



Taking the lead
at the
Schwedt site.



Welcome to EEW Energy from Waste!

Energy is essential to everyday life. Since the availability of fossil fuels is limited, the use of energy from waste is becoming increasingly important. As Germany's leading company in the production of environmentally friendly energy from thermal waste recovery, it is our mission to take the lead: With ultra-modern energy from waste plants. With state-of-the-art technology that meets the latest environmental standards. With highly qualified, dedicated employees. With good and constructive 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 electricity**

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

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EEW Energy from Waste Schwedt. Built to serve the region.

Energy from waste plants are a special kind of high-quality power plant. They not only have to comply with very strict emission limits, they must also satisfy the highest technical demands, and are therefore continuously monitored and optimised. For around 30 years, the EEW Energy from Waste Group has been planning, building and operating thermal waste recovery plants that set standards across Europe. In the vicinity of our plants, which stand out for their low emissions, high efficiency and excellent workplace safety, new companies and thus new jobs are being created. At the same time, consumers and nearby industrial firms benefit from using the environmentally friendly energy that EEW generates.

Germany declared the Lower Oder Valley, with its riparian forests, waterways and vast reed beds, a national park in 2006. Schwedt, the economic hub of the Uckermark region, has a particular responsibility towards this nearby natural paradise. It is therefore all the more important that the high energy demand of the local paper industry – the fourth-largest paper-producing region in Germany – is met in an environmentally friendly way. To this end, in cooperation with paper company Georg Leinfelder GmbH (LEIPA), EEW Energy from Waste built the Schwedt power plant in 2010. The thermal waste recovery plant efficiently generates around 175,000 megawatt hours of electricity and 602,000 megawatt hours of process steam every year. To produce this energy, up to 330,000 tonnes of residues from paper production as well as refuse derived fuel (RDF, specially processed commercial and industrial waste with a significantly higher calorific value) are recovered every year in a safe, low-emission process. We are proud to take the lead – for energy in the region and for environmental protection.

An overview of how the EEW Schwedt plant works.

1

Every week, residues from paper production and several thousand tonnes of refuse derived fuel (RDF) are transported to the energy from waste plant and processed in a treatment plant.

2

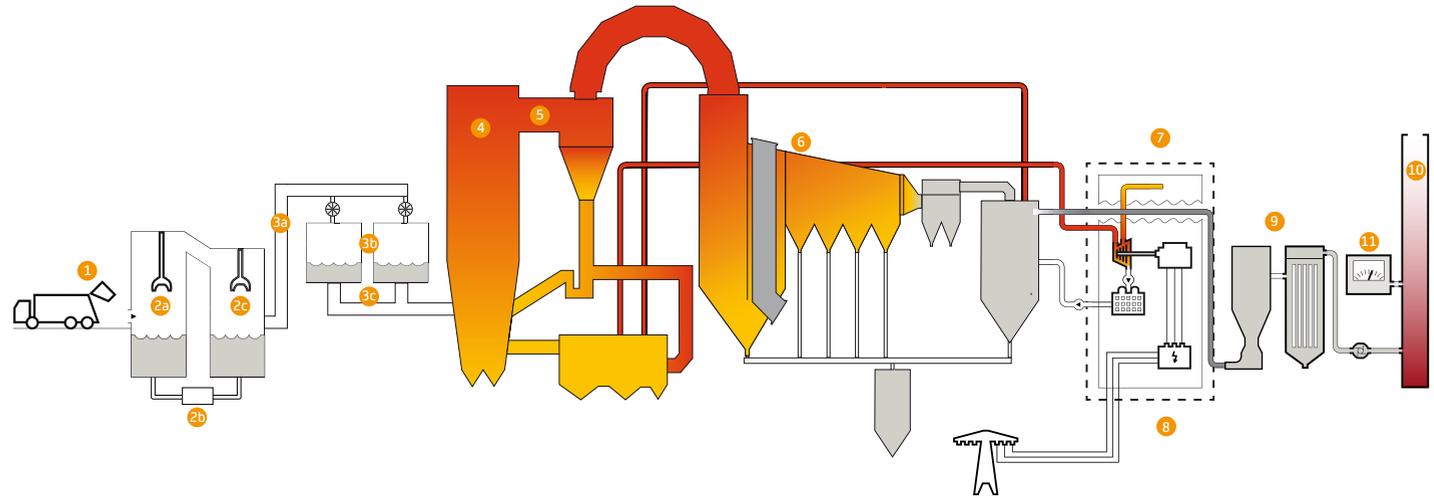
The waste is temporarily stored and mixed in the raw product bunker (2a), then undergoes further treatment in the treatment plant (2b) and is stored in the finished product bunker (2c). The air pressure is kept slightly negative in the bunker and treatment plant so that no emissions, such as odours, can escape. Environmental protection is therefore integral right from the start.

