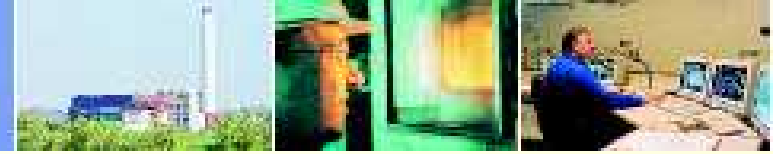
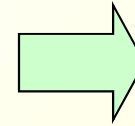
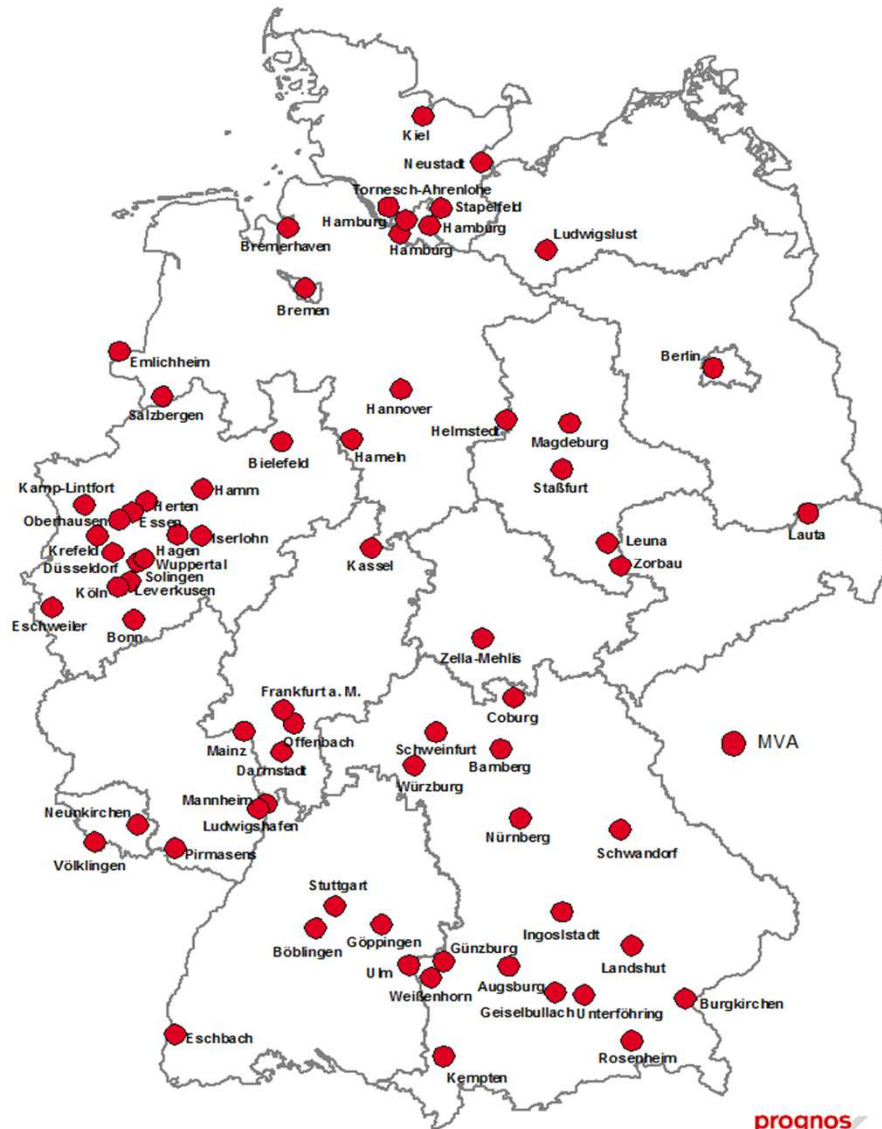


Welcome to the municipal waste incineration plant Hamm

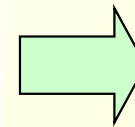




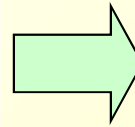
Municipal waste incineration in Germany



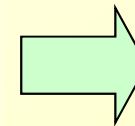
The first waste incineration plant was built in 1893 in Hamburg



