



Taking the lead
at the
Heringen site.



eeW

Energy from Waste

Welcome to EEW Energy from Waste!

Energy is the basis of our life. As fossil fuels are only available in limited quantities, using energy from waste as a resource is becoming increasingly important. As Germany's leading company in the production of environmentally friendly energy from the thermal utilisation of waste, it is our task to take the lead. With highly modern energy from waste plants that are state of the art technically and ecologically. With superbly qualified, dedicated employees. With good and effective relationships with citizens, municipalities and companies. And of course with environmentally friendly energy from waste.



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1 tonne of waste = 600 KWh of power

Power from waste is an important resource. The high calorific value of the material is comparable to that of brown coal making it virtually predestined for energy use.

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EEW Energy from Waste Heringen. Built out of responsibility for the region.

Energy from waste plants are a special kind of high-quality power plant. They not only have to meet the strictest requirements with regard to emission limits but also to satisfy the highest technical demands and are therefore continuously checked and optimised. For about 30 years, the EEW Energy from Waste Group has been planning, building and operating thermal waste recycling plants that set standards throughout Europe. New companies are being established and thus new jobs created near to the plants, which are characterised by low emissions, high efficiency and an exemplary health and safety record. At the same time, consumers and surrounding industrial companies are benefiting from the use of the energy generated in an environmentally friendly manner.

Heringen is the heart of the potash mining industry. White gold has been mined here for over 100 years. The major company, Kali+Salz (K+S), runs the Wintershall potash mine here and requires a lot of energy in the process in the form of steam and power. It was an obvious conclusion, therefore, to use the waste occurring in the region to meet these needs in ways that make sense in energy terms. This has been happening since 2009 in partnership with K+S in EEW's energy from waste plant on the site of the potash mine in Heringen. Today, 954,000 megawatt hours of process steam are generated here which is supplied to the potash mine. In return, up to 297,600 tonnes of household and commercial waste together with refuse derived fuels are safely recycled here every year with low emissions. For more energy and to protect the environment. That is something we are proud of.

An overview of how an EEW plant works.

1

Every week, up to 6,000 tonnes of waste are transported to the energy from waste plant.

2

The fuel is collected and placed in interim storage in the waste bunker which has a capacity of around 7,500 tonnes. A slight underpressure is maintained to ensure that no emissions or odours can escape. Environmental protection starts right there.

3

The crane driver mixes the waste and transfers it continuously to the feed hopper from where it reaches the combustion grates for the two lines (boilers).

4

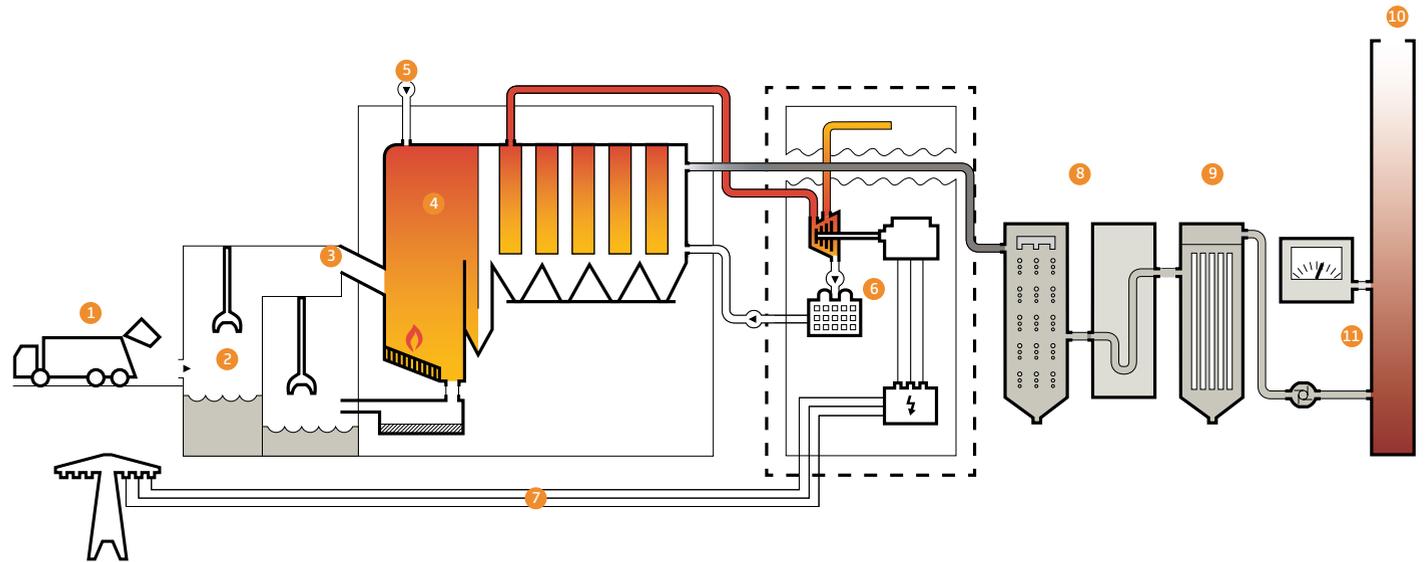
As waste self-combusts at the high temperatures in the boiler, no additional fossil fuels are required. Only when the boiler is powered up and powered down are gas burners switched on in order to guarantee the minimum temperature of 850 °C. This high temperature is required to ensure that pollutants are largely destroyed.

