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Improved capacity and efficiency: First repowering project of Siemens in Russia added 500 MW installed capacity to Kirishi Unit 6

Siemens' first repowering project in Russia was officially inaugurated on March 23, 2012 by the Russian Prime Minister Vladimir Putin. The project at the Kirishi power plant Unit 6 involved upgrading of a previously gas fired steam turbine power plant unit to an efficient combined cycle power plant (CCPP). This increased the installed capacity of the plant by almost three times, from 300 Megawatts (MW) to 800 MW. Valuable natural gas resources will now be utilized much more efficiently and the customer will profit from substantial cost benefits. The customer and plant operator is the Russian power provider OGC-2 JSC, a subsidiary of Gazprom Energo Holding OOO/LLC.



Kirishi is a town known for its petrochemical industry center located 150 kilometers south-east of Saint Petersburg. The power plant site consisted of six gas-fired steam turbine power units with an efficiency of less than 40 percent. One of these units has now been converted into a modern CCPP within the scope of a repowering project. Siemens supplied two SGT5-4000F gas turbines, two SGen5-1000A generators and the SPPA-T3000 instrumentation and control system and also provided technical consultation and services for the project. It was possible to reuse the existing steam turbines after they were adapted to the new steam parameters.

Repowering of existing gas-fired steam turbine power plants not only represents an attractive option for global markets, but in particular for the steadily growing Russian market by extending the service life of plants and reducing operating costs to render these plants competitive with new power plants just being introduced onto the market.

Russia has a substantial potential for saving its natural resources and places considerable emphasis on improvements in energy efficiency. "With our solution for Kirishi, in cooperation with our partner Power Machines, we have been able to demonstrate the enormous savings that are possible with repowering", said Ralph Schneider, CEO of Siemens Gas Turbine Technologies in Russia. "Our customer will not only benefit from the extended service life of the plant, but also from the significantly lower costs of electricity production, operation and maintenance".

High-efficiency combined cycle power plants are part of Siemens Environmental Portfolio. In fiscal 2011, revenue from the Portfolio totaled about EUR30 billion, making Siemens one of the world's largest suppliers of eco-friendly technologies. In the same period, our products and solutions enabled customers to reduce their carbon dioxide (CO₂) emissions by nearly 320 million tons, an amount equal to the total annual CO₂ emissions of Berlin, Delhi, Hong Kong, Istanbul, London, New York, Singapore and Tokyo.