



RENEWABLE ENERGY POLICY REVIEW

POLAND

Being the largest hard coal producer in the EU, Poland's energy import dependency is among the lowest in the EU. Hard coal plays a significant role in the Polish energy mix, with very large shares in electricity generation and also in primary energy supply, resulting in high emissions and CO₂ intensity. Poland exports a significant share of its coal production. The use of other energy sources (oil, gas and renewable energy) has also been increasing. There are public concerns over security of supply, with Russia being by far the major supplier of gas and oil for Poland. Hydropower is the dominant renewable energy source in Poland. The installed capacity at hydropower plants is growing steadily, particularly at small-scale plants. Poland has a significant potential especially in term of biomass due to – among other things – its high share of good arable land per capita.

KEY FIGURES

- The **share of RES in total primary energy balance** was of 6.5% in 2007.
- The **share of RES in the gross final energy consumption** was 7.2% in 2005.
- The **share of RES in the gross electricity consumption** was 3.48% in 2007¹
- The share of biofuels in transport fuels in 2007 was 0.68% (estimates)
- Poland's dependence on external energy supplies is of about 18.4% in 2005.

Technology specific figures

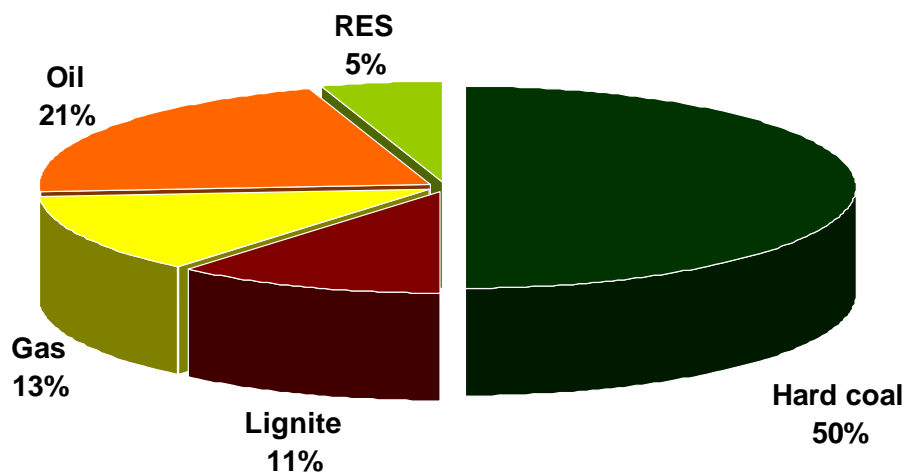
- **Installed capacity for RES-Electricity in 2007 amounted for biomass** to 1523.8 MW (co-firing excluded) that produced 5429.3GWh of energy.
- **43.3% of RES electricity** was provided by hydropower plants, 39.2% came from co-firing, the rest being produced by wind power (9.6%), biogas (3.7%) and other solid biomass (0.2%). **Wind energy** production almost doubled in 2007, compared to 2006: 521.6GWh of electricity

