



RENEWABLE ENERGY POLICY REVIEW

SLOVAKIA

Fossil fuels cover 95 % of primary energy needs in Slovakia, and more than 90% of primary energy sources are imported. At the same time, Slovakia has a great potential to use biomass from own forests and agriculture. About 40 % of primary energy consumption is used for heat production and roughly half of the households are served by district heating. The main energy source for district heating is natural gas (more than 70 %), seldom used in combined heat and power production and registering a remarkable increase.

Large-scale hydro energy is the only RES electricity with a notable share in total electricity consumption. Despite the existing support mechanism and that in 2007 the Government approved a Strategy of Higher Utilisation of Renewable Energy Sources (RES), the Government has presented a proposition to decrease the target to 19% RES-e in 2010 (instead of 31%), that means only 1.35% growth of RES –electricity compared to 2002. Despite all European and national commitments, Slovakia is unfortunately far from meeting the targets. Official national policy documents (e. g. Strategy for Renewables, 2006) quote that only between 3.2% (2003) to 4.3% (2005), of the gross domestic energy consumption is summing from renewables (vast majority by existing large hydro power plants).

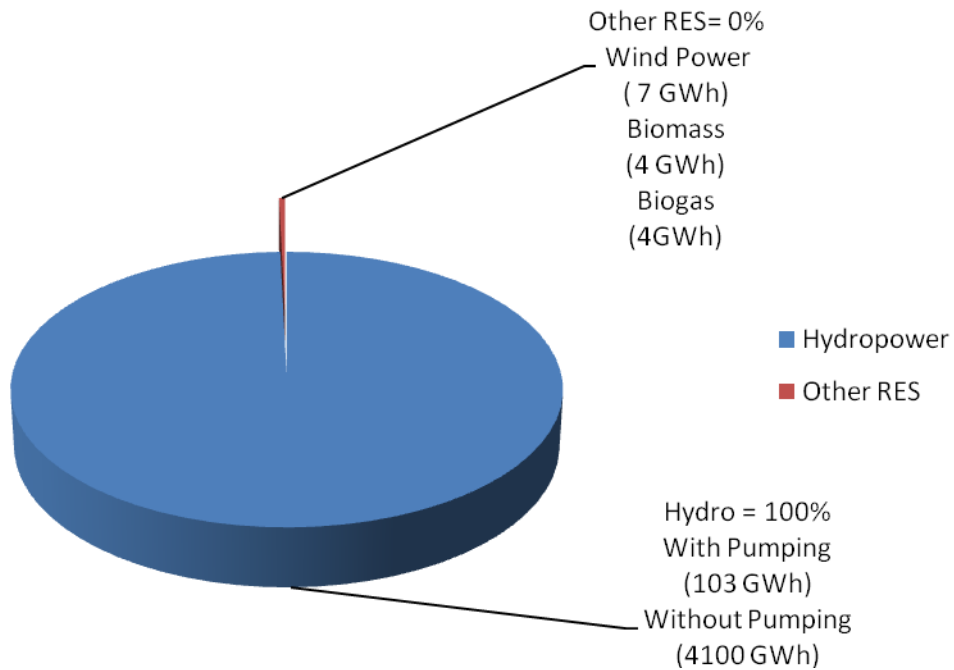
In fact the government does not recognise the need of RES sector development, nor does he support this sector. Even during Russo - Ukrainian gas conflict at the beginning of 2009, the government articulated possible re-use of Jaslovské Bohunice V2 nuclear plant (shut down according to the Accession Treaty), instead of improving the use of Slovak/EU-originating energy sources.

