





The Market of Renewable Energy and Energy Efficiency in Czech Republic

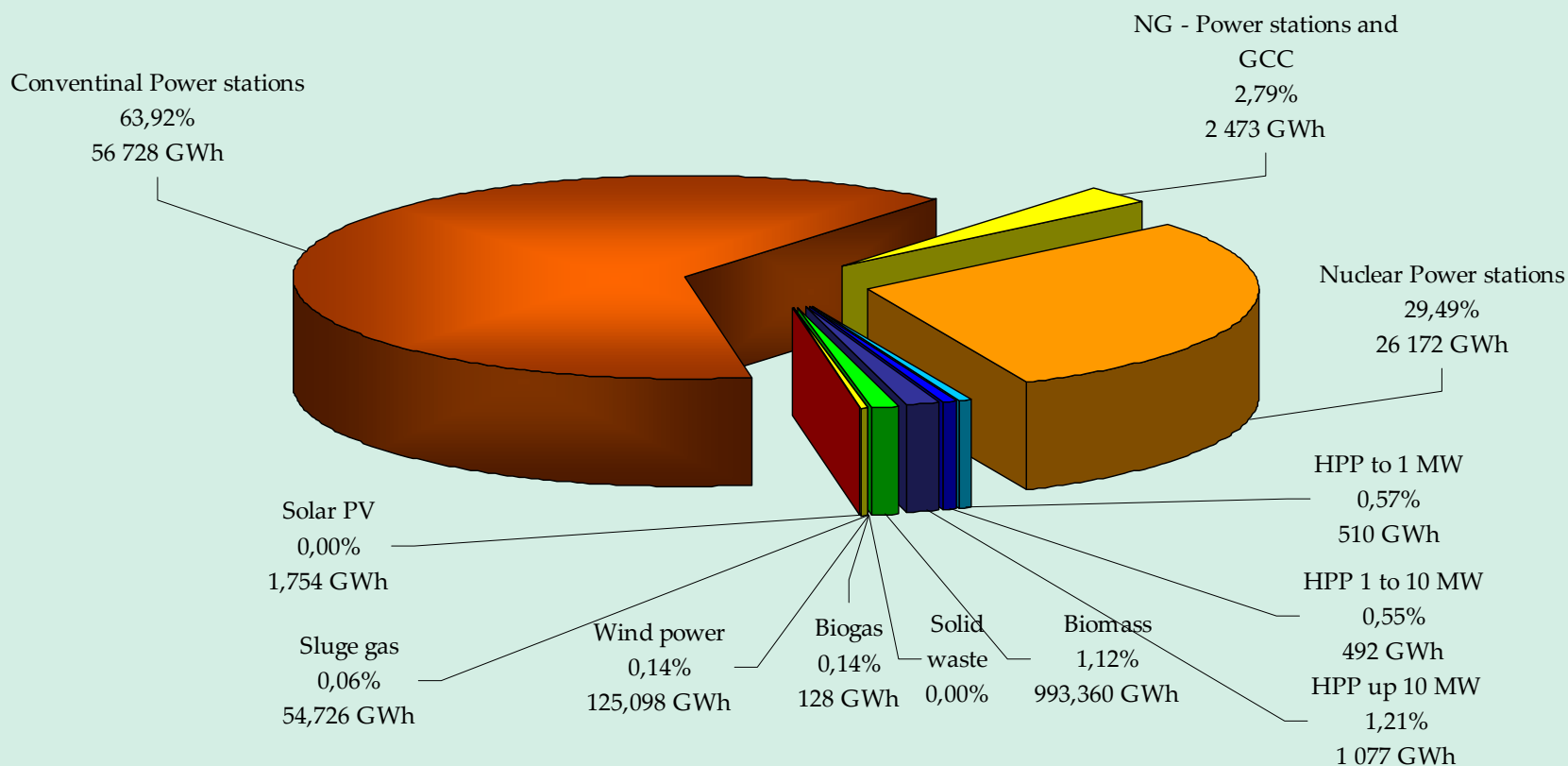
RENEXPO conference 2008