3

From the finished product bunker, the fuel is transported via a roughly 400 m long tubular belt conveyor (3a) into the two intermediate silos (3b) and is then available for the dosing system (3c).

4

The fuel is now continuously injected into the combustion chambers of the circulating fluidised bed. As waste self-combusts at the high temperatures in the boiler, no additional fossil fuels are required. Oil and gas burners are only activated when the boiler is powered up or down in order to guarantee the minimum temperature for EBS feeding. This high temperature is legally stipulated to ensure that pollutants are largely destroyed.



5

By injecting urea between the combustion chamber and the cyclone of the circulating fluidised bed, the nitrogen oxides present are converted into environmentally neutral nitrogen and water.

6

From there, the flue gas travels through the waste heat boiler, the fly ash separator and the economiser into the flue gas cleaning, where pollutants are reduced to a minimum.

7

The combustion process produces nearly 155 tonnes of steam every hour. At a pressure of 70 bar and a temperature of 470 °C, the steam drives an extraction-condensing turbine connected to a generator.

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Approximately 175,000 megawatt hours of electrical energy and 602,000 megawatt hours of process steam for paper production at LEIPA are produced in this way every year.

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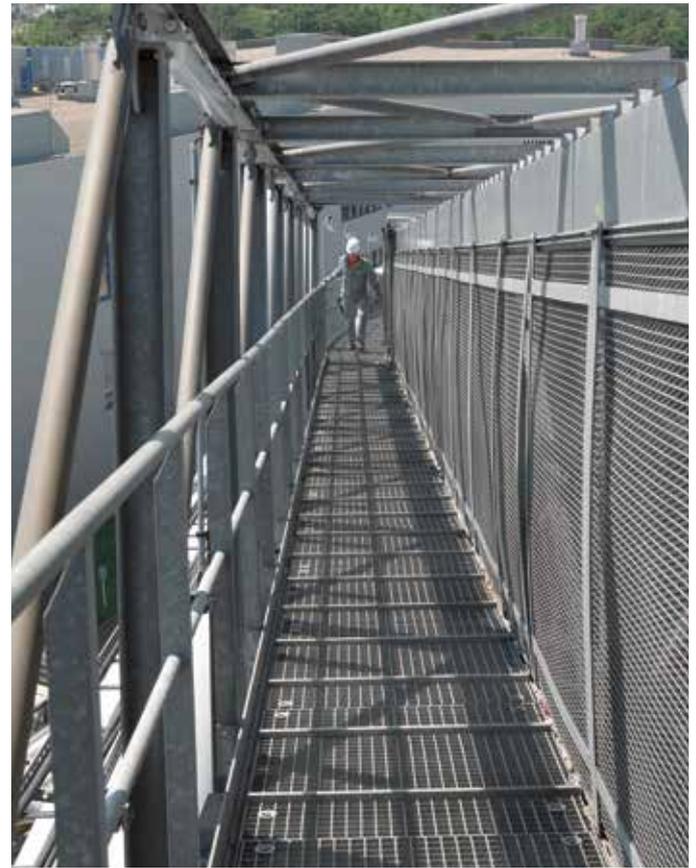
During the flue gas cleaning, lime hydrate and hearth furnace coke are added. These bind with other pollutants such as hydrogen chloride and heavy metals. The resulting solid matter is captured by the downstream fabric filter and removed as filter dust.

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After the cleaning process, the clean gas then leaves the 100 m stack. What remains is bed ash, fly ash and filter dust. The bed ash is recovered and used for the construction of roads and landfills. Fly ash and filter dust are used as backfilling material in mines.

11

The plant easily complies with the particularly strict statutory emission limits. A measuring station at the stack continuously analyses and monitors the emissions.



Technical data

Commissioning	2011
Total investment	€ 160 million
Capacity	330,000 tonnes/year
Number of combustion lines	1
Waste bunker capacity	17,000 cubic metres ≈ 5,000 tonnes
Calorific range of waste	8 - 25 megajoules/kilograms
Electricity generation	175,000 megawatt hours/year ≈ 50,000 households
Process steam generation	602,000 megawatt hours/year



**Taking the lead
to ensure
clean air.**

We shrink the carbon footprint.

A benefit for the environment.

