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Report Highlights:

The Czech Republic implemented the EU legislation and has set targets for greenhouse gas (GHG) savings, for the share of biofuels and renewable electricity in transportation on total consumption, and blending mandates. There are sufficient production capacities and feedstock available to meet those targets. However, a recent increase in the excise tax might challenge meeting those goals in 2017.

General Information:

I. Executive Summary

The long term goals of the Czech energy strategy as defined in the State Energy Conception of the Czech Republic 2015 are: safety, competitiveness and sustainability. The Czech biofuel policy reflects that, being also significantly influenced by the European Union policy and regulations. Major energy sources and percent share of total Czech electricity generation based on installed capacities in 2014 are: coal – 50 percent, nuclear – 20 percent, hydropower – 10 percent, solar – 9 percent, natural gas – 6 percent, biogas – 4 percent, wind – 1 percent.

The target set by the European Commission under Directive 2009/28/EC is to reach 13 percent share of energy from renewable sources against gross final energy consumption and a 10 percent share of renewable energy sources in transport by 2020. The Czech Republic in general does not have significant problems in meeting its targets, although in 2010 they did not fulfil the target to replace 5.75 percent of energy content of fossil fuels consumed in transportation with biofuels. Blending of biofuels with fossil fuels has been mandatory in the Czech Republic since September 1, 2007. Recent changes in excise tax legislation might challenge fulfilling the targets in 2017, as they temporarily increase prices of biofuels and make them less competitive.

The Czech Republic has sufficient capacities for biofuel production but they are currently underused. Feedstock for biofuel production is mostly local. Czech producers use locally grown rapeseed for biodiesel and sugar beet and grains as a feedstock for ethanol production. There is exportable surplus of feedstock available.

II. Policy and Programs

Being an EU member, Czech Republic creates biofuels policy in connection with that of the European Union (EU). The regulatory framework for the EU biofuels and biomass market consists of the EU Energy and Climate Change Package (CCP) and the Fuel Quality Directive (FQD). In the Renewable Energy Directive (RED), which is part of the CCP, specific sustainability requirements are laid out for liquid biofuels. These include minimum greenhouse gas emissions reductions, land use and environmental criteria as well as economic and social criteria.

For more details on the EU biofuels policy, situation and market please refer to the EU-28 Biofuels Annual 2016 report in our GAIN system available at http://gain.fas.usda.gov.

The Czech Republic transposed the European Renewable Energy Directive (RED) into Act on Air Protection no. 201/2012 and to Government Directive no. 351/2012. Goals stemming from that legislation are:

	Obligation to reduce GHG emissions by (%)	**Minimum GHG emissions savings in biofuels (%)**	**Share of biofuels and renewable electricity in transportation on total consumption (% energy content)**

2014 - 2016	2	35	5,71
2017 - 2019	4	50	8,00
2020	6	60	10,00

Act on Air Protection no. 201/2012 also sets mandates for individual biofuels. It is 6 percent vol. for biodiesel and 4.1 percent vol. for bioethanol.

As a result of RED implementation, domestic production of biofuels gradually grows, as well as trade (mainly intra EU). In the Czech Republic local production capacity and feedstock are still not fully used up, therefore no significant third-country imports are foreseen, unless price driven. Many of the producers use ISCC certification.

The Czech Republic introduced tax incentives for high percentage biofuels, as they are not price competitive on the market with fossil fuels. The situation, however, recently changed:
The first national Multi-year "Program of Supporting Further Utilization of Biofuels in Transportation" made possible the pure biofuels and high-percentage mixtures of biofuels in transportation in the Czech Republic (e.g. B30, B100, E85, E95, etc.) to be partially or fully exempted from excise taxes. The program was implemented into the Act on Excise Tax. This program expired at the end of June 2015.

The new, second national "Multi-year Program of Supporting Further Utilization of Biofuels in Transportation" for 2015 – 2020 was approved with delay. The plan includes a temporary increase in the excise tax in order to compensate for the period of July 1, 2015 to December 31, 2015, which was not covered by any approved plan but the tax exemption was still in place. The increased excise tax for biofuels is now in place for the period of January 1, 2016 to June 30, 2017. The levels of excise taxes for individual biofuels are described in the tables below.

Original lower excise tax for the period of July 1, 2017 to December 31, 2020 (CZK/liter and CZK/MWh for biogas)

	FAME B100	Vegetable Oils	SMN B30	Ethanol E85	Ethanol E95	SMN HVO/ HEFA 30	Biogas
Tax	2,190	1,610	8,515	10,970	0	7,665	0

Increased excise tax for the period of January 1, 2016 to June 30, 2017 (CZK/liter and CZK/MWh for biogas)

	FAME B100	Vegetable Oils	SMN B30	Ethanol E85	Ethanol E95	SMN HVO/ HEFA 30	Biogas
Tax	4,590	4,590	9,265	10,230	0	7,665	0

Consumption of fossil fuels for transportation in the Czech Republic in the last few years has picked up along with the improving economic situation. Deliveries on the market as published by the Czech Ministry of Industry and Trade were:

	2007	2008	2009	2010	2011	2012	2013	2014
Gasoline (000 MT)	2,098	2,070	2,041	1,858	1,794	1,669	1,570	1,577
Diesel (000 MT)	4,072	4,159	4,093	3,980	4,100	4,087	4,144	4,359

Source: Ministry of Industry and Trade, www.mpo.cz

Projection of fuel use prepared by the Czech Association of Petroleum Industry and Trade (www.cappo.cz) expects that the share of oil based fossil fuels in transportation will decrease to 92 percent in 2020 and to 78 percent in 2030. Consumption of gasoline in 2020 is projected at 1,811,000 MT and diesel consumption at 4,286,000 MT.

