Onsite training
Become an expert in lifecycle management for high-voltage products

Increase your overall high-voltage product portfolio’s know-how in practice. Meet with ABB high-voltage (HV) product experts and learn more about suitable maintenance strategies to become strategic partners throughout the life cycle stages of the product.

About us
ABB, the leading global player in high-voltage products, offers a wide range of electrical infrastructure solutions and services encompassing:
• Gas Insulated Switchgear (GIS)
• Hybrid Switchgear Plug and Switch System (PASS)
• Air Insulated Switchgear (AIS)
• Generator Circuit Breakers (GCB)
• Capacitor Banks and Filters
• Instrument Transformers
• Surge Arresters

As a globally operating technology organization and product manufacturer, we complement our offerings with a comprehensive range of round-the-clock support and life cycle services. The goal of ABB’s product support services is to improve the reliability and extend the operating life of your high-voltage equipment, while reducing operation and maintenance costs in each life-cycle phase. To meet the challenges of the evolving high-voltage service market, we continue to develop our portfolio, increase customer satisfaction, and improve our operations.

Benefits
• Improve trouble shooting skills
• Gain technical knowledge needed to reduce time & cost of maintenance
• Develop the skills needed to lengthen your equipment’s operating life
• Avoid equipment failure due to incorrect operation or maintenance

On-site training
ABB offers the convenience of on-site training courses where experienced instructors present customer-specific courses at your location.

The courses held under on-site training will guide you through the most essential parts of the different service strategies needed to give your assets a long and healthy life. It will put some perspective on technology developments achieved throughout the years and provide you with insights on how to modernize your existing equipment. Get familiar with the processes and advanced services used today and obtain an outlook of what is to be expected in the future. Overall, the course provides you with the basic know-how and contacts to experts that help you shape your maintenance strategy in the future.
Our training content includes:

**Latest product technology**
- What is state-of-the-art today?
- What technology is currently under development?

**Service portfolio and maintenance philosophy**
- How do you extend the lifetime of your asset?
- What is the difference between preventive and predictive maintenance for your HV products?

**Troubleshooting**
- How to handle the equipment when failure occurs?
- What are suitable steps to take and which people to contact?

**Condition monitoring and diagnosis**
- What are the parameters that influence the condition-based maintenance criteria?
- Monitoring of SF$_6$ gas and partial discharge

**SF$_6$ gas handling**
- Environmental background and properties
- Rules for handling
- Measurement of SF$_6$ gas quality (pressure, humidity) using state-of-the-art analyser

**Circuit breaker drive maintenance**
- Understand drive design
- Maintenance checks / intervals
- Hydraulic modules and their function

**Targeted participants**
Anyone responsible for managing high-voltage assets, will benefit from our training courses. They will be given an insight into the maintenance criteria, possibilities to extend the lifetime and reliability of the equipment during its complete life cycle. This will form the basis of a sound service strategy with the best possible return on investment as a result.

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome &amp; introduction to ABB and our HV products</td>
<td>HV product portfolio basics – refresher</td>
<td>Condition assessment &amp; diagnosis</td>
<td>SF$_6$ background and handling</td>
</tr>
<tr>
<td>Latest HV product service technology</td>
<td>Workshop: Risk management for HV assets</td>
<td>Asset monitoring: PD &amp; SF$_6$ Gas</td>
<td>Circuit breaker drive mechanism</td>
</tr>
<tr>
<td>HV product service portfolio &amp; maintenance philosophy</td>
<td>Case study on failure mitigation and risk management</td>
<td>Troubleshooting</td>
<td></td>
</tr>
</tbody>
</table>

Theory
Practice