5

By adding ammonia water, nitrogen oxides are converted to environmentally neutral nitrogen and water.

6

Around 160 tonnes of steam are generated every hour from the thermal energy of the two boilers. The temperature is increased to 520 °C for the potash mine. Only then is the steam fed to the steam turbine in the Wintershall mine where the heat is converted to power by means of cogeneration and the required process steam is removed.



7

Approx. 954,000 megawatt hours of process steam are generated in this way.

8

After the boiler, the flue gases reach the three-stage flue cleansing system. The first stage is the spray absorber where the acidic pollutants are treated with lime milk with which they react to form atomised lime salts which are transported further with the flue gas. In the second cleansing stage, the diversion reactor, hearth furnace coke is added in order to bind gaseous heavy metal compounds of dioxins and furans.

9

The flue dust, lime salts and contaminated hearth furnace coke dust are then captured in the bag filter which constitutes the third cleansing stage, and continuously eliminated in the form of residual material.

10

The cleansed flue gases now reach a gas analysis section where continuous monitoring takes place to ensure that limits are being met, and then leave the combustion system via a 70 m flue gas chimney. What remains is slag, flue ash and filtration dust. The bottom ash is recovered and used for road-building and landfill. Flue ash and filtration dust are used by K+S as back-filling material in mines.

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The plant easily complies with the strict statutory emission limits and in most cases is substantially below them.

It is also interesting to note that the EEW Heringen location produces no waste water. Dirty water is captured and used during flue gas cleansing. The same applies to rainwater occurring at our facility.



Jürgen Heß, Maintenance Electrician with EEW Energy from Waste Heringen GmbH

Technical data

Commissioning	2009
Total investment	130 million euros
Capacity	297,600 tonnes/year
Number of combustion lines	2
Waste bunker capacity	15,000 cubic metres \approx 7,500 tonnes
Calorific range of waste	8 - 18 megajoules/kilograms
Combustion temperature	> 850 °C
Process steam generation	954,000 megawatt hours/year



**Taking the lead
for the air purity
requirement.**

We're improving the CO₂ balance.

A benefit for the environment.

Energy generation from waste is active environmental protection. With an averageshare of 50% biogenic substances in waste , it is recognised that energy from waste plants produce energy from renewable sources pursuant to the Renewable Energies Act (EEG) and thus help to achieve the climate goals in Germany and Europe.

Also exemplary: the emissions of our waste recycling plant easily comply with the strict statutory regulations of the Federal Immissions Control Act (Bundesimmissionsschutzverordnung) and are substantially below them in some cases. This is documented by the seamless emissions control by the supervisory authority.

Ideally, come and see for yourself and take a look in person by visiting our plant. You will discover that at EEW Energy from Waste, we give waste a job in climate protection.



