ABB supplied a complete integrated instrumentation, control and electrical solution for a combined cycle power plant in Bangladesh to cope with power deficiency in the country.

ABB was awarded the contract by the main contractor, NEPC-CNEEC, China National Electric Equipment Corporation Ltd., which was appointed by the Owner - Summit Meghnaghat Power Company Limited, to provide a complete and fully integrated instrumentation, control and electrical solution for a new dual combined cycle power plant located at Meghnaghat, Naryanganj, Bangladesh.

The 337 megawatt (MW) nett output of the combined cycle unit will provide electricity to Bangladesh Power Development Board (BPDB) - a state run utility under a long term contract between BPDB and the Owner. This project has been implemented under Build-Own-Operate basis.

As part of the contract, ABB delivered a complete designed and engineered electrical package solution, which among others, included the gas turbines and steam turbine generators’ transformers, auxiliary and distribution transformers, low, medium and high voltage switchgears, motor control centers as well as over 300 kilometers of cables and its accessories. These electrical equipment were then seamlessly integrated on a common state-of-the-art automation platform, the Symphony® Plus distributed control system where through its open architecture, consolidated and visualized all plant data to improve operator response thereby enhancing improved plant safety and availability.

ABB also constructed 8 nos of bays of 220 kilovolts (kV) air-insulated switchgear (AIS) substation including substation automation and intermediate transmission lines that link to the national transmission grid.

<table>
<thead>
<tr>
<th>Project name</th>
<th>Summit Meghnaghat 337 MW combined cycle power plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Naryanganj, Bangladesh</td>
</tr>
<tr>
<td>Customer</td>
<td>China National Electric Equipment Corporation Ltd., NEPC-CNEEC</td>
</tr>
<tr>
<td>End user</td>
<td>Summit Meghnaghat Power Company Limited</td>
</tr>
<tr>
<td>Completion</td>
<td>June 2015</td>
</tr>
</tbody>
</table>

**ABB solution**
- Supply of complete designed and engineered electrical package solution, inclusive power and auxiliary transformers, LV and MV switchgears, motor control centers, cables, cable trays, and accessories, bus duct system, UPS system and SCADA
- Supply of state-of-the-art Symphony® Plus distribution control system for seamless electrical integration to the plant for full plant automation
- Supply of 220kV air-insulated substation packages (8 bays)

**System benefits**
- One single reliable supplier contact point for electrical balance of plant and control system solution for increase security and efficiency and reduced maintenance cost
- Common platform for electrical and automation equipment integration, thus reducing risk and increase stability and reliability
ABB successfully commissioned the generator transformers for
gas turbines in the first quarter of 2014, thus laying the path
towards achieving the plant’s commercial operation date
(COD) for its simple cycle power generation, enabling the
first batch of 220 megawatt of electricity to be transmitted
into the grid. The plant is scheduled for its combined cycle
operation to commence in early 2015.

ABB’s solution brings together seamless and secure
integration of the entire facility and covered by one process
control system that includes all plant areas which can be
used efficiently, helping customer to reduce cost and risk of
the overall project management. ABB’s total integrated solution
comes with highly experienced in-house core competence
for the entire scope of electrical balance of plant, plant wide
automation and optimization as well as lifecycle management;
from site assessment, system studies, electrical and automa-
tion physical design, project engineering, grid connection
and power quality, installation and commissioning, as well as
the entire service and maintenance portfolio.

ABB is responsible for the entire execution, starting from
design to delivery, as well as execution of erection,
testing and site commissioning activities. ABB brings
in-depth knowledge of local requirement and robust
experience in handling large scale projects. This core
expertise and ABB’s world-class technology provides huge
advantages and satisfaction to customers as compared to
competitions.

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