*9th October 2008
Augsburg, Germany*

Vladimír Vlk
Director of Department of Sustainable Energy and Transport

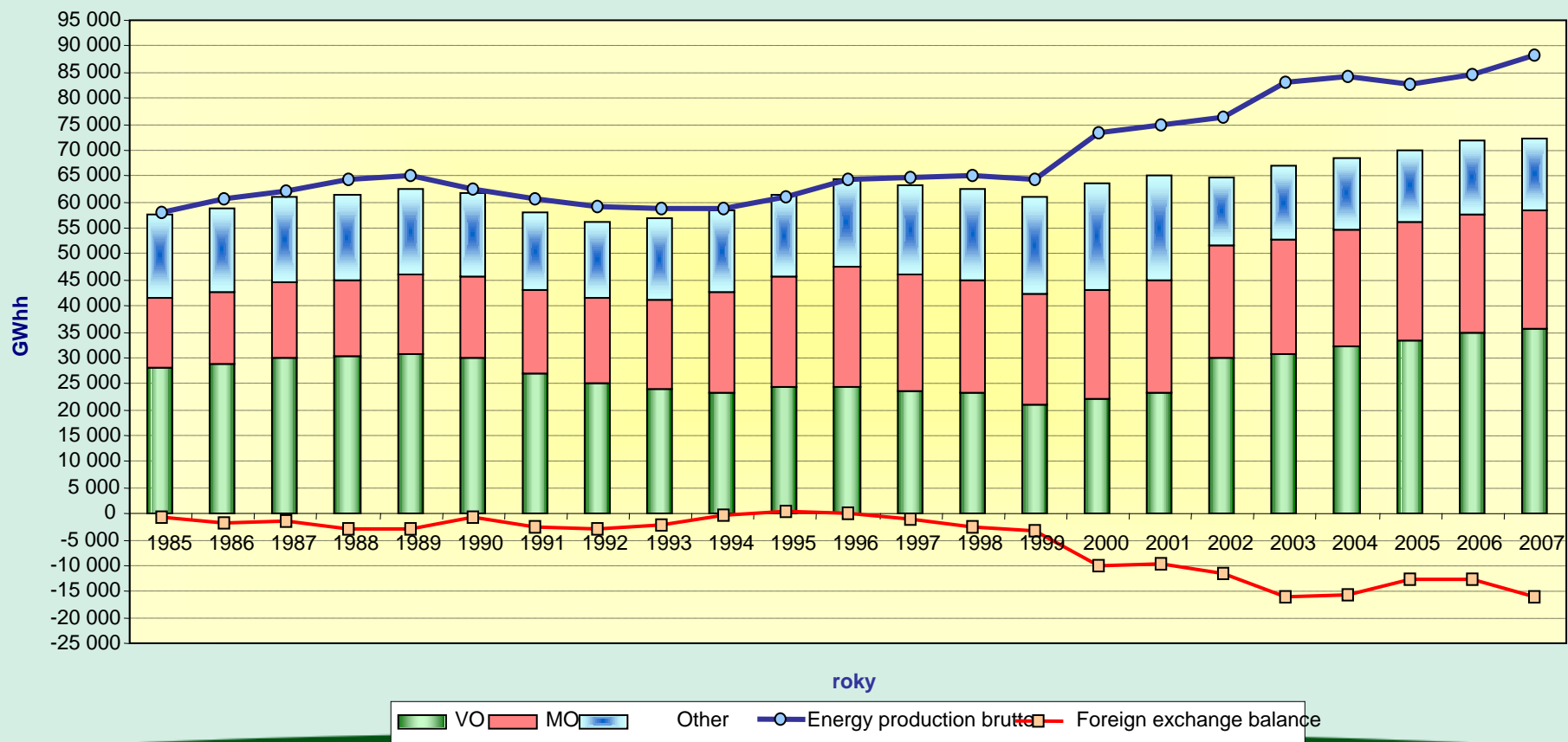


