Fact File / Success stories

Borlänge Energi
Indoor Substation for 132 kV

Customer need

Borlänge Energi wanted to replace an old 132 kV substation located in an industrial area. The major reason for the investment was the need for high reliability, availability and low environmental impact. They decided to build an indoor substation as the city had rezoned the area for commercial use and plans included a major shopping center.

ABB solution

To attain a compact indoor solution ABB choose to use a DCB (Disconnecting Circuit Breaker) solution that eliminates conventional disconnectors.

To blend the substation into the surrounding area, it was constructed with the same building design as the nearby buildings.

The substation’s high voltage side contains two incoming lines and two transformers that are equipped with space-saving disconnecting circuit breakers. The disconnecting circuit breakers utilize motor-operated grounding switches towards the lines and transformers.

The substation is also designed for live working, so that the busbar can be sectionalized for maintenance of the high voltage equipment without taking the medium voltage side out of service.

This indoor solution provided Borlänge Energi with a highly reliable, well-protected substation that blends into the environment and only requires 410 m² for the complete substation, including high voltage apparatuses, power transformers, medium voltage equipment and a control room.

Facts

<table>
<thead>
<tr>
<th>Customer</th>
<th>Borlänge Energi</th>
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</thead>
<tbody>
<tr>
<td>Scope of supply</td>
<td>Four-bay indoor turnkey substation for 132 kV. High voltage apparatuses from ABB Ludvika: Disconnecting circuit breakers, instrument transformers and surge arresters</td>
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<tr>
<td>Year of delivery</td>
<td>2010</td>
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<tr>
<td>Space required</td>
<td>410 m²</td>
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<tr>
<td>Substation designed by</td>
<td>ABB Substations, Västerås, Sweden</td>
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</table>
DCB benefits

- Replaces the conventional combination of circuit breaker and separate disconnectors
- Optimized substation design
- Improved availability
- Safe, simple, fast and reliable installation
- A complex, complete, tailor-made, turnkey project
- Short delivery time

A complete program with full support

ABB provides complete resources in electrical high voltage technology, and stands for innovative new approaches with the focus on efficient and environmentally friendly power transmission.

Our comprehensive product line, which besides disconnecting circuit breakers also includes conventional circuit breakers, surge arresters, instrument transformers and power capacitors, makes us a comprehensive supplier of both individual high voltage apparatuses and complete turnkey installations.

For more information please contact:

ABB AB
High Voltage Products

SE-771 80 Ludvika, Sweden
Phone: +46 (0)240 78 20 00
Fax: +46 (0)240 78 36 50
E-mail: circuit.breaker.info@se.abb.com

www.abb.com/highvoltage

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