Our annual environmental contribution.



Up to 297,600 tonnes
of recycled waste



954,000 megawatt hours
of process steam produced with
energy-saving technology



We tackle the future. And assume responsibility.

More than 145 years – that is how long our expertise has been built on progress. Founded in 1873 as Braunschweigische Kohlen-Bergwerke (BKB), the company was soon also operating as a power generator and has grown steadily to the present day. EEW Energy from Waste entered the waste combustion sector as early as 1990 and today is the most experienced company with the greatest expertise in the environmentally friendly generation of power from thermal waste recycling. As the market leader in Germany, we make a substantial contribution with 18 plants here and in neighbouring countries to resource management and to a reduction in greenhouse gas emissions.

Our figures speak for themselves:

Our plants have a yearly energy recycling capacity of around 4.7 million tonnes of waste. This means that we generate approx. 2.4 million megawatt hours of power and 2.6 million megawatt hours of process steam and 900,000 million megawatt hours of district heating.* The power volume produced by EEW alone corresponds to the electricity requirements of around 700,000 households.**

Around 1,150 highly qualified, dedicated employees are sending a clear signal with energy which provides a benefit not only to numerous companies, but also hundreds of thousands of households and particularly the environment.

References:

* Power, district heating and steam volume

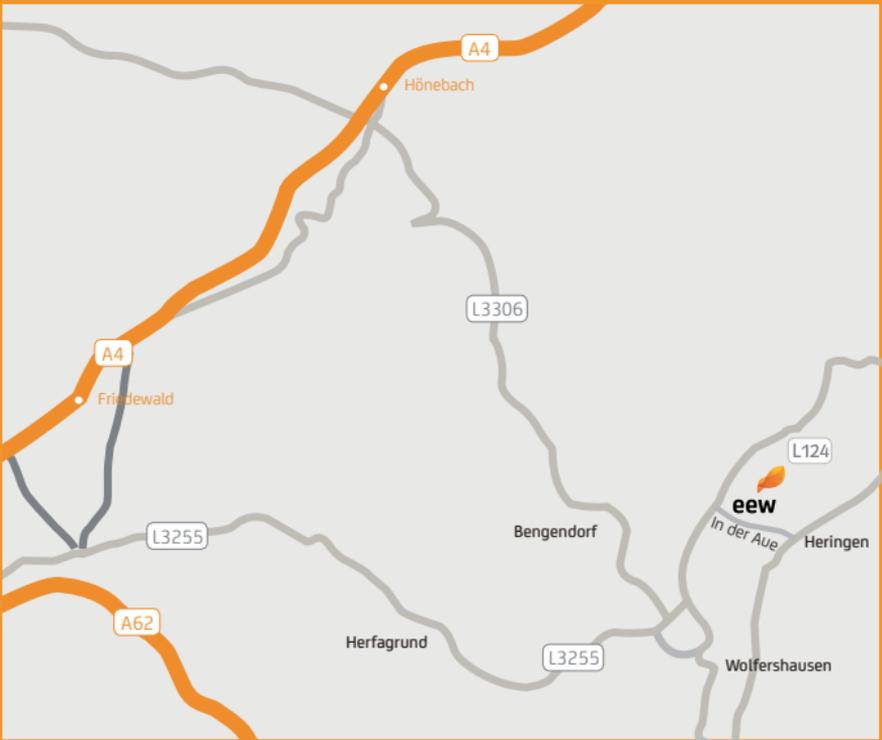
produced by our currently 18 EEW Energy from Waste plants in 2017

** Assumed annual average requirements per household: 3,450 kWh



We are not resting on our laurels; instead, we are continuously improving the processes and the efficiency of our plants. Ultimately we offer municipalities and companies pioneering waste management that keeps an eye on every aspect: we offer customised waste disposal concepts, accept the waste and also take care of the statutory documentation procedure. With outstanding performance and equal acceptance among the general population and local residents.

This is how we take the lead. Together. For our future.



Would you like to find out more
or visit the EEW site in Heringen?
You are very welcome! Simply contact us at:

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