Mix of gross electricity production in the year 2007



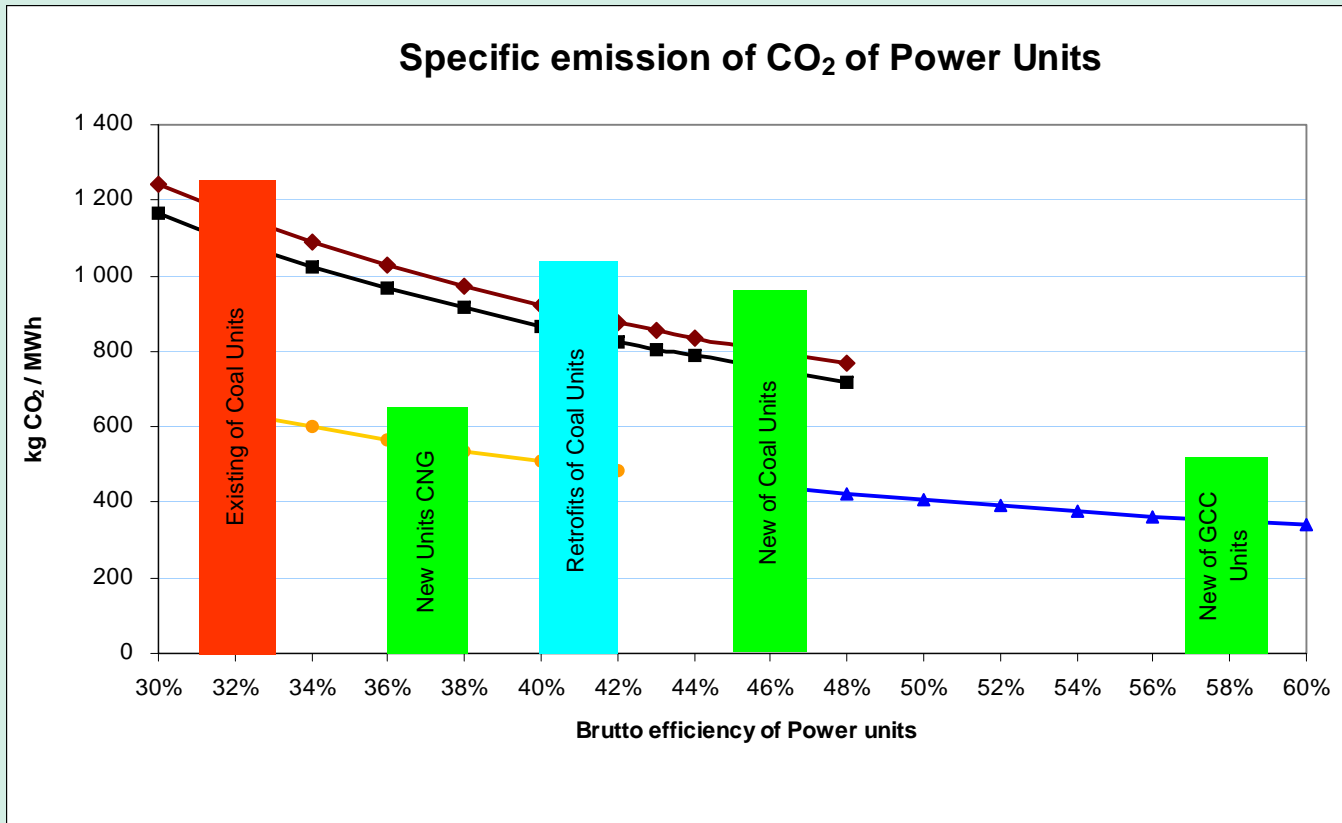


Electricity balance between 1985 and 2007



