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Siemens AG: Rapid to get gas turbines

First of four gas turbines for PIPC in Johor to be delivered by next month

by P PREM KUMAR

THE first gas turbine to generate energy for the Pengerang Integrated Petroleum Complex (PIPC) in Pengerang, Johor, will arrive at the end of next month, says the turbine maker Siemens AG.

The gas turbine, part of the largest order in Siemens Malaysia's history, was shipped from Germany last month, said Lothar Balling, executive VP of Global Project Management, Siemens Energy Solutions.

The PIPC hosts the RM61 billion Refinery and Petrochemical Integrated Development project (Rapid) developed by national oil firm Petroliam Nasional Bhd (Petronas).

The Pengerang order consists of a combined-cycle power plant with steam extraction and four gas turbines of which the first of the latest technology — SGT5-8000H turbine — is expected to arrive in June, while the balance would arrive between July and September, he told *The Malaysian Reserve* during a recent interview in Dusseldorf, Germany.

The power turbines which will be installed in Pengerang Co-generation Plant (PCP) would be one of the largest and most efficient gas-fired power plants in Malaysia with steam supply to the industrial complex, he said.

The first co-generation unit of the PCP is expected to go online by mid-2017. It will also supply power to the national grid for public consumption. The remaining co-generation units will supply to other facilities within the PIPC, he said.

Balling said the PCP would be able to produce approximately 1,220MW of power and up to 1,250 tonnes per hour of steam for the Rapid complex.

Petronas' subsidiary, Pengerang Power Sdn Bhd, was awarded the co-generation power plant order in 2014 for the turnkey construction of the PCP. It comprises four gas turbine units and two steam turbine units, along with a long-term maintenance and services contract.

Each unit comes with a Siemens H-class gas turbine, a waste-heat recovery steam generator (HRSG), a steam turbine, associated mechanical and electrical systems and the instrumentation and control system.

Each of the four co-generation units will include a Semens SGT5-8000H gas turbine, and the installation of these gas turbines with the associated HRSGs, steam turbines and auxiliaries will help Pengerang meet its long-term energy needs with efficient, clean energy, said Balling.

Likening a Siemens SGT5-8000H gas turbine as heavy as one unit of a fully fuelled Airbus A380 plane, he said each such turbine produces sufficient energy to supply to a city of approximately 2.2 million inhabitants.

Each turbine consists of more than 7,000 individual parts. Temperature in the combustion chamber is more than 1,500°C, and the turbine blade tips can almost reach sonic speed, he explained.

Besides Rapid, PIPC also consists of naphtha crackers, a liquefied natural gas import terminal and a regassification plant.

Rapid's Steam Cracker Complex is targeted to start refinery operations by first-quarter 2019 as the first to operate within PIPC, whereby the project's commercial operations expected by middle of 2019.