KEY FIGURES

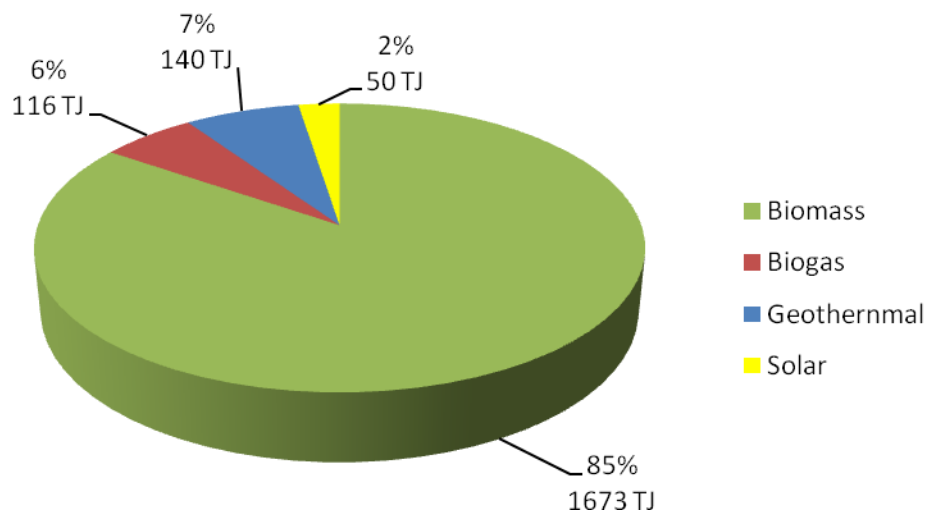
- The **share of RES in total primary energy consumption** was of 4.72% in 2006.
- The **share of RES in the gross final energy consumption** was 6.7% in 2005.
- The **share of RES in the gross electricity production** was 17.12% in 2006 in 2005 was 16.3%.
- The **share of RES heating and cooling** was of 0.59% in 2006.
- The **share of all biofuels** in the transport sector in 2006 was 2.1%.

- Slovakia dependence on external energy supplies is of about 90%.

RES electricity Production in Slovakia (2005)



RES Heat Supply in Slovakia (2005)



Source: ECB

RES POLICY

The Strategy of Higher Utilisation of RES in the Slovak Republic was approved in April 2007.

RES TARGETS

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

- 14% 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 2001¹

- 31 % Share of RES on gross electricity consumption by 2010.

Indicative Target set by the European Biofuels Directive from 2003²

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

National Commitments

On April 25, 2007, new Strategy on higher RES utilisation was approved by the government.

- New internal targets for RES heat and electricity by 2010 and 2015

Ongoing Legislatives measures:

- Law on RES to be prepared by end of 2007 (proposal still not published, preparation process in delay - estimated time of parliament procedures summer 2009, validity since august 2009).
- Support programme for households for solar thermal and biomass technologies installation (programme was been agreed by government in April 2007 except financing, refreshed in February 2009 again except financing but with proposal for the Ministry of Finance to find funds)

¹ Directive 2007/71/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market. Currently in force, sets targets up to 2010.

² 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.

- Biomass action plan under preparation, end November 2007 (January 2008: proposal of national Biomass Action Plan being amended)

However In 2007, the Slovak Government came with 3 development scenarios, proposition to decrease the target to 19% RES-e in 2010; only 1.35% growth of RES –e compared to 2002

RES-e Technology Roadmap by 2010 and 2015

Source/ Year	2005 [GWh]	2010 [GWh]	Production increase [GWh]	Installed capacity [MW]	Investment costs [mio SKK]	2015 [GWh]	Production increase [GWh]
SHP	250	350	100	20	1800	450	100
Biomass	4	480	476	90	950	650	170
Wind energy	7	200	193	100	4000	750	550
Biogas	6	180	174	30	4200	370	190
Geothermal energy	0	30	30	4	400	70	40
PV	0	0	0	0	0	10	10
Total	267	1 240	973	244	11350	2 300	1 060

To reach 4% RESe (without large hydro) share on total electricity consumption 31 000 GWh in 2010 (1 240 GWh) and 7% share on total electricity consumption 32 900 GWh in 2015 (2 300 GWh)

RES-Heat Technology Roadmap by 2010 and 2015

Source	Heat Production in 2010	Heat Production in 2015
	TJ	TJ
Biomass	25 000	37 000
Biogas	2 000	4 000
Geothermal	200	1 000
Solar	300	1 000
Heat pumps (low potential heat)	200	800
Total	27 700	43 800

Source: ECB

Progress towards the targets

Between 1997 and 2006, the share of RES-e decreased from 17.9% to 17.21% of gross electricity consumption. Due to majority of RES electricity is produced by LHP, the amount of energy produced varies according to rainfall.