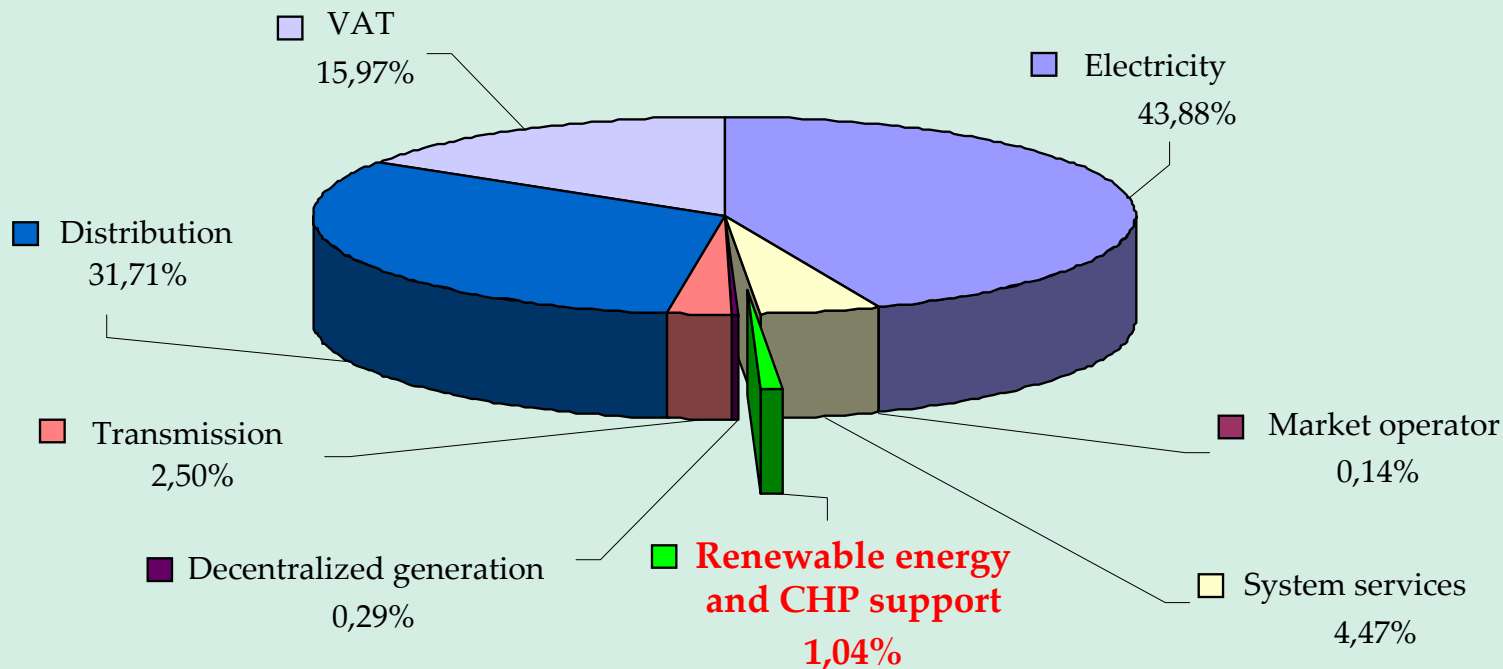


Energy Efficiency in Czech Republic



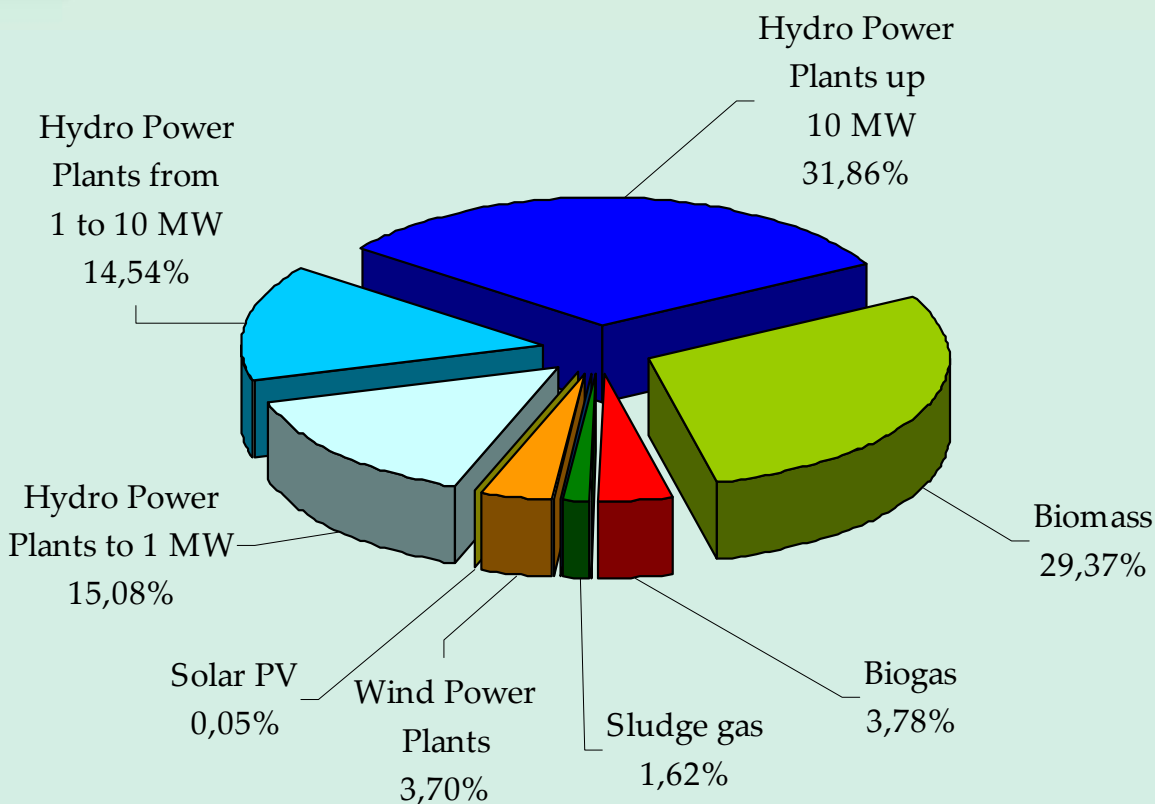


