



Legal Framework for Bioenergy in Germany

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THE FUTURE OF BIOFUELS IN LITHUANIA: ISSUES AND OPPORTUNITIES

Vilnius, November 8th 2007



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Overview



- Biofuel Quota Act
- Act on granting priority to renewable energy sources (Renewable Energy Sources Act)
- Market Enhancement Programme
- Results



Biofuel Quota Act



- Compulsory quotas of biofuels to be mixed with fossil fuels by refiners from the start of 2007
- Petrol: minimum 1,2 % (2007) to 3,6 % (from 2010)
- Diesel: minimum 4,4 % (from 2007)
- Total: minimum 6,25 % (2009) to 8 % (from 2015)
- Tax background: Petrol: 65 Cent; Diesel 47 Cent (netto)
Increasing taxes on biofuels

Year	Biodiesel	Plant Oil	Bioethanol (E85)
2007	9	0	-
2008	15	10	-
2009	21	18	-
2010	27	26	-
2011	33	33	-
from 2012	45	45	until 2015 free



Renewable Energy Sources Act



Forerunner: Electricity Feed Act (since January 91)

First RESA in April 2000, amended version since August 04:

- Feed-in tariffs: Obligation for grid system operators to buy electricity from renewable energy sources and pay fixed tariffs for 20 years
- Degression: The 20-year-fixed level of remuneration for newly constructed plants is reduced annually
- Shared burden principle: The costs are apportioned to all grid system operators across the country and passed on by them to the electricity customers (2006: 0,72 €Cent/kWh)
- Equalisation for special companies: apportionment limited to 0,05 €Cent/kWh for companies with electricity demand of more than 10 GWh or electricity costs of more than 15 % of GAD



Renewable Energy Sources Act



Ordinance on Generation of Electricity from Biomass (Biomass Ordinance)

- Substances that shall be considered biomass
- Technical processes for generating electricity from biomass that fall within the Act's scope of application
- Environmental standards that must be met in the generation of electricity from biomass



Renewable Energy Sources Act



Feed-in tariffs in €Cent per kWh_e for electricity from biomass

Electric power in kW	Basic*
Up to 150	10,99
from 150 to 500	9,46
from 500 to 5.000	8,51
from 5.000 to 20.000	8,03

1 Litas \cong 29 €Cent

*for plants started in 2007 (2004: 11,5)



Renewable Energy Sources Act



Feed-in tariffs in €Cent per kWh_e for electricity from biomass

Electric power in kW	Basic	Bonus for using special resources *
Up to 150	10,99	6,0
from 150 to 500	9,46	6,0
from 500 to 5.000	8,51	4,0
from 5.000 to 20.000	8,03	---

* energy crops, manure, draff, wood residues from forestry and LSC



Renewable Energy Sources Act



Feed-in tariffs in €Cent per kWh_e for electricity from biomass

Electric power in kW	Basic	Bonus for using special resources	Bonus for using heat energy (dep. on amount)*
Up to 150	10,99	6,0	max. 2,0
from 150 to 500	9,46	6,0	max. 2,0
from 500 to 5.000	8,51	4,0	max. 2,0
from 5.000 to 20.000	8,03	---	max. 2,0

* Example: 50% of the produced heat used → only 1 €Cent per kWh_e



Renewable Energy Sources Act

Feed-in tariffs in €Cent per kWh_e for electricity from biomass

Electric power in kW	Basic	Bonus for using special resources	Bonus for using heat energy (dep. on amount)	Bonus for using innovative technology*
Up to 150	10,99	6,0	max. 2,0	2,0
from 150 to 500	9,46	6,0	max. 2,0	2,0
from 500 to 5.000	8,51	4,0	max. 2,0	2,0
from 5.000 to 20.000	8,03	---	max. 2,0	---

* Prerequisite: heat use; Technologies: e.g. wood gasification, dry fermentation, gas turbines, steam engines, ORC, Stirling engines



Market Enhancement Programme



Main instrument for the heat market (law in preparation)

First issued in August 99 (100 Mio. €) 2007: 213 Mio. € (also solar thermal)

Financial grants for:

- Applications to produce heat from biomass
 - Wood pellet-ovens, -boilers and -combination boilers
 - Log wood boilers
 - Wood chip boilers
- Innovations with regard to emission reduction and efficiency improvement in bioheat
- Distribution systems for heat from biomass

Small applications (up to 100 kW) receive direct grants, middle-size and big-size applications receive partial deletion of loans

Results

Shares of total primary energy consumption

- 0,8 % electricity from biomass (0,4 % from solid biofuels)
- 2,0 % heat from biomass (1,5 % in households)
- 1,0 % fuels from biomass (0,7 % from biodiesel)

but

- 19 % of renewable electricity is from biomass
- 86 % of renewable heat is from biomass
- 100 % of renewable fuels are from biomass

in a country with a population density of 231 inhabitants/km²





Thanks for your attention!



Any questions?

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