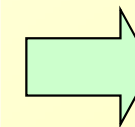
There are currently 69 municipal waste incineration plants with a total capacity of 20 million tons in Germany in operation



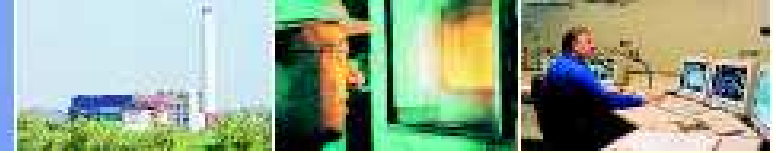
Approximately 19 million tons of household waste are burned in municipal waste incinerators



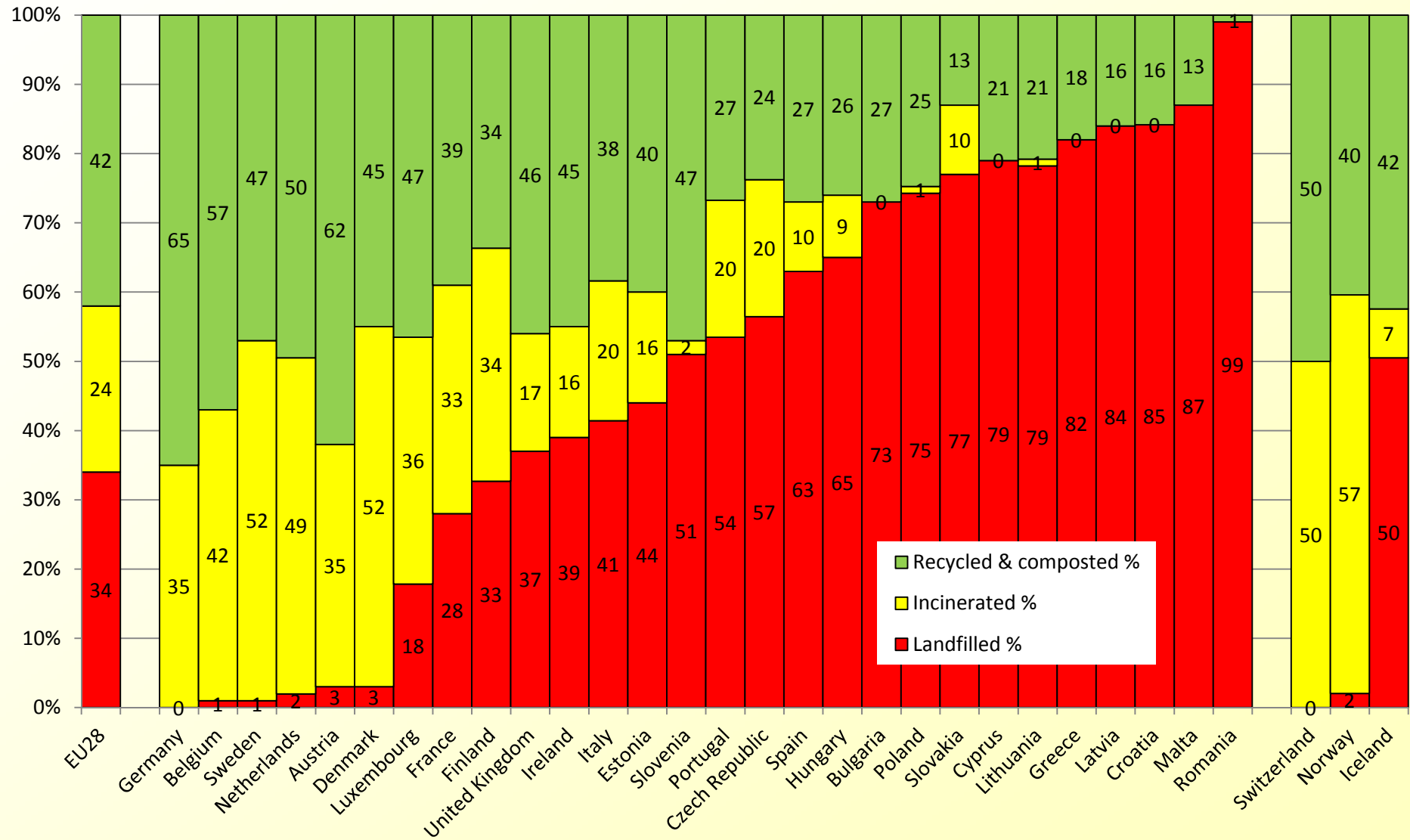
Approximately 7.7 Million MWh of electricity and 14 Million MWh of district heating are produced per year