¹ EurObaromet'er

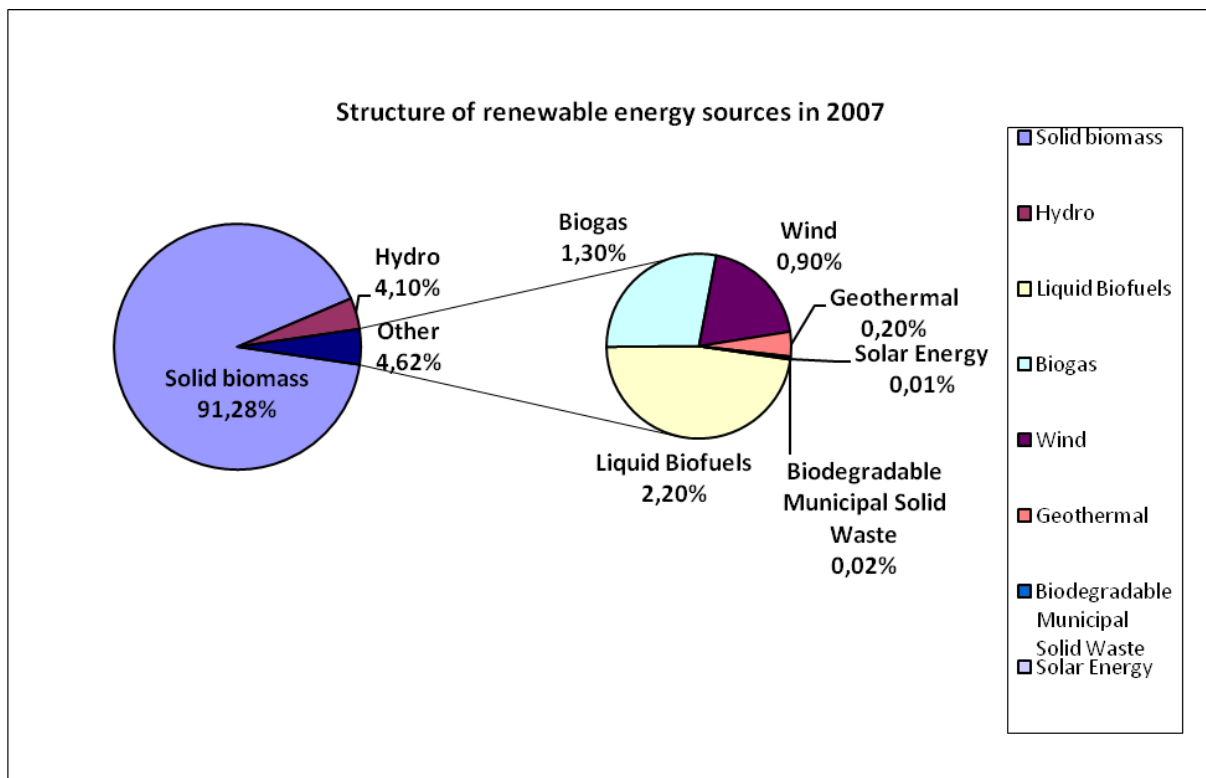
were delivered from an installed capacity of some 390 MW. However, some problems, such as the difficulty to access the grid, might halt this positive trend in the future.

- **The other RES installed capacity** in 2007 (2008) amounted to 936.4(934.8)MW for hydropower, 258.9(255.4)MW for biomass, and 52.7 (45.7)MW for biogas.
- Around 5,126TJ of **RES Heat** were produced in 2007. The majority of this came from solid biomass (3,972TJ). Excluding the use of biomass in low efficiency heating stoves, the **total biomass primary production** in 2007 was 190,510TJ.
- **Geothermal energy** production of heat has been stable at some 110MWth, thus providing energy for 5 district heating networks. Nevertheless, in 2007 a slight decrease in the production (439TJ) was registered due to technical problems. About 10,000 heat pumps were installed in Poland in 2007 with 133MW of capacity that produced 750TJ of heat.
- **Biogas and solar energy** have also grown, reaching a production of 700TJ and 15TJ respectively.
- 37.3 thousand tons of biodiesel and 70.8 tons of bioethanol (some 10% of which were imported) were produced in 2007, thus registering a decrease compared to 2006 figures: 44.9 thousand tons of biodiesel and 84.3 tons of bioethanol. The main reason for this reduction is a lack of appropriate and stable legal and fiscal enforcements.

Structure of primary energy use in 2005



Primary energy use – 3034 PJ, within 208.7 PJ (6.5%) from RES



Source: IEO EC BREC

RES POLICY

RES TARGETS

Mandatory targets set by the Directive on the Promotion of the use of energy from renewable sources

- 15 % share of RES on the final consumption of energy in 2020.
- At least 10% share of renewable energy in final consumption of energy in transport by 2020.

Indicative Target set by the RES- electricity European Directive from 2001² (Accession Treaty)

- 7.5% Share of RES on gross electricity consumption by 2010.

² Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market. Currently in force, sets targets up to 2010.

Indicative Target set by the European Biofuels Directive from 2003³

- Biofuels consumption of 5.75% of petrol and diesel use for transport in 2010.

National Commitments

Targets for renewable energy were set in the Development Strategy of Renewable Energy Sector (endorsed by the Parliament in 2001) and amount to 7.5 % RES in the primary energy balance by 2010 and 14% by 2020.

The target of 7.5% RES-electricity by 2010 set at national level is actually smaller than the target set by the EU, as it refers to electricity turnover in distribution companies and not to gross electricity consumption as in the directive. The difference is approximately 38 TWh, which means that the national target is lower by 30%.

Support for Electricity

The revised Polish Energy Law Act, which was adopted on 4 March 2005, introduced a range of rules which strengthen the mechanisms for promoting the development of renewable energy.

Purchase obligation

There is an obligation for enterprises which sell electricity to end-users to purchase electricity produced from renewable sources.