Share of price components on average household price in year 2007





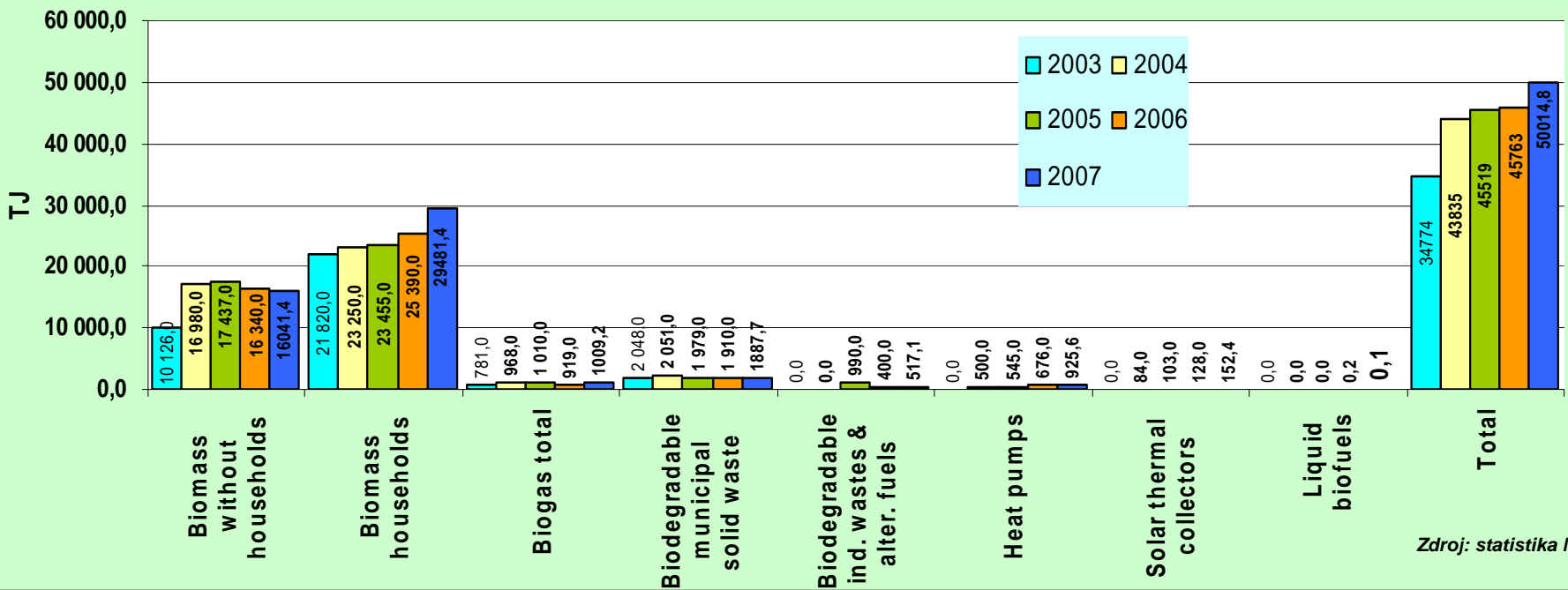
Production of electricity from RES in the year 2007