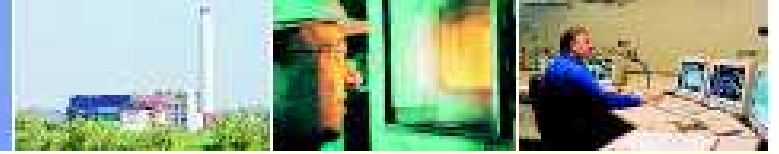


... additional to this there are incinerators for waste timber, hazardous waste and sewage sludge



Municipal waste treatment in the EU 2012





Association of municipal shareholders

➔ Municipal ownership structure of the cities of Dortmund and Hamm, as well as the counties Unna, Soest and Warendorf.

➔ Total population in this area: about 1.7 million inhabitants

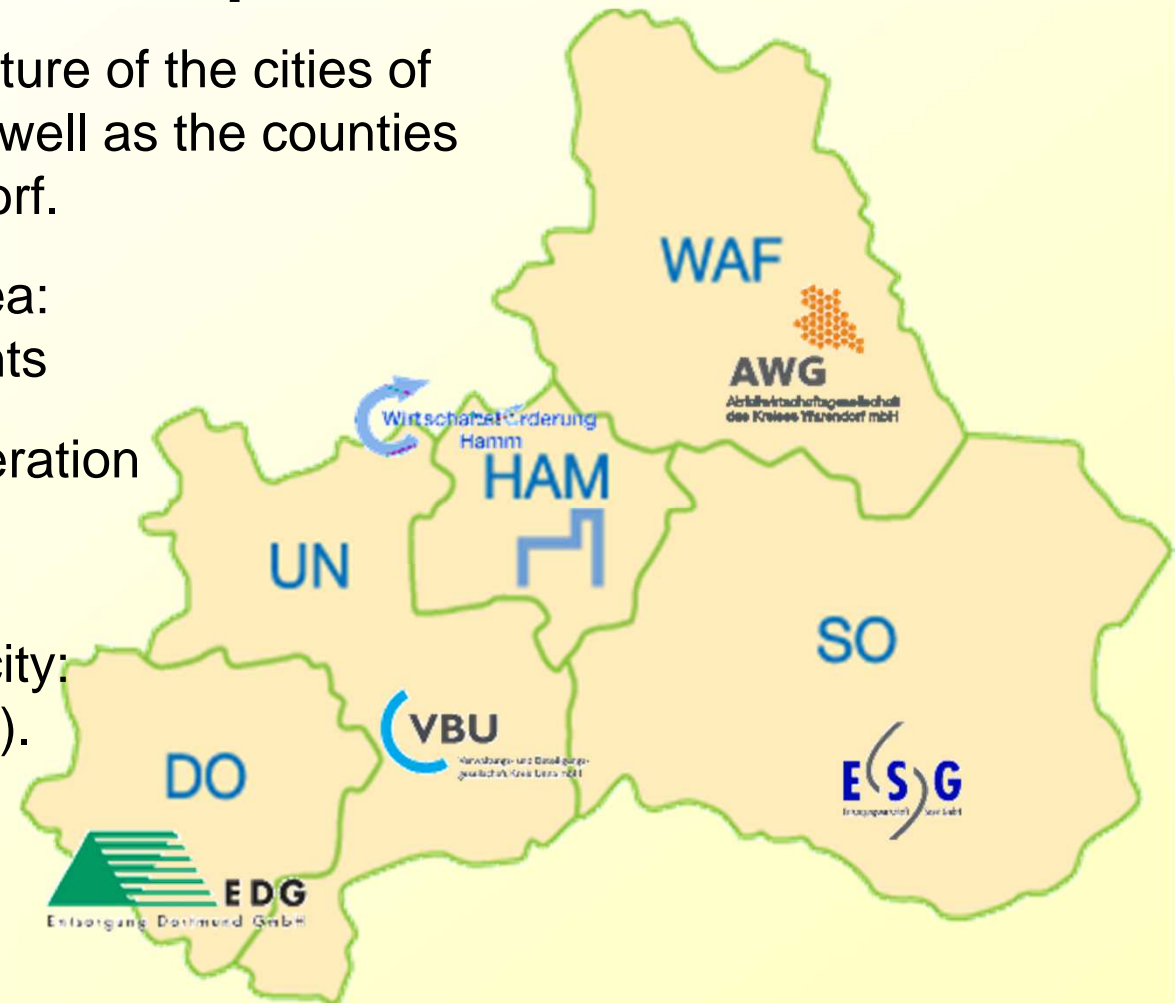
➔ The plant was put into operation in 1985 and has been continuously modernized