Green Certificates

The support mechanism consists of the obligation imposed on energy companies selling electricity to end users to obtain and present for redemption to the Energy Regulator a specified number of certificates of origin of energy generated from renewable energy sources, or to pay a substitution charge of 248.46 PLN/MWh (61.6 EUR). These certificates can be traded either on bilateral basis or on the Warsaw Commodity Exchange. A penalty of 130% of the substitution fee is applied in case of failure to comply with this legislation. In August 2007 higher required quota were introduced, accounting to 7% for 2008, 8.7% for 2009, 10.4% for 2010-2012, 10.4% up to 12.9% in 2017. The requirement of 5.1% as foreseen in 2007 was not fulfilled, with only 4.7% reached. The total income a RES producer can achieve is some 367.99 PLN⁴ /MWh, which is the result of the combination of the average electricity price of 128.8 PLN/MWh and a green certificate bonus of 239.19 PLN/MWh.⁵ The Green Certificates system is not that favourable to small capital intensive installations, such as PV, as it does not make any difference between the size of different technologies.

³ Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport. Currently in force, sets targets up to 2010, with indicative targets by 2005.

⁴ Exchange rate in March 2009: 1 Polish Zloty (PLN) = 0.216481 Euro (EUR)

⁵ Not considering fees and penalties

Quota

This is a requirement on energy suppliers to provide a minimum share of RES-electricity (4.8% in 2007 and 7.5% in 2010). Failure to comply with this legislation leads – in theory – to the enforcement of a penalty. In 2005, these were not sufficiently enforced. There is lack of legal and financial consequences for distribution companies, which don't fulfil their obligation, as the level of penalty has not been stipulated. In such cases the Energy Regulatory Authority (URE) has to sue those companies and in many cases penalties can be avoided.

In January 2007, changes in the Energy Law Act were made resulting in requirement of a licence RES energy generation regardless of the power installed (previously required only > 50 MW). Also changes in green energy purchase obligation were introduced resulting in higher % rates. For 2010 - 2014 the required RES share is 10,4% (previously only 9%).

Excise Tax exemption

An excise tax exemption on RES-electricity was introduced in 2002. It amounts to 0.02 PLN/kWh, being refunded after the submission of the certificate of origin as from 2009. (Exchange rate in March 2009: 1 Polish Zloty (PLN) = 0.216481 Euro (EUR))

Support to Biofuels

Exemption of excise duty

Exemptions from excise duty for fuels containing biocomponents, which applied since 2004 were reduced following the entry into force in January 2007 of amendments to the Regulation on Exemptions from Excise Duty. Under the provisions in force since 1 January 2007 the following are exempt from excise duty:

- 1) biocomponents intended for use in liquid fuels and liquid biofuels, meeting the relevant quality requirements;
- 2) The following fuels, meeting the relevant quality requirements and containing over 2 % of biocomponents:
 - a) petrol – 1.50 PLN on each litre of biocomponents added to it,
 - b) diesel – 1.00 PLN on each litre of biocomponents added to it;
- 3) biocomponents used as direct fuel and meeting the quality requirements specified in separate regulations – 1,680 PLN/1000 l.

Preferential excise duty treatment will increase under the Act of 11 May 2007, amending the Excise Duty Act, which includes amongst its provisions the following reductions of excise duty rates for the products listed below:

- 1) For products made by blending petrol with biocomponents and containing over 2% of biocomponents, excise duty charged on the petrol (1,565 PLN/1000 l) shall be reduced by 1.565 PLN for each litre of biocomponents added to the petrol, subject to the minimum excise duty payable being 10.00 PLN/1000 l.
- 2) For products made by blending diesel with biocomponents and containing over 2% of biocomponents, excise duty charged on the diesel (1,048 PLN/1000 l) shall be reduced by 1.048 PLN

for each litre of biocomponents added to the diesel, subject to the minimum excise duty payable being 10.00 PLN/1000 l

3) For biocomponents used as direct fuel in internal combustion engines – 10 PLN/1000 l.

In 2006 exemptions from excise duty arising out of the use of biocomponents in fuels amounted to 261.99 million PLN.