Kind of RES	Gross electricity production [MWh]
Hydro Plants to 10 MW	1 001 846
Hydro Plants up to 10 MW	1 077 493
Biomass	993 360
Biogas	182 699
Solid bio-waste	Data nejsou k dispozici
Wind Plants (up to 100 kW)	125 098
Solar PV	1 754
Biofuels	Data nejsou k dispozici
TOTAL	3 382 249



Heat production from RES 2003 - 2007



Zdroj: statistika MPO



Forecast of RES and biomass potential

Kind of biomass	HV [MJ/kg(m ³)]	Year 2006		MIT		MEN				AEBIOM	
		[thousand ton]	[PJ]	Potential 2020		Potential 2020 - study		Potential 2020 by MENV		Potential 2020	
				[thousand ton]	[PJ]	thousand ton (m ³)	[PJ]	[thousand ton (m ³)]	[PJ]	[thousand ton (m ³)]	[PJ]
Residual biomass							41,5		28,4		33,5
Forest biomass	12	1 132	10,6	1 132	10,6	2 042	24,5	1 392	16,7	1 542	18,5
Biogas	22					773	17,0	530	11,7	682	15,0
Fyto biomass						2 700	37,8	1 380	19,3	1 786	25,0
Straw of oleiferous	14	84	1,2	100	1,4	1 200	16,8	630	8,8	714	10,0
Straw of cereal	14					1 500	21,0	750	10,5	1 071	15,0
Cellulose	8	1 068	8,5	1 068	8,5	1 068	8,5	1 068	8,5	1 813	14,5
Agricultural biomass							67,0		62,8		64,4
Energy use	18	14	0,2	3 000	51,0	3 000	54,0	3 000	54,0	3 022	54,4
Biogas	22					590	13,0	400	8,8	455	10,0
Woods	12	3 141	28,3	3 141	28,3	4 680	56,2	4 317	51,8	4 250	51,0
Total		5 439	48,8	8 441	99,8		211,0		170,8		188,4