As waste contains 50 per cent biogenic substances on average, it is recognised that energy from waste plants produce energy from renewable sources pursuant to the Germany's Renewable Energy Sources Act (EEG) and thus contribute to reaching the climate targets in Germany and Europe.

Another area where we take the lead: The emissions from our waste recovery plant reliably comply with – and are sometimes substantially below – the strict limits established by the German Federal Immission Control Act.

This is documented by constant emissions monitoring and controlled by the supervisory authority.

Ideally, come and see for yourself during a tour of our plant. You will discover that at EEW Energy from Waste, we put waste to work for climate protection.



Our annual contribution to environmental protection:



Up to 330,000 tonnes
of waste recovered



175,000 megawatt hours
of electricity generated in an
environmentally friendly manner



Electricity produced in an
environmentally friendly manner
for 50,000 households



602,000 megawatt hours
of process steam produced with
resource-conserving technology



We tackle the future. And assume responsibility.

For more than 147 years, our expertise has been built on progress. Founded in 1873 as the coal mining firm Braunschweigische Kohlen-Bergwerke (BKB), the company soon also became an electricity producer and has evolved steadily to the present day. Having entered the waste treatment business in 1990, EEW Energy from Waste now has a great wealth of experience and expertise in environmentally friendly energy generation from thermal waste recovery. As the market leader in Germany, with our 17 plants here and in neighbouring countries we make a substantial contribution to conserving resources and reducing greenhouse gas emissions.

Our figures speak for themselves:

Our plants have an annual energy recovery capacity of more than 5.0 million tonnes of waste. We can thus produce around 2.5 million megawatt hours of electricity, more than 2.8 million megawatt hours of process steam and around 1.0 million megawatt hours of district heating. EEW's electricity output alone corresponds to the power required by around 720,000 households.** Our team of around 1,250 highly qualified, dedicated employees takes the lead by producing energy that benefits not only numerous companies but also hundreds of thousands of households and, most importantly, the environment.

References:

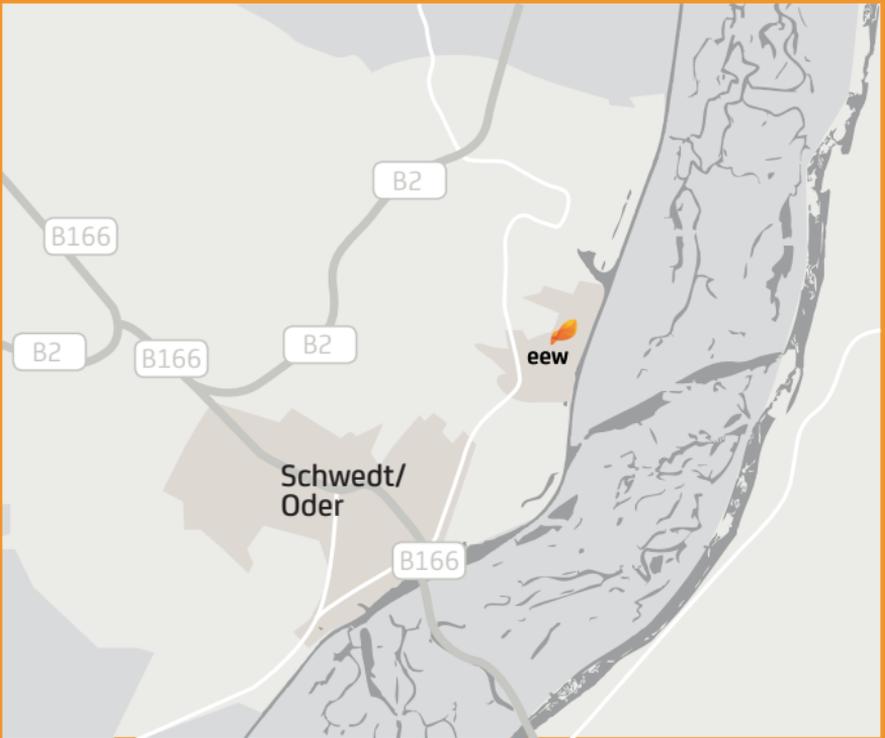
* Electricity, district heating and steam volume produced by 18 EEW Energy from Waste plants in 2020

** Assumed annual average consumption per household: 3,500 kWh



Rather than resting on our laurels, we continuously improve the processes and efficiency of our plants. Ultimately, we offer municipalities and companies pioneering waste recovery services that encompass everything from customised waste management concepts to waste acceptance and compliance with the statutory waste transfer documentation. We deliver outstanding performance and achieve a high level of 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 Schwedt?
Please get in touch! You can reach us at:

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2021-07