Thermal and Biological Energy from Waste: an Efficient, Environmentally Sound Solution for Modern Cities.

With 80 years of experience, over 500 reference projects, and the expertise of more than 400 dedicated employees, we are a partner you can rely on. Efficient and environmentally sound waste treatment solutions based on inhouse technology and provided on a turnkey basis for your benefit. Our holistic approach always centers on optimizing the investment and operating costs of your project. Throughout the life cycle of their plant, our clients benefit from Hitachi Zosen Inovas (HZI) technologies and innovations.

| A Clean Environment Forms the Basis of Life |
Thermal waste treatment based on grate combustion is tried-and-tested, economical, and efficient. And it also plays a key role in achieving carbon-neutral energy production as well as recovering valuable materials. Our state-of-the-art thermal waste treatment facilities safely and sustainably meet the most stringent emissions rules. Non-recyclable waste is thus used productively without detriment to the environment or human health.

| Maximum Efficiency guaranteed |
Energy of hot combustion gases, in the form of steam or hot water, is converted to marketable energy. Of the energy initially contained in the waste, 60–90% is recovered and made available for use by households and industry. Whether it is to supply electric power and/or heat resp. cold to a city or to meet the energy requirements of an industrial plant, energy from waste is environmentally safe, reliable, and economical.

You benefit from our experience in using state-of-the-art engineering to optimize energy extraction and flue gas treatment solutions – lowering your plant’s emissions and reducing the costs. You can also recover valuable residues and close the resource cycle.

| Thermal Waste Treatment – a Sustainable Process |
Municipal solid waste is delivered to the site and stored in a bunker. Once the fuel has been thoroughly mixed, it is fed into the feed hopper by crane. Once in the feed hopper, the fuel is pushed onto the proven Hitachi Zosen Inova grate by a ram feeder. A fully integrated control system ensures stable and efficient operation and optimized fire position on the grate. When the fuel has been completely burnt, the remaining ash falls into the bottom ash extractor, from where it can be taken to a bunker or storage area for further use.

The syngas released from the combustion of the waste are mixed with secondary and recirculated flue gas. This allows complete burnout of the flue gas for very low CO emissions. The recirculation of flue gas also enhances the efficiency of the plant. The energy released by the combustion process in a boiler is used to produce superheated steam, which is expanded in a turbine.
Energy from Waste – Closed-Cycle Waste Management

We see thermal and biological waste treatment as an integrated part of a modern waste management concept. Rather than focusing primarily on getting rid of waste for reasons of hygiene, this approach centers on using it productively for the benefit of society as a whole. Energy from Waste is the element that closes the process to allow the full reintegration of materials, compost and energy into the product cycle.

Our Commitment to the Future

Proper waste disposal combined with energy production is a global need. Our integrated solutions help ensure a clean, healthy, and prosperous environment by enabling the environmentally sound disposal of waste and simultaneous energy generation. Our indepth know-how in international turnkey delivery makes your project bankable and financially viable. On time and on budget delivery is our way of doing business.

The flue gas cleaning keeps the plant in full compliance with emission limits under any operating conditions. The flue gas treatment residues are separated in a fabric filter, and are recycled or sent to an appropriate landfill for safe disposal. The disposed-of residues amount to 3–5% of the waste treated by the facility. The clean flue gas is finally released into the atmosphere through a stack.

The Kompogas® Technology – Energy from Organic Waste

Responding to a global trend of recycling organic waste, either recovered from municipal solid waste or segregated at the source, HZI owns now another first-class technology: The Kompogas® technology. Established more than 20 years ago, today there are more than 75 plants in operation worldwide using the continuous dry Anaerobic Digestion (AD) technology of Kompogas. The Kompogas process stands for highest reliability and safety, cost-effectiveness and user-friendliness. Based on standardized digester modules in steel or concrete, HZI is able to offer AD plants with throughput capacities from as low as 20,000 Mg/a up to several 100,000 Mg/a. Our modular system allows us to deliver AD as turnkey biowaste stand-alone plants, mechanical-biological treatment (MBT) plants or large integrated waste management centres combining material recycling, dry AD and thermal treatment.

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| About Hitachi Zosen Inova
Zurich-based Hitachi Zosen Inova (HZI) is a global leader in energy from waste (EfW), operating as part of the Hitachi Zosen Corporation Group. Formed from the former Von Roll Inova, HZI acts as an engineering, procurement and construction (EPC) contractor delivering complete turnkey plants and system solutions for thermal and biological energy-from-waste recovery. Its solutions are based on efficient and environmentally sound technology, are thoroughly tested, can be flexibly adapted to user requirements, and cover the entire plant life cycle. The company’s customers range from experienced waste management companies to up- and-coming partners in new markets worldwide. HZI’s innovative and reliable waste and flue gas treatment solutions have been part of over 500 reference projects delivered since 1933.

We deliver. Check our references.