



Press release
December 2006

2006 Solid biomass Barometer

Europe's will to substitute a part of its fossil fuel origin energy consumption (petrol, gas and coal) by solid biomass (principally wood and wood waste, but also straw, crop harvest residue, animal and vegetal waste as well) is beginning to pay off. EurObserv'ER presents the current development of the solid biomass sectors and, for the first time, it also monitors organic urban waste. All of this information can be found in the Barometer published in **issue number 176** of the *Systèmes Solaires* magazine.

Solid biomass

Primary production of solid biomass (not including renewable solid urban waste) has once again increased markedly with 5.6% growth with respect to 2004 (+ 3.091 Mtoe). This growth is mainly due to German production (+ 1.731 Mtoe between 2004 and 2005), that allowed Germany to move closer up to the level of Swedish production (an increase of 0.470 Mtoe). The drop in Finnish production (- 0.8 Mtoe) is linked to a fall in activity of the paper pulp industry in 2005 (after having had a very good year in 2004). This sector supplies a significant share of biomass energy through production of black liqueur and wood waste.

Table 1: Primary energy* production of solid biomass in the European Union in 2004 and 2005 (in Mtoe)**

Countries	2004	2005	Growth in %
France***	9,678	9,669	- 0,1
Sweden	7,467	7,937	6,3
Germany	6,130	7,861	28,2
Finland	7,364	6,608	- 10,3
Poland	4,062	4,299	5,8
Spain	4,137	4,176	0,9
Austria	3,250	3,507	7,9
Portugal	2,683	2,715	1,2
Czech Rep.	1,418	1,460	3,0
Latvia	1,394	1,394	0,0
Denmark	1,200	1,264	5,3
Netherlands	0,724	1,142	57,7
Hungary	0,821	1,112	35,5
Italy	0,942	1,005	6,7
Greece	0,917	0,957	4,4
Lithuania	0,705	0,736	4,4
UK	0,704	0,719	2,1
Estonia	0,597	0,597	0,0
Slovenia	0,463	0,467	0,9
Belgium	0,386	0,423	9,5
Slovakia	0,345	0,398	15,4
Ireland	0,186	0,217	16,4
Luxemburg	0,015	0,015	0,0
Total E.U.	55,587	58,678	5,6

* Imports and exports are consequently not included.

** Estimation.

*** Overseas departments included for France

Source: EurObserv'ER 2006

Renewable solid municipal waste

Direct combustion of urban waste continues to be the principal way for treating household waste. In this way, incineration plants make it possible to produce heat and electricity just like thermal power plants running on more "noble" fuels do. Primary production of renewable solid urban waste (that is to say with the exclusion of biogas) is estimated at 5.3 Mtoe in 2005 for the European Union, i.e. a slight increase with respect to 2004 (+ 0.2 Mtoe). Among the principal producers, Italy (+ 15.1% between 2004 and 2005) had the most noteworthy growth, bringing it up to second place in terms of EU production, to the detriment of Denmark. France remains the leading country in the valorisation of this waste, in spite of a decrease in its production in 2005 (- 3.9%).

Table 2: Primary energy production of renewable municipal solid waste in the European Union in 2004 and 2005* (in Mtoe)

Countries	2004	2005	Growth in %
France**	0,957	0,920	- 3,9
Italy	0,653	0,751	15,1
Denmark	0,686	0,685	- 0,1
Netherlands	0,623	0,669	7,5
Germany	0,624	0,605	- 3,1
UK	0,463	0,460	- 0,7
Sweden	0,254	0,295	15,9
Latvia	0,224	0,224	0,0
Spain	0,140	0,188	34,1
Belgium	0,173	0,187	8,4
Portugal	0,095	0,103	9,4
Finland	0,076	0,066	- 12,8
Austria	0,059	0,057	- 3,3
Czech Rep.	0,060	0,056	- 6,3
Slovakia	0,029	0,033	15,6
Hungary	0,016	0,033	101,2
Luxemburg	0,014	0,013	- 6,3
Poland	0,0003	0,0003	0,0
Total E.U.	5,144	5,346	3,9

* Estimation

** Overseas departments included for France

Source: EurObserv'ER 2006

Expanding industry growth

2005 was marked by very considerable growth in the market of wood heating apparatus and biomass power plants (heat, electricity or CHP). Most of the big boiler manufacturers have increased their production capacities and their technological range, and have very significantly increased the volume of their sales as well. The industry has also been able to relaunch the domestic market by offering new innovative design appliances that are better adapted to modern comfort. The ranges of capacities have also been enlarged, permitting manufacturers to offer heating and hot water production apparatus adapted to the specificities of each home. The new thing is that some of these boilers can now also produce electricity.

The table below shows European-scale companies involved in manufacturing individual and collective boilers or in designing and producing industrial boiler plants.