➔ Annual combustion capacity: 295.000 t/a * (2,6 Mio. GJ).

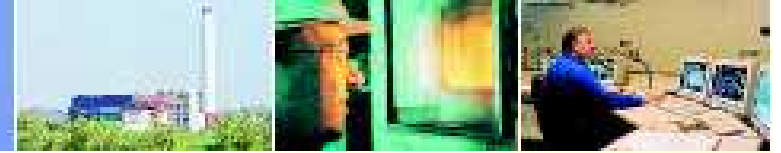
➔ Well over 90% of the waste coming from the region

➔ Important economic factor:

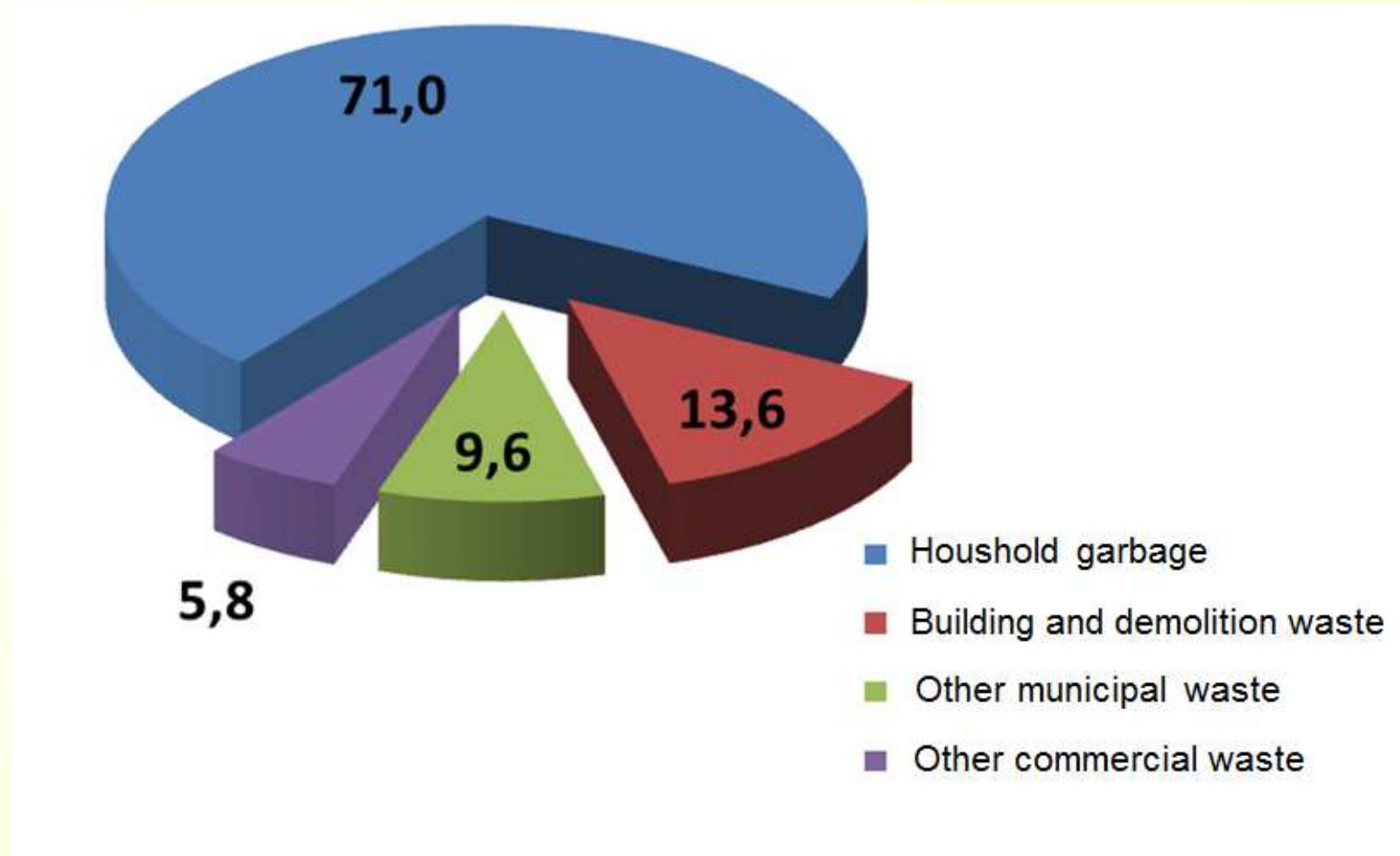
- Employer (almost 90 local employee)
- Investment and jobs for businesses



