Siemens celebrates 1,000 gas turbines from Berlin: electricity for one billion people

- 1,000 gas turbines have an installed capacity of nearly 220 gigawatts
- More than 90 percent of the machines produced in Berlin were exported
- 1,000th gas turbine on its way to the Umm Al Houl power plant in Qatar

Today, the Siemens gas turbine factory in Berlin is shipping its 1,000th gas turbine manufactured at the plant. The SGT5-4000F gas turbine, which has a capacity of 300 megawatts (MW), weighs 300 metric tons and is destined for the Umm Al Houl combined cycle power plant in Qatar. The total installed capacity of the 1,000 gas turbines produced in Berlin, amounting to nearly 220 gigawatts (GW), would be sufficient to theoretically supply approximately one billion people* with electricity. The total capacity of the 1,000 gas turbines is thus equivalent to the installed power generating capacity of Spain and Italy. More than 90 percent of the 1,000 gas turbines produced in Berlin have been exported.

“1,000 Siemens gas turbines from Berlin for customers in 65 countries around the world – we have good reason to be proud of this achievement,” said Willi Meixner, CEO of the Siemens Power and Gas Division. “This huge volume is only possible because Siemens supplies the global market and continuously drives the competitive further development of its products forward.” Ever since it shipped its first gas turbine in 1972, the Berlin gas turbine factory has been a reliable partner with extensive expertise and today continues to provide its customers with the right solutions for their needs.

The milestone machine is an SGT5-4000F gas turbine. The first one of its kind was shipped in 1996 and had a capacity of 240 MW. Over the past 20 years, Siemens has sold approximately 400 gas turbines of this type in 40 countries around the world.

*Assumption for calculation: mean value for the capacity of the 1,000 gas turbines, power production 24/7 per year, average power consumption of a four-person household of 4,400 kWh per year.
world. This turbine model now has a capacity of 300 MW.

The gas turbine is one of a total of six SGT5-4000F turbines for the Umm Al Houf combined cycle power plant. Siemens is supplying ten SGen5-1200A generators and four SST-4000 steam turbines as additional key components for this plant with a total capacity of 2.5 GW. In addition to electricity, the integrated seawater desalination plant produces up to 618 million liters of drinking water per day for the people of Qatar. Siemens has also signed a 25-year service agreement for the plant’s maintenance and servicing. The power plant is scheduled to go into operation in mid-2018.

“We are very pleased to be cooperating with Siemens for this important new power plant. With proven technology and Siemens as our trusted service partner, we are looking forward to the reliable operation of the power plant for many years to come,” said Jamal Al Khalaf, CEO of Umm Al Houf Power Q.S.C. “We are proud that the anniversary gas turbine is destined for our power plant in Qatar. This history of 1,000 gas turbines from Berlin is a sign of the reliability, quality, and continuous improvement inherent in Siemens technology. Congratulations! And we look forward to welcoming Siemens’ 1,000th gas turbine to Qatar.”

As it embarks on its journey to Qatar, the gas turbine will first be shipped from the factory to Berlin’s Westhafen port. From there, it will travel by barge to Rotterdam. Upon arriving at the seaport, the gas turbine will be loaded onto a heavy cargo vessel. It will pass through the Atlantic Ocean to the Mediterranean Sea via Gibraltar. The machine will then enter the Red Sea through the Suez Canal, round the Arabian Peninsula, and finally reach Qatar.

The Berlin turbine factory was founded in 1904. Initially producing steam turbines, the factory shipped its first gas turbine for power plants in 1972, which was delivered to Electricity Trust of South Australia. The first Siemens ETSA 1 gas turbine from Berlin had a capacity of 62.5 MW. It is still in standby operation today and has its original turbine and compressor blades. Since then, gas turbine technology has undergone rapid development. Gas turbines uniquely combine classic heavy machinery construction with ultramodern production technology, such as additive manufacturing, for example. Components – from extremely heavy to tiny – are
assembled using the most advanced methods and with clockwork precision. It takes the engineers and technicians several months to produce one gas turbine. The result, in the case of H-class turbines, is a machine with a capacity in the 400 MW range. This power is sufficient to supply a city of 2.4 million people with electricity. The capacity of a single H-class gas turbine is equal to that of 1,300 Porsche 911 turbos or ten Airbus 380 aircraft.

This press release, press pictures and infographics are available at:
www.siemens.com/press/PR2016040258PGEN
For further information on the 1,000th gas turbine from Berlin, please see:
www.siemens.com/press/1000-gasturbines
For further information on Division Power and Gas, please see:

Contact for journalists
Kerstin Schirmer
Phone: +49 9131 18-83481; E-mail: kerstin.schirmer@siemens.com

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