Act No. 180/2005 Coll. on Promotion of Use of Renewable Sources

- The most important instrument for the support of RES

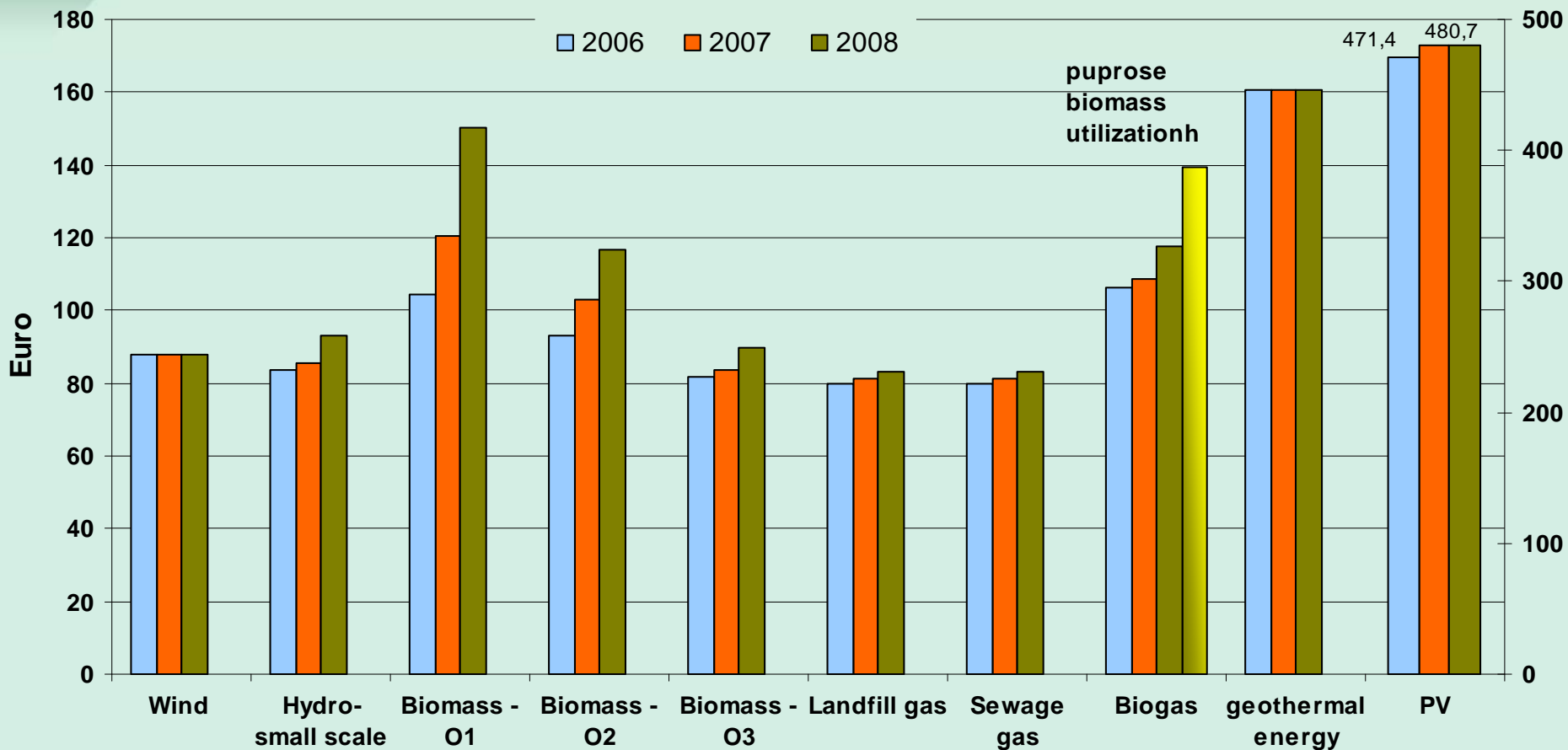
- the method of promoting the production of electricity from RES and other related scopes of this aspect

Basic features:

- different purchase prices and green bonuses for electricity from RES – to ensure adequate support with regard to the various investment and operating costs
- keeping of the level of feed-in tariffs for 15 years for existing devices, for new devices max. annual decrease of feed in tariffs by 5%
- create conditions for fulfillment of the indicative target for the share of electricity from RES to 2010, and for further progress.