RES POLICY INSTRUMENTS

Support for RES electricity

Feed in tariff

Tariffs are being set annually by Regulatory Office for Network Industries, increasing each year by index of national core inflation.

Resource	Technology	Support level [SKK/kWh]	Support level [€cents/kWh]	Start year	Duration [years that an investor is entitled to support]	End year [of the scheme]
hydro	small	2,00 - 2,82	6,0 - 8,5	2008	1 year	2008
wind	onshore	1,70 - 2,94	5,1 - 8,9	2008	1 year	2008
wind	offshore	-	-	2008	1 year	2008
biomass	energy crops combustion	3.15	9.5	2008	1 year	2008
biomass	solid - combustion	2,19 - 2,96	6,6 - 8,9	2008	1 year	2008
biomass	waste from bioethanol production	3.6	10.9	2008	1 year	2008
biomass	co-firing with fossil	2,19 - 2,65	6,6 - 8,0	2008	1 year	2008
biomass	biogas from waste water treatment and landfill gas	2.63	7.9	2008	1 year	2008
biomass	biogas from anaerobic fermenting technology	3,90 - 4,31	11,8 - 13,0	2008	1 year	2008
Solar	PV	8.41	25.4	2008	1 year	2008
Geothermal	geothermal	3.68	11.1	2008	1 year	2008

Source: ECB

Other Measures:

RES-E policy in the Slovak Republic includes the following measures:

- A measure that gives *priority regarding transmission, distribution and supply* was included in the 2004 by Act on Energy.
- *Subsidies (EU Funds)* are available for the re-construction of RES-e facilities.

Support for RES Heating

Heat Purchase Obligation

Obligation to purchase heat (Act No. 657 / 2004 in the Collection of Laws of the Slovak Republic on Heat Energy).

The holder of license in heat distribution has to purchase heat from the holder of license in heat production who is producing heat from RES or CHP unit, if he:

- Is not a producer or purchaser of RES / CHP heat himself;
- Will not increase the price for his purchasers;
- Cooling medium used in RES / CHP heating unit is identical that is used in public heating system;
- Purchasing of heat from RES / CHP unit is economically equal with purchasing heat from other heat sources (in the point of heat distribution license holder's view).

Investment subsidies

Subsidies (EU Funds, Envirofond) are available for the (re)construction of RES-H facilities. Public (up to 95% subsidy) and private sector (up to 50% subsidy) is eligible.

Financial Incentives (reduction on interest rate)

Resource	Technology	Support level [% reduction on interest rates]	Start year	End year	Comments
Environmental Fund	Solar thermal systems	1% interest rate on loan (national average is about 6%)	Applications to be submitted annually.		For private sector only, maturity of loan between 5-15 years; 130% guarantee of loan value is required; minimum 3 years history of private company

Investment subsidies for households

In April 2007, the Slovak Government approved a framework of support for increased household use of biomass, financed from the State budget. This framework will be developed in more detail in the *Programme for increased household use of biomass and solar energy*, which the Slovak Ministry of Economic Affairs approved in September. Grants will be awarded subject to certain criteria being met. The overall amount of funding earmarked per year will be SKK 100 million (about EUR 3 million). The first stage of this measure, up to 2011, will focus on plans for promoting the use of biomass.

Resource	Technology	Support level [%/total investment]	Start year	End year
Solar Thermal	collectors	cca 20%	Theoretically 2009	2015
Biomass	Biomass combustion small scale furnace	25% max. ca 750,-€	2008	2015

An approx. 90 EUR/square meter up to total square 8m², and over 8m² it will be 45 EUR for every additional square meter. It is according the Government decree from 27th April 2007 " Programme for higher utilisation of solar energy a biomass (wooden chips and pallets only) in household sector" Amount 75 mil Sk (it is aprox. 2 200 000 EUR/year) was intended to be allocated for every year. Commitment for 2008 not fulfilled; possibility of shifting on 2009.