Table 3: Some representative firms of the solid biomass industry

Company	Countries	Type of product	Power Range	Turnover (2005) (M€)
Kvaerner Power*	Norway and Sweden	solutions for municipalities & industrial sites	20 – 300 MWth/ up to 550 MWe	500
Fröling Heizkessel und Behälterbau	Austria	boilers & burners for homeowners & small companies	5 – 1 000 kW	92
Wärtsilä Biopower Oy	Finland	solutions for municipalities & industrial sites	3 – 17 MWth/ up to 5,3 MWe	37
HDG Bavaria	Germany	boilers & burners for homeowners & small companies	10 – 200 kWth	30
KWB	Austria	boilers & burners for homeowners & small companies	10 – 150 kWth	36,3
TPS Termiska Processer AB	Sweden	boilers & burners, complete solution for DH	300 kWth – 20 MWth	27
ETA Heiztechnik	Austria	boilers & burners for homeowners & small companies	20 – 90 kWth	26,5
Nolting	Germany	boilers & burners for homeowners & small companies	10 – 3 000 kWth	4,7
Compte R.	France	Boilers and burners for municipalities and industry	150 – 6 000 kWth	10

*Kvaerner Power's turnover includes the pulping and power segments

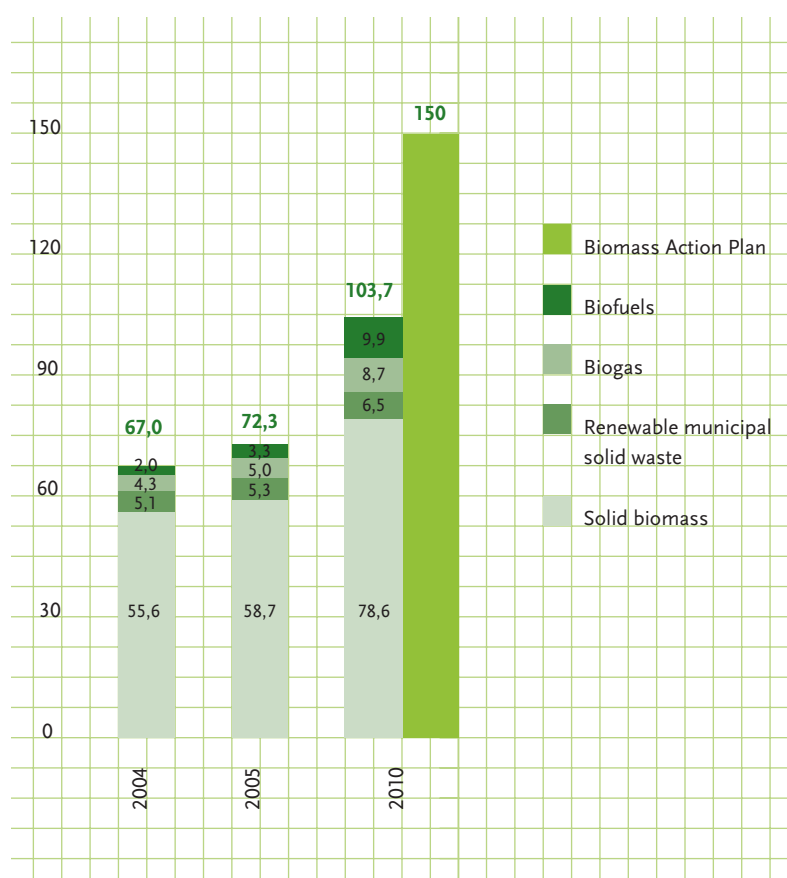
Source: EurObserv'ER 2006.

2010: New biomass objectives

The increase in the price of fossil fuels and the need for decision makers to take environmental constraints into consideration in their policies have had very beneficial effects on the choice of biomass energy solutions in 2005. Present decisions are fundamental because they are going to make it possible to modify in the long term local energy production infrastructures. The Biomass Action Plan was redefined at the end of the year 2005, with a new objective to include all of the 25 member States. The European Commission estimates that the measures provided for in the Action Plan are going to lead to an increase in biomass use (solid biomass, biogas, biofuel and renewable municipal

waste), that should reach a total of approx. 150 Mtoe in 2010 (55 Mtoe intended for electricity production, 75 Mtoe intended for production of heat and 19 Mtoe intended for transport). Taking recent developments and the capacities of certain countries to valorise their potential into consideration, we estimate solid biomass consumption at 78.6 Mtoe for this date, and energy consumption linked to renewable solid urban waste at 6.5 Mtoe. This forecast takes into account the estimates made by national experts as well as the current growth rate of primary energy production. If the forecasts made in the last Biofuel Barometer (9.9 Mtoe in 2010) and in the last Biogas Barometer (8.7 Mtoe in 2010) are added on, our forecast for primary biomass energy consumption comes to a total of 103.7 Mtoe, i.e. 46.3 Mtoe less than anticipated in the Plan.

Graph 1: Comparison of the current trend with the Biomass Action Plan scenario (in Mtoe)



Source: EurObserv'ER 2006.

EurObserv'ER

EurObserv'ER is a consortium composed of five European organisations devoted to the promotion of renewable energies within the European Union.

These five organisations are:

- **Observ'ER**, the Observatory of renewable energies (Paris, France);
- **Eurec Agency**, the European association of renewable energy research centers (Brussels, Belgium);
- **Eufores**, European forum for renewable energy sources (Brussels, Belgium);
- **Erec**, The European Renewable Energy Council (Brussels, Belgium);
- **Jozef Stefan Institute**, Energy Efficiency Center (Ljubljana, Slovenia);

The EurObserv'ER barometer

The **EurObserv'ER barometer** consists of regular publication in the European press of indicators reflecting the current dynamics of renewable energy sectors (solar, wind, hydraulic, geothermal and biomass) worldwide and within the European Union.

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