

How to boost energy from waste ?

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How to boost energy from waste ?

The answer is very simple:

thanks to good cooperation with stakeholders

to reach legal equity

and the let's play the market

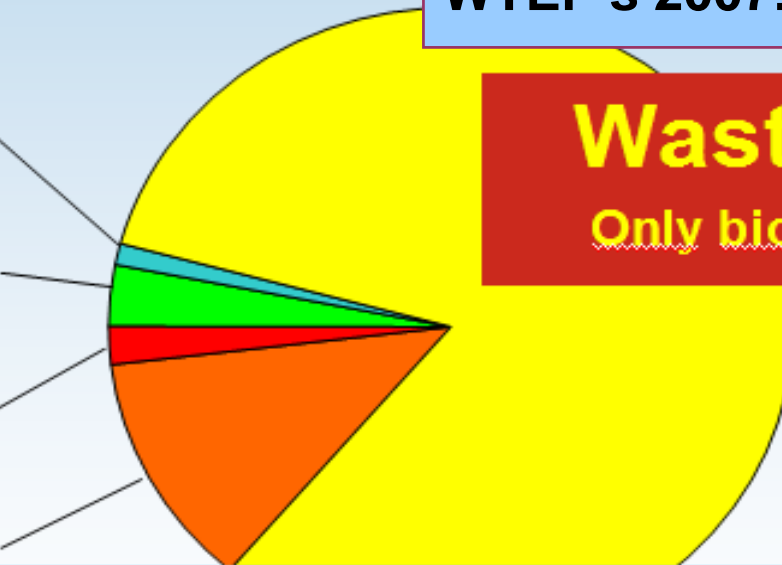
Energy from wastes



Renewable energy without hydropower

(Source: Energy statistics 2005 SFOE)

Wind	1%
Biomass	4%
Photovoltaics	2%
Sewage	11%



WTEP's 2007: 3.44 mio tons

Waste 82%
Only biogenic part

WTEP's 2005: electricity at generator = 3% of final consumption CH

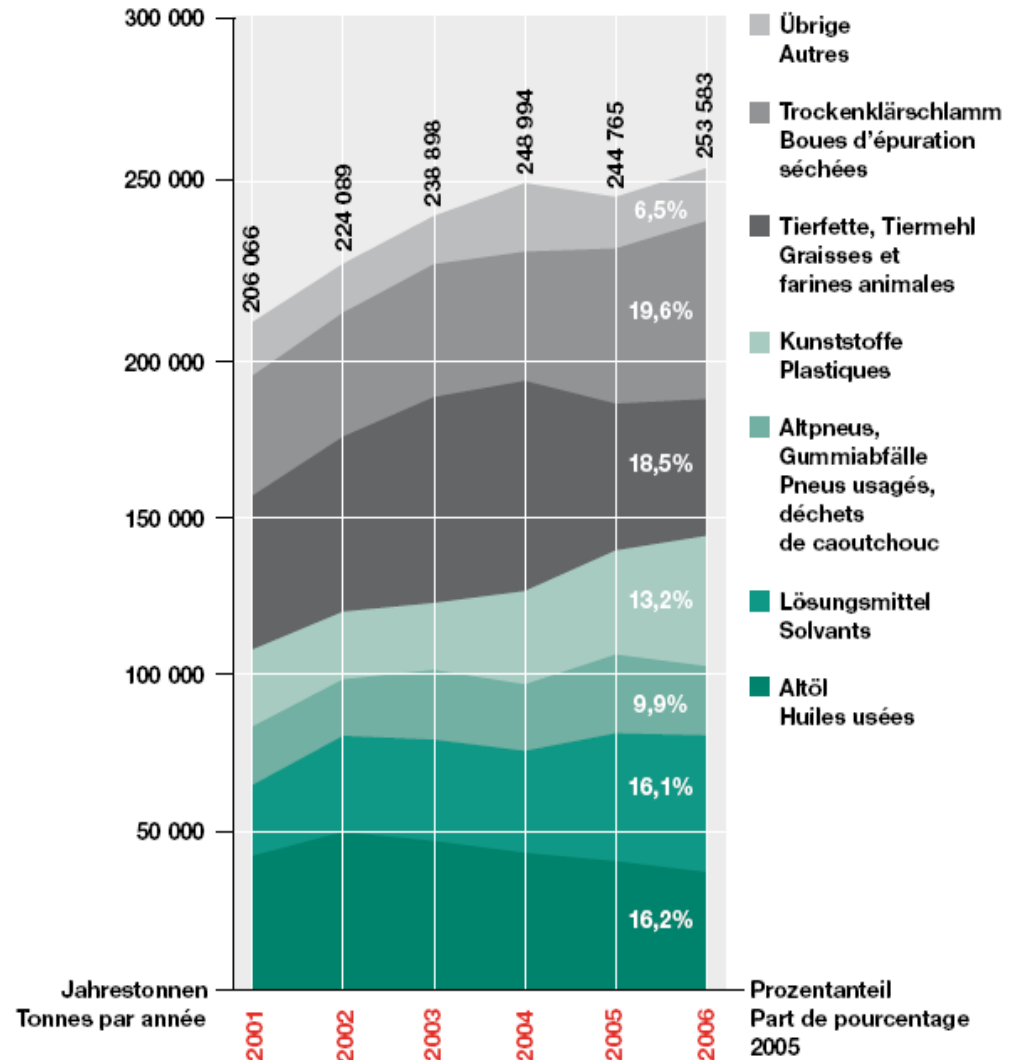
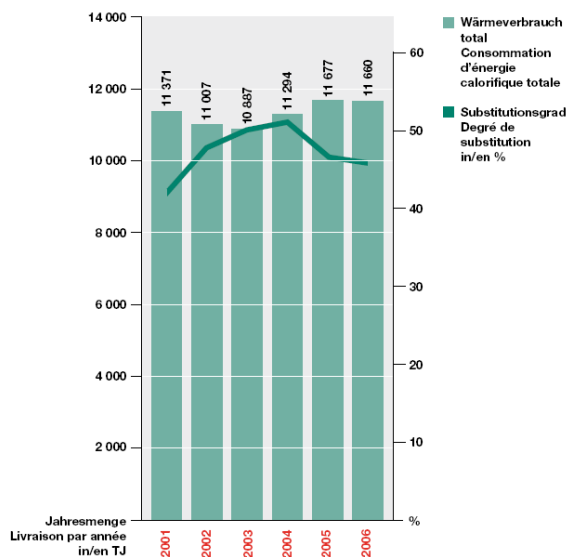
Energy from wastes