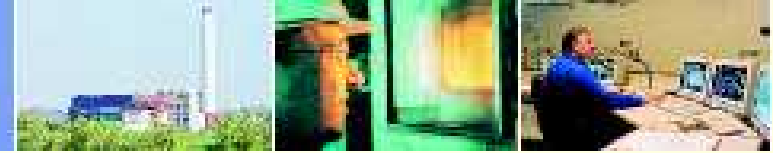
* 1 t (metric tonne) = 1.000 kg



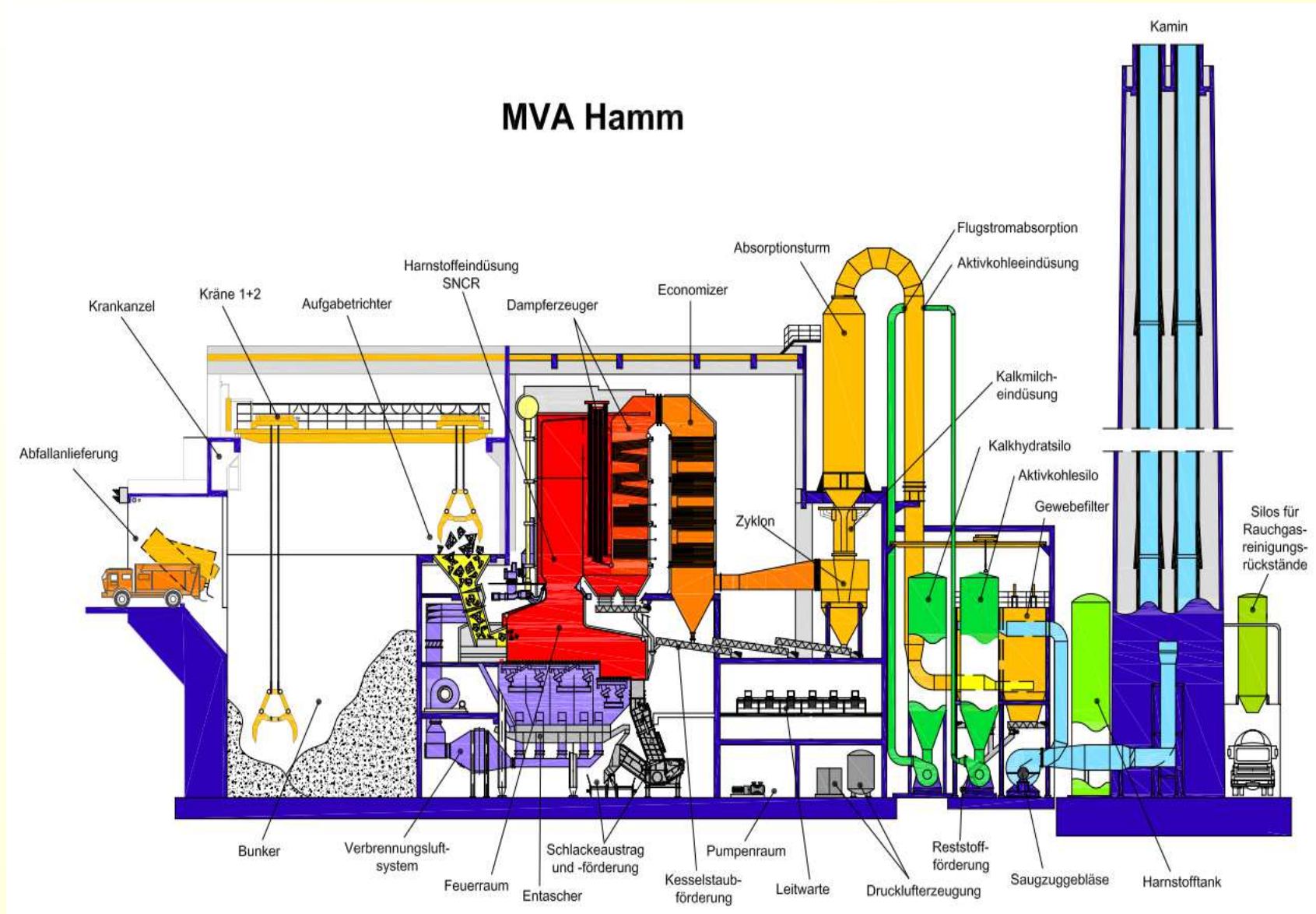
Waste input in 2013

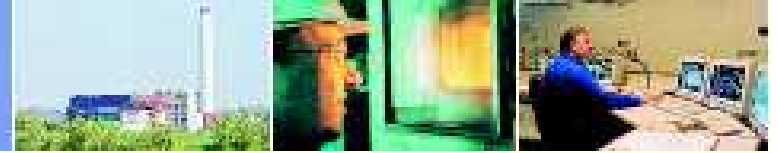


Total waste input in 2013: 280.000 tonnes

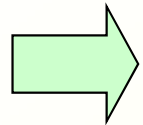


Basic plant layout

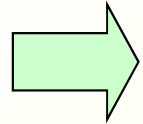




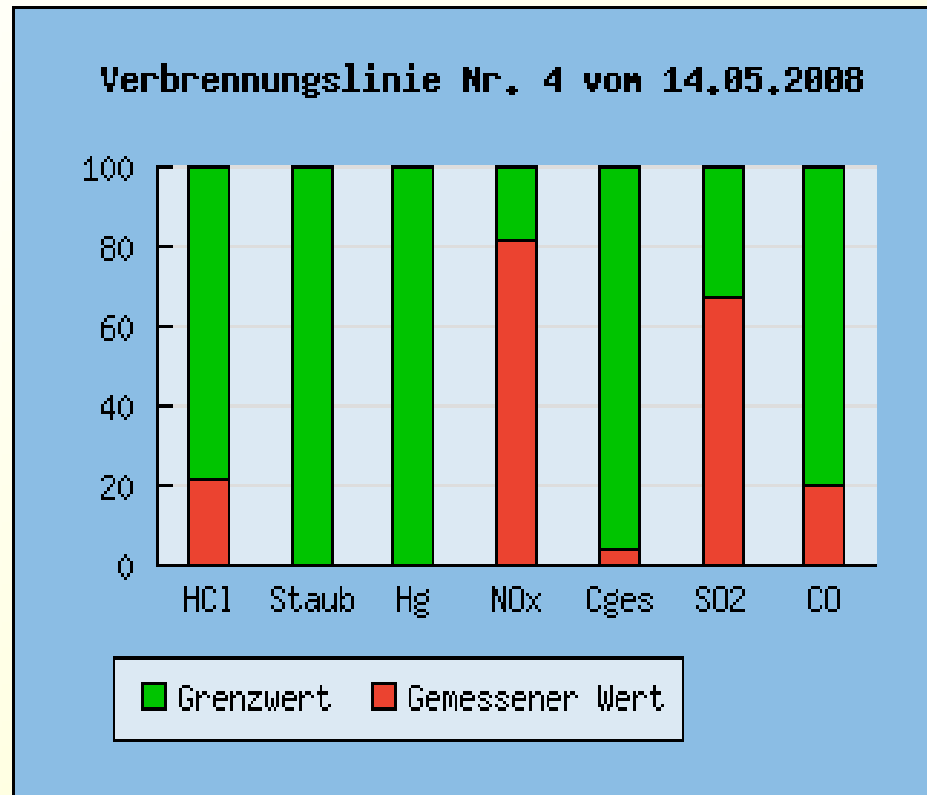
Emissions values



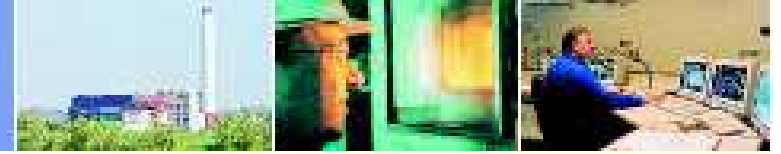
The emission limits are reliably adhered to



The emission values are published daily on the internet



| Parameter | Grenzwerte [mg / Nm ³] | Messwerte [mg / Nm ³] |
|--|--|---------------------------------------|
| Anorganische Chlorverbindungen (HCl) | 10,00 | 2,19 |
| Gesamtstaub (Staub) | 10,00 | 0,00 |
| Quecksilber (Hg) | 0,03 | 0,00000 |