Transposing the 2003 Biofuels Directive into Polish law

In August 2006 the Sejm of the Republic of Poland adopted two Acts: the Biocomponents and Liquid Biofuels Act and the Fuel Quality Monitoring and Control Act. The two Acts ensured full transposition of Directive 2003/30/EC into Polish law. Their most important provisions include:

- Enabling farmers to produce liquid biofuels for their own use. In addition, the provision of security for excise duty will no longer be required in the case of pure vegetable oils and esters. The Fuel Quality Monitoring and Control Act requires liquid biofuels produced by farmers for their own use to meet only minimum quality requirements, essential for reasons of environmental protection. The annual own use production quota is 100 litres per hectare of arable land owned by the farmer.
- The introduction as from 1 January 2008 of a requirement to ensure specified biocomponent participation in the transport fuels market. This requirement has been imposed on businesses producing liquid fuels or liquid biofuels and purchasing them intra-Community, for subsequent sale or for their own use. Such businesses are defined as entities implementing the national indicative target.
- The introduction of the concept of “captive fleet” into Polish law, defined as a group of at least 10 vehicles, agricultural tractors or off-road machines, or a group of locomotives or ships fitted with engines able to burn liquid biofuels, owned or used by individuals engaged in business, legal entities or organisations without a legal personality. The introduction of this concept has made it possible to use a wide range of liquid biofuels with high biocomponent content, other than those granted marketing authorisation, in vehicles and machines forming part of “captive fleets”.

Draft Amendments to the Corporation Tax Act

The Sejm is currently preparing a Draft Act amending the Corporation Tax Act, which introduces corporation tax relief for biocomponent manufacturers. The proposed system is intended to ensure stability of the tax relief and exemption system throughout the Programme period. Other financial support instruments offered by the programme include: removing biocomponents used as direct fuel from the list of products subject to fuel duty, a system of subsidies for farmers cultivating energy crops for use in biocomponent manufacture, investment support out of EU funds and a reduction of air pollution charges for entities using liquid biofuels in their vehicles.

Support to RES- Heat

There is no targeted support for RES-Heat in Poland.

Support for all RES

Grants and loans

In Poland there are no RES targeted development funds. Investors can apply for investment grant and/or for preferential loan to: the National Fund of Environmental Protection, the respective county and municipal funds; Environmental Protection Bank; ECOFUND and others.

Grants and preferential credits for investments in RES may be obtained from the Polish National Fund for Environmental Protection and Water Management, as well as from the corresponding regional funds. Pursuant to the Energy Law Act of 27 April 2001, these funds are, in particular, intended to support activities promoting the use of local RES, as well as to assist the introduction of more environmentally friendly energy carriers.

- the *National Environmental Protection and Water Management Fund* and provincial, district and commune environmental protection and water management funds. These funds are accumulated out of environmental charges and fines, including substitution charges and fines associated with the Green Certificates system. Under the terms of the Environmental Protection Act of 27 April 2001, these funds are intended to support the use of renewable energy sources.

- The *EcoFund Foundation*: its funds are generated by debt-for-environment swap activities.

EU Structural and Cohesion Funds

Additional support for renewable energy is provided by the implementation of the National Development Plan 2004–2006, under which public resources from the structural funds and the Cohesion Fund have been committed. These measures will be followed up by implementing the Infrastructure and Environment operative programme in the National Strategic Reference Framework 2007–2013, a document which will define the priorities and scope of the use of EU funds, as well as the system for implementing them. As of 2009 funds will be granted within the Operational Programme “Infrastructure and Environment”. A subsidy from 30% to 70% of qualified costs is foreseen which will vary on the basis of the region and the size of the investor. Underdeveloped regions and small investors will be rewarded. The minimum cost for investments is 20Mio PLN,⁶ 10 Mio PLN for biomass, biogas and small hydro, whereas the maximum is 40 Mio PLN per project, excluding co-firing.

Rural Areas Development Programme

This programme supports projects for up to 176 PLN/ha. The 176 PLN/ha subsidy foreseen for energy crops has been withdrawn as of 2009.

⁶ Exchange rate in March 2009: 1 Polish Zloty (PLN) = 0.216481 Euro (EUR)

Sources:

European Commission Factsheets by Country

http://ec.europa.eu/energy/energy_policy/facts_en.htm

Member States Reports in the framework of the Directive 2001/77/EC on renewable electricity

http://ec.europa.eu/energy/res/legislation/electricity_member_states_en.htm

Member States Reports in the framework of the Directive 2003/30/EC on biofuels

http://ec.europa.eu/energy/res/legislation/biofuels_members_states_en.htm

EurObserv'er Barometer

<http://www.energies-renouvelables.org/observ-er/sig/eufores/sig.asp>

IEO, institute for Renewable Energy

www.ieo.pl



In the framework of the EU co –funded project: RES 2020: Monitoring and Evaluation of the RES Directives implementation in EU27 and policy recommendations to 2020

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