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PowerSenoko Embarks On Repowering Project

PowerSenoko signed a contract with Asea Brown Boveri (ABB) to repower the Stage I Development of Senoko Power Station. The project will be carried out in two phases. The first of the three units of Stage I will be repowered in the first phase. The second and third units to be repowered in the second phase on an optional basis. The total project cost of repowering the three units is approximately \$670 million.

Mr. Peter Seah, Chairman of PowerSenoko, revealed that the repowering programme will result in an increase of its power generation capacity by some 720 MW.

Senoko Stage 1 Development, which was commissioned in 1975, is reaching the end of its physical and economic life. To give these old plants a new lease of life, PowerSenoko is embarking on this repowering project to transform them into an efficient combined cycle plant. Through repowering, the existing 3 x 120 MW thermal plant will be converted into 3 x 360 MW combined cycle plant.

Mr Seah said, " We consider the investment timely as we are confident that the economy will eventually recover from the current setback. This investment is a clear demonstration of our commitment to ensuring the continuous supply of efficient, reliable and clean power in Singapore both now and into the future."

He added, "When repowered, each of the existing 120 MW unit will be converted into 360 MW combined cycle plant. It will boast an efficiency of 50%, 14 percentage points or 39% higher than the present efficiency. These repowered units will be fuelled by natural gas and we will be harnessing the latest combustion technology to bring down the emission level even further."

"The bottom line is cost savings for our customers. Using the existing site and retaining the civil infrastructure, construction cost is lowered by 10% as compared to a new construction on a green-field site. Furthermore, higher plant efficiency and operational productivity will eventually lead to a lower cost for the electricity generated," said Mr. Lau Khoon Chor, Managing Director of PowerSenoko.

Mr. Lau added, "In order to minimise interruption to the Stage 1 operation and supplies to the consumers, phased construction programme will be adopted."

Repowering involves replacement of the existing boiler with a new gas turbine and heat recovery steam generator (HRSG). The waste heat from the hot exhaust of the gas turbines will produce useful steam through the HRSG. The steam generated in the HRSG will be used to drive the existing steam turbine-generator. Most of the existing civil structure and equipment will be re-used with some modification and refurbishment.

The repowering concept will be the first of its kind in Singapore as well as in this region. The first repowered unit is expected to come into commercial operation in the first quarter of 2001.