ABB High Voltage Service offers complete services for each life cycle phase of your GCB: replacement parts, overhauls for life extensions, upgrades, field service, technical assistance, and training - we offer the most comprehensive and cost effective alternatives to the purchase of new power equipment.

**Reliability:** ABB HV Service has perfected solutions to keep a switchgear fleet running with maximum uptime.  
**Technical Knowledge:** ABB HV Service personnel is regarded as experts in the high voltage industry.  
**Maximizing Asset Value:** ABB HV Service’s portfolio of capabilities focuses on cost reduction, life extension, reliability, and increased revenue through improved switchgear performance.

### Our Offer

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<th>Description</th>
<th>Benefits</th>
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| **Training** | - Multiple formats: Hands-on training, SF<sub>6</sub> handling, maintenance plan and many more  
- Specialized & customized training available on request  
- Customer training available on-site (field training) or in one of the factory training centers  
- Gain technical knowledge needed to reduce time & cost of maintenance  
- Develop the skills needed to lengthen your equipment’s operating life  
- State-of-art training facility with hands-on learning workshop  
- Improve troubleshooting skills |
| **Warranty Extension** | - Extension of the warranty period  
- Available for up to five years for active product portfolio  
- Guarantee to cover unexpected failures  
- Fixed annual costs  
- No unplanned expenses |
| **Spare Part Concepts** | - Parts cover minor and major failures  
- Strategic Spare Components are stored on-site and are multiusable  
- Spare breaker is a complete GCB to cover 99% of all possible failures  
- Shared breaker is for customers with more than one power plant or several (different) GCBs  
- Avoidance of long delivery times for critical and captive spares:  
- Reduced downtimes and repair times  
- Reduced operational lossed in case of failure |
| **Diagnosis (Analysis Inspection)** | - Diagnosis is a non-destructive analysis and includes:  
  - Visual inspections  
  - Functional checks  
  - Test of the operating mechanism  
  - DRM Analysis determines the ablation of the arcing contact to predict the remaining lifetime without opening the breaker  
  - Diagnosis report contains status of all important operational parameter  
  - Clear service recommendations  
  - Reduction of risk of unexpected downtime |
| **Overhauls** | - Exchange parts and reconditioning of the GCB  
- Proven maintenance concept with defined maintenance criteria:  
  - Ageing criteria (diffusion, relaxation, corrosion)  
  - Mechanical endurance criteria (wear and tear)  
  - Electrical endurance criteria ("burn off of contacts")  
- Prevention of operational losses due to failures  
- Improved performance & reliability  
- Only a fraction of the price of installing new equipment  
- Significantly shorter lead-time than new breaker |
| **Repair & Troubleshooting** | - HV Service is able to repair all components of your switchgear:  
  - Repair  
  - On-site troubleshooting (emergency repair)  
  - Emergency hotline (24/7)  
- Limited resources – we can help 24/7  
- Access to experiences and certified field service engineers  
- Our promise: "Energize First" |
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| **Condition Monitoring and Expert Services**                 | - GMS600 is ABB’s state-of-the-art monitoring system and can be installed to most of the SF₆ breakers. The basic version comes with:  
- Remaining lifetime estimation (till next overhaul)  
- Operating mechanism supervision  
- Alarms and warning notifications  
- Data logging  
- Websrvr functionality  
- By adding optional SF₆ and / or temperature sensors, the GMS600 enables you to fully monitor gas leakage rate and the thermal status of the GCB  
- VBCC reports are generated from GMS600 monitoring system data and comprise valuable operational information | - Continually monitors switchgear performance & reliability  
- Cost effective asset management - enables you to do maintenance when it is really necessary (condition-based maintenance)  
- Alerts user when actions or maintenance is needed  
- Reduced probability of failures                                                                                   |
| **Upgrades of the GCB**                                      | - Rating upgrade can be offered with respect to the following parameters: voltage, current and short-circuit interrupting capability  
- Earthing switch upgrades are available for installations that were not equipped by one from factory  
- Enhanced Interlocking prevents staff to close the earthing switch locally or remotely when the bus duct is on high voltage | - Increased capabilities of the switchgear  
- Increased personnel safety  
- Avoidance of unexpected outages  
- Better control of the installation                                                                               |
| **Retrofits**                                                 | - Retrofit legacy components with state-of-the-art technology  
- Operating Mechanism Retrofit  
- Example: Retrofit an AHMA operating mechanism with a HBM operating mechanism                                                                 | - Latest technology  
- Increased reliability  
- Latest safety standard  
- Short project execution                                                                                         |
| **Replacements**                                             | - Replacement of the existing GCB with a new GCB  
- Moving to the latest technology                                                                                                                                                                             | - Spare parts availability min. 20 years after breaker delivery  
- Lower maintenance costs & longer maintenance intervals (intervals of 15-20 years instead of 6-8 years)  
- New technology SF₆ with less complexity  
- Power increase of generator can be considered                                                                     |
| **Power Plant Extensions**                                   | - Integration of a new GCB in power plants that originally were not equipped with a GCB                                                                                                                                 | - Integration of GCBs with minimal space requirements  
- Ensure protection of transformer and generator  
- Ensure clearance of harmful short-circuit faults in tens of milliseconds                                              |