ABB supplied a complete electrical turnkey solution, with not only ABB products and systems, but also managed the project from start to finish by performing system studies, engineering, installation, commissioning, post-project support and service, and life cycle management.

Tuas Power, one of the major power generation companies in Singapore, built a new state-of-the-art multi-utilities complex comprising a clean-coal cogeneration plant (BMCC), a desalination plant, and a waste water treatment facility, located in Tembusu, Jurong Island, Singapore. The project aims to be environmentally sustainable using the best clean coal technology where its cost-saving benefits will be channelled back to the investing industries in the area, essentially making the plant a one-stop solutions centre for utility needs.

The plant started commercial operations at the end of February 2013, and provides a reliable supply of steam, high-grade industrial water, demineralised water and waste management services to its customers.

Supply I
The first contract came from Marubeni Corporation, for a turnkey electrical balance of plant (EBoP) solution for the main BMCC plant. Marubeni was appointed as the main engineering, procurement and construction (EPC) contractor to construct the cogeneration plant.

<table>
<thead>
<tr>
<th>Project name</th>
<th>Singapore Cogen - BMCC project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Jurong Island, Singapore</td>
</tr>
<tr>
<td>Customer</td>
<td>(Supply I) Marubeni Corporation (Supply II) Hyflux Ltd</td>
</tr>
<tr>
<td>End user</td>
<td>TP Utilities Pte. Ltd.</td>
</tr>
<tr>
<td>Completion</td>
<td>February 2013 (Supply I)</td>
</tr>
<tr>
<td></td>
<td>June 2014 (Supply II)</td>
</tr>
</tbody>
</table>

ABB solution
- Supply of complete designed and engineered electrical package solution, inclusive power transformers, LV and MV switchgears, PMS, CEMS, protection and communication systems. Scope includes installation and commissioning of the plants.

System benefits
- One integrated electrical platform for entire utility
- Single window from concept to commissioning
- Power management system to regulate power versus steam generation
ABB was responsible for the complete design, engineering, supply, installation and commissioning of the complete electrical package solution, integrating different power equipment such as power & distribution transformers, low and medium voltage intelligent switchgears, fully automated power management, protection and communication systems. ABB also supplies the cable systems including its accessories.

**Supply II**

The second contract came from Hyflux Limited for the seawater intake. This off-site plant supplied the cooling water for the main power island of the cogeneration plant. Hyflux was appointed as the engineering, procurement and construction (EPC) contractor to undertake the Stage 1 of the seawater desalination plant.

ABB was responsible for the complete design, engineering, supply, installation and commissioning of the electrical package solution, integrating different power equipment such as power & distribution transformers, low and medium voltage intelligent switchgears and drives to support the building infrastructure of the 40 MiGD desalination plant and 160 MW power plant sea water intake requirement.

ABB helped in the energy-efficient generation to reduce fuel consumption and lower carbon emissions.

With our energy efficient electrical technologies and innovation, customers enjoyed a more reliable and enhanced operation as well as reduced maintenance and operational costs.

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