Support for Biofuels

In 2005, the National Programme of Biofuel Development was adopted. Legislation concerning the minimum amount of biofuels on the Slovakian market and a decree laying down the requirements for fuel quality and maintenance of records of fuels were scheduled for 2006.

Quota

This corresponds to the indicative target set in the EU Biofuels Directive. Interim targets are 2.5% in 2006, 3.2% in 2007, 4% in 2008 and 4.9% in 2009.

Resource	Quota in % (per year)	Year
Biofuels	2.5%	2006
Biofuels	3.2%	2008
Biofuels	4%	2008
Biofuels	4.9%	2009
Biofuels	5.75%	2010

Tax exemption for Biofuels

Resource	Technology	Total support level (= tax exemption incl. reduction of VAT to be paid) [€cents/litre]	start year	End year	Duration [years of support entitled]	Comments
Excise tax (15,50 Sk/litre = 46,8 €cents/litre for petrol; 14,50 Sk/litre = 43,8 €cents/litre for diesel)	Bioethanol and biodiesel	Max. 1,12 Sk/litre = 3,38 €cents/litre for petrol (corresponding to max. 15% share of ETBE in petrol); Max. 0,73 Sk/litre = 2,2 €cents/litre for diesel (corresponding to max. 5% share of MERO in diesel);	2004	n/a	Till next Act on excise tax amendment.	Excise tax reduction is calculated as reduction by each % corresponding to the energy content of bio-ingredient in petrol or diesel

All RES

Investment subsidies

Resource	Technology	Support level [%/total investment]	Start year	End year	Comments
Environmental Fund	Solar thermal systems	95%	Current year (application till the end of October)	Grant should be applied till the end of 1. year after application	Public sector only.
	Biomass boilers				
	Heat pumps				
EU Structural Funds	All RES technologies except wind turbines and large hydro	Not specified yet.	2008	2013	Relevant operational programmes approved; state support schemes have not been finally approved yet; waiting for calls for proposals
Financial Mechanism of Norwegian Kingdom and EEA	All RES technologies	Up to 90% for public sector; private sector - up to 50%	2004	2009	

Annex I. Evolution of RES electricity and RES heat Supply in Slovakia (2002-2005)

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

Energy Centre Bratislava

<http://www.ecb.sk/>

Slovak Innovation and Energy Agency


<http://www.siea.gov.sk>

EurObserv'er Barometer

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



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

Intelligent Energy  **Europe**

The sole responsibility for the content of this publication lies with the authors. It does not represent the opinion of the Community. The European Commission is not responsible for any use that may be made of the information contained therein.

Drafted in March 2009

Annex I. Evolution of RES electricity and RES heat Supply in Slovakia (2002-2005)

RES electricity production in GWh, 2002 – 2005

Sources	2002 [GWh]	2003 [GWh]	2004 [GWh]	2005 [GWh]	2005 [GWh]
Hydro power plants total	5 483	3 671	4 207	4 741	4 566
out of which pumping HPP	215	192	107	103	n/a
Hydro power plants (without Pumping HPP)	5 268	3 479	4 100	4 638	n/a
Wind power plants	0	2	6	7	6
Biomass	159	84	3	4	367 *
Biogas	1	2	2	4	8
Municipal waste					47
Industrial waste					1
Total	5 428	3 567	4 111	4 653	4 987
RESe share on electricity consumption	18,6 %	12,4 %	14,4 %	16,3 %	16,3 %

Source: Slovak Strategy for higher RES utilisation, approved on April 25, 2007

* note: electricity production using Primary solid biomass

RES heat supply in GWh, 2002 – 2006

Source	2002	2003	2004	2005	2006
	[TJ]	[TJ]	[TJ]	[TJ]	[TJ]
Biomass	474	643	1354	1673	1468
Biogas	1	0	0	116	54
Geothermal	159	139	144	140	165
Solar	36	40	45	50	1
Total	670	822	1543	1979	1688

Source: Energy Centre Bratislava