RES: feed-in tariffs comparison





RES: Feed-in tariffs comparison (in EUR)

€ category	2006		2007		2008	
	Feed-in tariff	Green bonus	Feed-in tariff	Green bonus	Feed-in tariff	Green bonus
Biogas	110,4	74,4	112,6	71,1	x	x
Energy plant biomass	x	x	x	x	144,4	97,0
Agriculture waste	x	x	x	x	122,2	74,8
Landfill gas	82,6	46,7	84,1	42,6	86,3	38,9
Sewage gas	82,6	46,7	84,1	42,6	86,3	38,9
Biomass O1	108,5	72,6	125,0	83,5	155,9	108,5
Biomass O2	96,3	60,4	107,0	65,6	121,1	73,7
Biomass O3	84,8	48,9	86,7	45,2	93,3	45,9
Wind Power Plant	91,1	74,8	91,1	72,2	91,1	69,3
Hydro (up to 10 MW)	86,7	53,0	88,5	49,6	96,3	51,9
Geothermal energy	166,7	134,8	166,7	130,0	166,7	124,8
Photovoltaic	488,9	466,3	498,5	472,2	498,5	468,5



RES support scheme

Operational programme Environment 2007 – 2013

(www.OPZP.cz)

Priority axis Nr. 3– Sustainable use of energy sources

Aims: increase use of RES, energy savings, use of waste heat,
Intervention area Nr. 3.1 – build-up new facilities and reconstruction of existing facilities with the aim of higher use of RES for heat , electricity production and for coupled production of heat and electricity.

Intervention area Nr. 3.2 – Realization of energy savings and use of waste heat by noncommercial sphere.

Time horizon: 2007 – 2013

Budget: aprox. 673 mil. €



RES support scheme

Governmental Programme for Energy Conservation and the Utilization of RES 2007

www.sfzp.cz

- Heating and water heating (natural persons-biomass, heat pumps, solar. coll. and PV)
- Central distribution of heat and hot water (municipalities etc.)
- RES in public building (schools, hospitals)
- Heat pumps natural persons
- Cogeneration from biomass
- RES in purpose building (swimming pool etc.)

Natural persons (subsidy up to 50 % of investment costs), Municipalities (subsidy 70%, 80% or up to 90 % in dependence on the type of project), Non-governmental organizations and other organizations (schools, hospitals, etc.)

- Public education (subsidy up to 50 %)
- Education, propagation, consulting (subsidy up to 80%)



RES support scheme

- **Draft amendment of Clean Air Protection Act No. 86/2002 Coll. (Clean Air Act), regarding biofuels for transport**

Sets definition of biofuels

Specifies duty for subjects, who place fuels on the market, to blend biofuels into fossil fuels:

- **2% in volume (from 1.9.2007 – 31.12.2008 for FAME (fatty acid methyl ester) to diesel and from 1.1.2008 for bioethanol into gasoline)**
- **3,5 % in volume from 1.1.2009 for bioethanol into gasoline**
- **4,5% in volume from 1.1.2009 for FAME to diesel**

Prescribes charge to be paid for each liter of biofuels, which has not been blended (2,75 EUR/l)

Determines reporting duty for Ministry of Agriculture

Specifies control mechanisms for customs office authority in cooperation with Czech trade inspection



Operational programs of other resorts:

- Ministry of Industry and Trade

Operational Programme Enterprise and Innovation

(www.mpo.cz/en/business-support)

Commercial projects

Subsidy will allocate on systems using RES for electricity or heat production

Projects contributing to rising of efficiency by generating, transmission and consumption of energy

- Ministry of Agriculture

Operational Programme for Rural Development and Multifunctional Agriculture

(<http://www.mze.cz/en/>)

support to building up of facilities for processing and utilization of RES, which contribute to energy self-sufficiency of rural areas

(production line of pellets, biogas stations or establishment of energy plants vegetation)



Operational programs of other resorts:

Act No. 586/1992 Coll. on Income Tax

According to this act, the profit of renewable electricity production is tax-exempt income in the year of setting in operation and next 5 years



Thank you for your attention

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