Regional energy transition: MAN technology to support expansion of supplies in Germany’s Ruhr region

- MAN Diesel & Turbo supplying technology for combined heat and power to regional disposal company
- Trend toward decentralized electricity and heat production highlights transition in the energy landscape.

In the German city of Herten, in the Ruhr region, a waste-to-energy plant is about to supplement its electricity and heat production with a steam turbine by MAN Diesel & Turbo. The operator of the plant, Abfallentsorgungsgesellschaft Ruhrgebiet [Ruhr Waste Disposal Company], has ordered the highly flexible MAN turbine of the MARC series to raise its output of both district heating and electric power. The climate-friendly expansion of regional supplies will provide additional heating energy for around 25,000 households in the district heating network of the Ruhr region, which is also currently being expanded.

In total, six combustion lines in Herten generate high-energy steam, converted by steam turbines and generators to electrical power and district heating. In the cooler months of the year, the focus is on decoupling district heating as heat energy; in the summer the emphasis is on power generation. The additional MAN Diesel & Turbo steam turbine generator set will support this varying operation with a maximum degree of flexibility and efficiency.

"Projects such as this demonstrate the transition that is going on in the energy landscape," explains Holger Kube, Head of Sales Power Generation at system manufacturer MAN Diesel & Turbo in Oberhausen. "Smaller steam turbines such as our MARC series are used primarily by regional suppliers and industrial companies. Away from large-scale power plants, they generate electrical power and heat both for local demand and for feeding into the grid. For this decentralized form of power generation, various fuels are used. In addition to waste, this is also biomass or the waste heat from industrial processes."

He adds: "In the medium term, we foresee a trend toward such plants in the small to medium output range, and not just in Germany. Besides the pure efficiency, flexibility is a deciding factor, allowing the operator to respond to
fluctuating supply and demand requirements. While the requirements for the plant in Herten vary seasonally, the requirements of the energy market as a whole are increasing, in part due to the fluctuating supply from renewable sources. Here, efficient, flexible and reliable solutions are needed," Kube explains.

About MAN Diesel & Turbo
MAN Diesel & Turbo SE, based in Augsburg, Germany, is the world's leading provider of large-bore diesel and gas engines and turbomachinery. The company employs around 14,500 staff at more than 100 international sites, primarily in Germany, Denmark, France, Switzerland, the Czech Republic, India and China. The company's product portfolio includes two-stroke and four-stroke engines for marine and stationary applications, turbochargers and propellers as well as gas and steam turbines, compressors and chemical reactors. The range of services and supplies is rounded off by complete solutions like ship propulsion systems, engine-based power plants and turbomachinery trains for the oil & gas as well as the process industries. Customers receive worldwide after-sales services marketed under the MAN PrimeServ brand.