| Stickstoffoxide (NOx) | 200,00 | 163,55 |
| Organische Stoffe als Gesamtkohlenstoff (Cges) | 10,00 | 0,37 |
| Schwefeldioxid (SO ₂) | 50,00 | 33,46 |
| Kohlenmonoxid (CO) | 50,00 | 10,16 |



Energy utilization



District heat
120.000 MWh



Power generation
120.000 MWh total output
95.000 MWh export to the
national grid



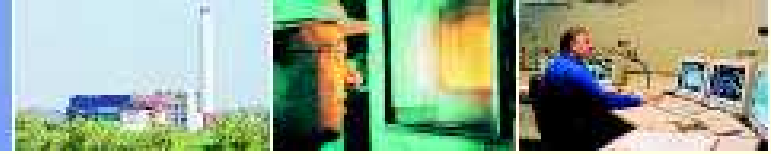
**Mobile Sorptions
Accumulator**
(potential 450 MWh)



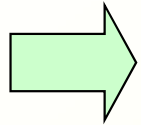
Greenhouse
(potential approx.
174.000 MWh)



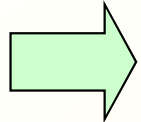
Internal heat consumption of the plant
approx. 80.000 MWh



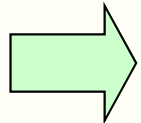
Safety instructions for guided tours



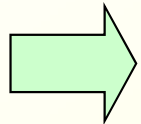
The instructions of the staff must be obeyed.



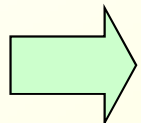
The specified path must not be left. The group must stay together.



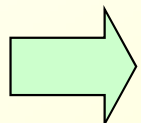
Helmets are mandatory. Appropriate footwear is required.



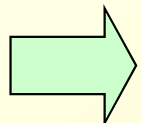
During the tour the consumption of food and beverages is prohibited. Smoking is prohibited within buildings.



Visitors with pacemakers are not allowed to enter the plant (high voltage). Due the high temperatures in the plant, people with heart problems or circulatory problems should not participate in the tour. People with a fear of heights should also not participate.



Please do not touch any parts of the plant – they may be dirty and very hot.



You are entering the facility at your own risk.