewable energy sources	**12.1**	**23.9**
Nuclear	29.7	0

Source: Lithuanian Energy Institute (LEI)

Tables below present use of RES in heating and cooling, production of electricity, and use in the transport sector in 2013 and 2014. Please note that the only available official data on production and use of RES in Lithuania were published by the Ministry of Energy as a biannual report on RES submitted to the EU in 2015 covering 2013 and 2014.

Share of RES in energy supplies in Lithuania (%)

	2013	2014
RES in heating and cooling	37.7	41.6
RES in electricity production	13.1	13.7
RES in transport	4.6	4.2
Overall share of RES	22.9	23.9

Source: National Report on RES to the EU, 2015

Production of electricity from different sources of RES (MW)

Type of RES	2013	2014
Hydro	876	877
Wind (onshore)	279	288
Biomass	59	66
• Solid biomass	43	46
• Biogas	16	20
Total	1,282	1,300

Source: Source: National Report on RES to the EU, 2015

Use of RES in heating and cooling (ktoe)

Type of RES	2013	2014
Biomass	945	1,000
• Solid biomass	939	991
• Biogas	6	9
Total	946	1,000

Source: Source: National Report on RES to the EU, 2015

Use of different sources of RES in transport sector (ktoe)

Type of RES	2013	2014
Bioethanol	6	6
Biodiesel	51	54
Renewable electricity	1	1
Total	59	61

Source: Source: National Report on RES to the EU, 2015

Mandatory EU targets for renewable energy

In the National Energy Strategy (NES), the goal concerning renewable energy is in line with EU Directive 2009/28/EC. Lithuania should achieve by 2020 the mandated target of energy from renewable energy sources (RES) of 23 percent of gross energy consumption. In 2014 the share of RES in the final energy consumption amounted to 23.9 percent, with biomass (wood and wood wastes) being the largest contributor. It is estimated that in 2015 the share of RES in the gross energy consumption reached 25 percent. According to the NES, Lithuania holds huge potential of wind and hydro energy.

Share of RES in total energy consumption and transport

	2010	2011	2012	2013	2014	2015*	2016*
Biofuels in total energy consumption	19.8	20.2	21.7	22.9	23.9	25.0	25.0
Biofuels in transport	3.6	4.3	5.6	5.3	6.0	n/a	n/a

Source: Eurostat; *FAS Warsaw estimate

For 2016 the National Indicative Target (NIT) for use of biofuels in transport for Lithuania was set at 8.0 percent. NIT will grow up to 9.0 percent in 2017and to 10.0 percent in 2018. Lithuania meets the NIT through consumption of biofuels sourced from domestic production and from imports, mainly from the European Union. Rapeseed oil, the basic feedstock for biodiesel production, is produced in Lithuania. The basic raw material for bioethanol production is rye.

Biofuels

In Lithuania annual fuel consumption amounts to 200-250,000 MT of gasoline and 1.0 to 1.2 million

MT of diesel per year. Lithuania produces two types of biofuel: biodiesel and bioethanol. The main feed stocks for biodiesel and bioethanol production are rape seed and rye. In Lithuania there are two biodiesel plants with capacity of 100,000 MT and 30,000 MT. It is estimated that in 2015 production of biodiesel amounted to 70,000 MT, 9 percent more over the previous year. Annual consumption of biodiesel in 2015 is estimated at 64,000 MT. The remaining amount of biodiesel is exported.

In 2015 annual production of bioethanol is estimated at 12,000 MT. In 2014 one of two plants producing bioethanol in Lithuania went bankrupt. In 2015 total bioethanol consumption is estimated at 11,000 MT.

Bio-fuel production and consumption

Year		2011	2012	2013	2014	2015*	2016*
Production (000 MT)	Biodiesel	43	58	59	64	70	75
	Bio-ethanol	23	19	16	13	12	12
	Total	66	77	75	77	82	87
Consumption (000 MT)	Biodiesel	40	56	56	62	64	66
	Bio-ethanol	15	13	10	11	11	11
	Total	55	69	66	73	75	77
Bio-fuel share in total fuel consumption (percent)		4.3	5.6	5.3	6.0	6.1	6.3

Source: Energy Balance; Lithuanian Department of Statistics.
FAS Warsaw estimate

Biofuel production in Lithuania started in 2002 and has expanded continuously since then. The share of biofuel as a percentage of total fuel consumption has been increasing as well, starting in 2005 at less than 0.5 percent to reach over 6 percent by 2015.

A reduction of prices for regular fuels in 2014 made biofuels less competitive. In addition there is still only a small number of bio-fuel using vehicles in the country. The harsh winter conditions and very low temperatures in Lithuania make use of high ethanol blends dangerous to car engines. A third reason is market limitations. Lithuanian blending companies can purchase bio-components from other EU producers who offer more competitive prices. Therefore, local producers are finding it a challenge to sell their higher cost bio-fuels.

Policy

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

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. 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. According to the new regulations, biofuels produced from wastes and non-food products will get bonus on the basis of sustainable development.

End of Report