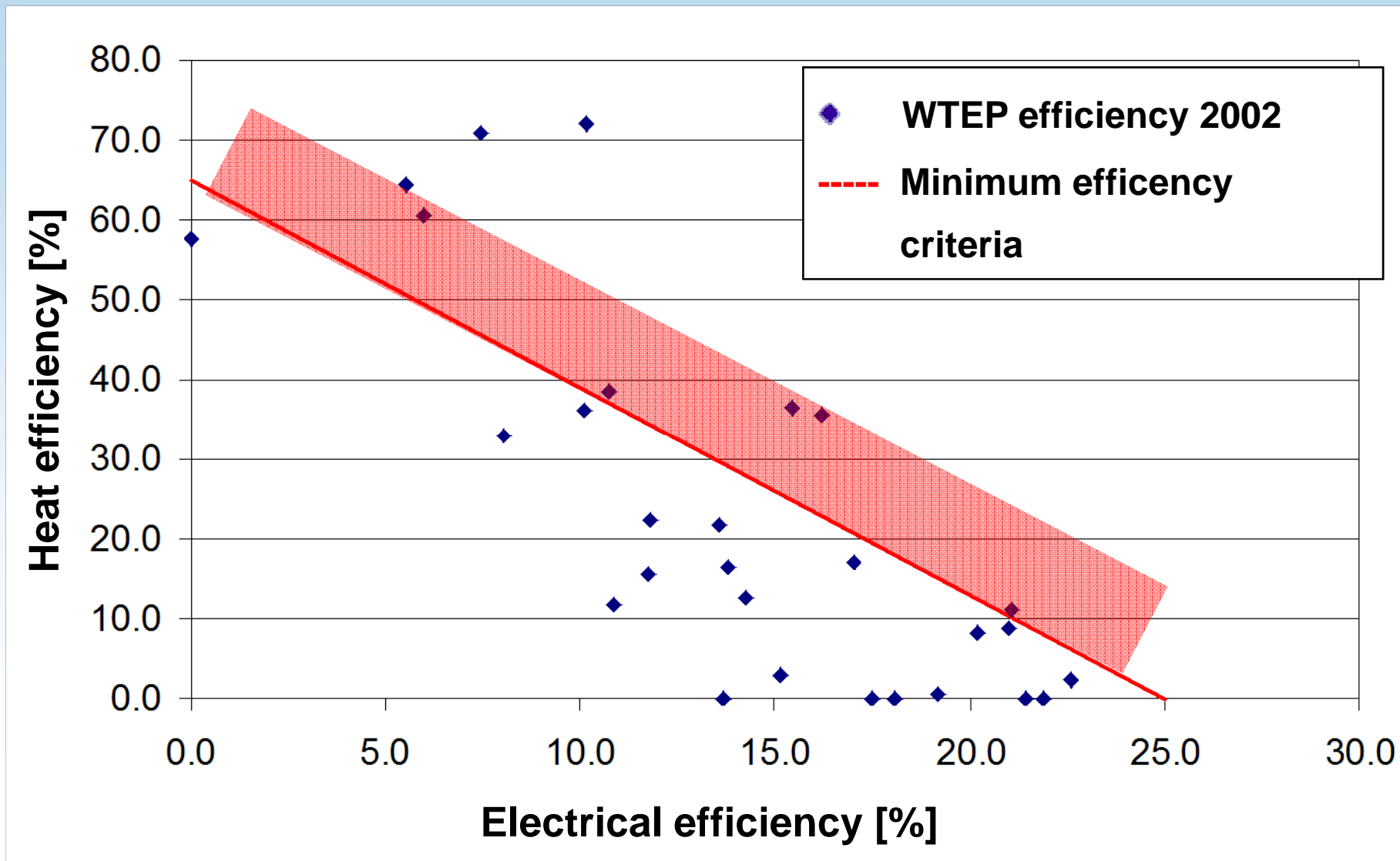
Wastes in cement kilns 2006:

- RDF^{*)} 254'000 t
- RDF 11'660 TJ
- Substitution rate 45.8%

*) RDF = refuse derived fuels



Energy from wastes



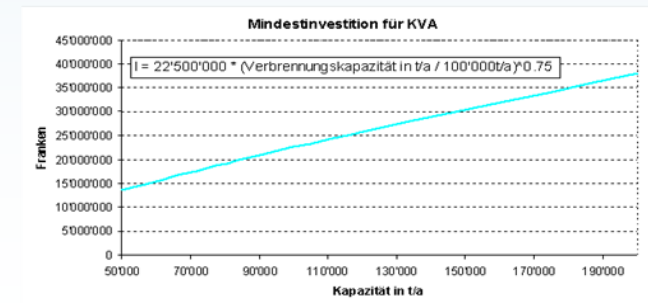
New swiss energy legislation 2008



Important target is now effective:



- New swiss legislation integrate wastes from biomass, incl. from WTEP's as renewable energy. Energy from waste = 50% renewable
- For renewed plants (25/65% + 25% more energy or 50% of energy invest.): Cost-covering remuneration for feed-in the electricity grid (CRF)
- For new plants 25/65 % efficiency to have access to CRF
- Grid-fee: $2 * \text{electricity production cost} - \text{market price}$
- Reference production cost: 6.1 €/kWh
- Renewable Fund: 200 mio€/a;
40 mio€/a for WTEP's, sewage,
wood and biogas



Marketing tool for energy from waste



Renewable Energy labels:

- Naturemade basic (hydraulics)
- Naturemade Star (photovoltaics, biogas, biomass, wind, geothermal, landfillgas)



Since April 2008: 50% energy from WTPE's can be certified with the label Naturemade Basic

Specific Criteria for WTPE's:

- Energy efficiency (25/65)
- Standard: 50% renewable, more has to be proved (exceptions)
- Minimization of bottom ash (gate fees)
- Respect of local waste management plans and communication

Label and criteria for district heating: september 2008

Marketing tool for energy from waste



Energy market:

Competition between renewable market price and CRF

Investments in energy efficiency:

Competition between energy market prices (electricity, heat) and renewable energy fund

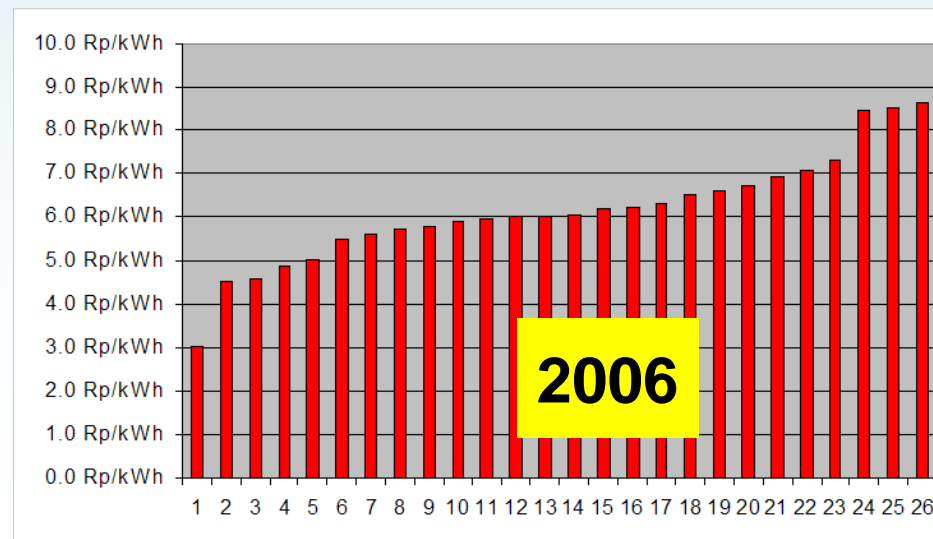
WTEP's are investing in new Turbines in 2008, even when they do not reach the criteria for the national fund

Mean electricity price:

2006: 3.1 €ct/kWh

2007: 5.6 €ct/kWh

2008: > 6.25 €ct/kWh



How to boost energy from waste ?

**Good cooperation with the stakeholders
and legal equity as basic conditions
then**

**Once again the market will be the
driver to boost energy from waste**