III. Ethanol

In 2015, the Czech Republic produced 104,715 MT of bioethanol. The main feedstock used in its production was sugar beet (55 percent), corn (45 percent). Production capacities involve 4 ethanol plants that could together produce nearly 300,000 MT of bioethanol annually. In 2015, as well as in 2014, only 2 of them were operating.

Year	**2011**	**2012**	**2013**	**2014**	**2015**
Production (MT)	54,412	102,195	104,488	104,112	104,715
Consumption (MT)	78,961	89,592	86,432	119,042	119,548

Source: Ministry of Industry and Trade, www.mpo.cz

E85 consumption in 2014 totaled 23,288 MT. In 2015 it dropped to 12,329 MT. Recent increase in biofuel excise taxes increased price of E85 resulting in a significant drop in demand. Many distributors drastically reduced their E85 stocks and stopped offering this high-percentage biofuel. A map of gas stations, where the E85 is available can be found at http://www.bioethanole85.cz/cerpaci-stanice-e85.

IV. Biodiesel

Production capacities for biodiesel consist of 5 major plants and a few small scale ones, totaling at slightly over 400,000 MT per year. In 2015 only 3 of them produced biodiesel. Czech biodiesel production in 2015 reached 167,646 MT, with rapeseed the main feedstock.

Year	**2011**	**2012**	**2013**	**2014**	**2015**
Production (MT)	210,092	172,729	181,694	219,316	167,646
Consumption (MT)	245,216	242,267	228,084	300,413	277,268

Source: Ministry of Industry and Trade, www.mpo.cz

A slight decline in production and consumption in 2015 as seen in the previous table is mainly caused by the increase in excise taxes.

V. Advanced Biofuels

There is one plant (Oleo Chemical) producing biodiesel from animal fat from a rendering plant in the Czech Republic. Its capacity is reported in the media at 62,000 MT per year. The production is

estimated to be lower than what the full capacity would allow. It has been used for export to other European member states so far.

VI. Biomass for Heat and Power

Use of biomass for renewable electricity and heat production has been increasing, with corn silage and agricultural waste the main feedstock. According to data published by the Czech Ministry and Trade, deliveries of electric energy produced from biomass to the grid reached 1,120,003.4 MWh in 2014. Heat production from biomass amounted to 20,368,960.5 GJ in 2014.

Biogas

Biogas has good potential in the Czech Republic and the production and number of biogas stations keep rising. Agricultural biogas stations produce approximately 88 percent of biogas in the Czech Republic.

Year	No. of biogas plants	Total capacity in MW	Electricity production GWh	Feedstock
2015	507	358	83,887	Corn silage, hay and straw, industrial and municipal waste

Source: Czech Biogas Association, www.czba.cz

The figures in the table above are as of December 31, 2015. Currently there are over 600 biogas stations, however this number includes also those that have not been through a trial run yet. Under the Rural Development Program 2014-2020 it is possible to receive support for building biogas stations and facilities producing heat and using cogeneration.

Electricity produced from biogas in the Czech Republic reached 2,583,362.5 MWH in 2014. Heat produced from biogas reached 3,964,548.0 GJ. Data for 2015 were not yet available in time of preparation of this report. Increase is, however, foreseen for 2015, as well.

Wood Pellets

Wood pellets have been popular in the Czech Republic, mainly among the producers. Their production has been growing, since they can be successfully exported (e.g. to Austria). Producers use mostly German certification, because of increased export possibility.

Year	Production (000 MT)/ out of which EN plus certified	Import (000 MT)	Export (000 MT)	Delivered to domestic market (including stocks) (000 MT)
2007	60	0	46	14
2008	135	0	112	23
2009	158	4	134	28
2010	145/12	13	111	50
2011	148/67	19	111	56
2012	157/93	18	128	47
2013	163/124	36	131	68

2014	199/?	25	139	86

Source: Ministry of Industry and Trade, www.mpo.cz

The share of EN plus certified pellets on the total wood pellets production has been increasing. The increasing trend in production and exports is expected to continue, consumption has been stagnating (mainly in households, because coal is cheaper and the pellet heaters can burn it as well). According to the Association for Biofuel producers, there is potential for U.S. Pellets on the Czech market.

VIII. Notes on Statistical Data

N/A

End of report.