Power Products Division

Power Services
Service underpins everything we do
Business Overview

ABB’s Power Services is a support group to all power products and systems business units within ABB. We provide services that help customers get optimal performance throughout the life cycle of the products in use. Power Services provide nation wide services for:

- Power and distribution transformers
- High voltage switchgear and systems
- Medium voltage switchgear and systems
- Low voltage switchgear and systems
- Power systems and protection

The services cover the support activities outlined below but are not limited to them. We can organise any support for a customer and quickly provide the required level of services.

Installation and commissioning services
Any power product needs to be properly installed and commissioned to achieve the required performance. This requires expert product knowledge, right practices and qualified resources. We take care of the installation of all power and distribution transformers supplied throughout Australia. We also provide supervision services for high and low voltage switchgear to ensure that your contractors execute the job correctly - making sure you benefit from the full performance of the equipment you purchased. We can provide these services for any make of equipment.

Condition monitoring and the risk assessment
We provide services to check condition of existing power products of any make and model available in your plant. We undertake risk assessments and provide consulting services with the objective to maintain or enhance the plant performance. The process involves various tests like partial discharge, dielectric response, frequency response, etc.

Repairs
We can take care of on-site and factory repairs of all power products to correct the problems associated with their performance.

Component support and spares
We provide spare parts for all ABB products including legacy products. These include all types of transformers, switchgear and protection systems. In certain cases we also provide special spare parts to ensure continuous operation of your plant.

Retrofit and upgrade
The active parts of most of the power products like circuit breakers, On Load Tap Changes (OLTC) etc are subjected to mechanical and electrical duties, which reduce their life compared to other parts of the product. We provide retrofits for these products and upgrade with the latest technology. This enhances the life of the product without need for replacement. We provide retrofits for ABB and non-ABB brands.

Maintenance services
We possess complete plant maintenance service capabilities with or without service agreements. We can take care of routine maintenance needs of all your power products and power systems right from transformers to low voltage distribution. We also take care of maintenance contract agreements for 24/7 emergency support.
ABB is Power Services has all the required capabilities and resources to support your business in terms of manpower, equipment and skills.

**Service facilities**

We have four major service centres around Australia to cater to your local needs.

A new service centre will be opened shortly in North Queensland for transformers.

**NSW – Moorebank**
- Lead center for large power transformer repair and rewind
- Field service and workshop for transformers and switchgear products and systems
- National spares support

**VIC – Port Melbourne**
- Lead center for high voltage bushings repair
- Lead center for generator circuit breaker support
- Field service and workshop for transformers and switchgear products and systems

**QLD – Darra**
- Lead center for industrial substation commissioning projects
- Lead center for transmission and distribution protection and control product support
- Field service and workshop for transformers and switchgear products and systems

**WA - Malaga**
- Field service and workshop for transformers and Switchgear products and systems
- Transformers workshop repair up to 20MVA

**Skilled resources**
- Local teams fully trained in onsite and factory services
- Local and global engineering resources for design, product support and development of new services
- Skilled personnel familiar with environments such as mining, offshore LNG platforms
- Special teams for specific requirements such as OLTC repairs, site installations, protection systems, GCBs, active filters

**Plant and test equipment**
- Vapour phase drying facility for power transformers
- High capacity two and three stage vacuum plants
- On site testing tool kits for switchgear including Omnicron relay test unit
- SF6 gas recovery units
- Separate source withstand test up to 150 kV
- DC testing up to 1.5 kV, 5000 amps
- Condition assessment tools for switchgear – PD tester, thermoscan
- Fully equipped vehicles for site teams
- Frequency response analysis equipment
- Voltage turn ratio-meters
- Winding DC resistance test sets
- DLA and capacitance bridges (up to 10 kV)
- Insulation resistance testers (500 to 5000 VDC)
- Dew-point tester
Transformer Services

Over 100 years of experience in design, development and manufacturing of transformers and providing services globally have established a wealth of technical solutions. ABB has the largest installed base of transformers of any manufacturer and provides all services for transformers.

We have archives with full technical information for the following legacy products:

Solutions for every situation
Every customer has different needs and we can provide a solution for each of them. We have classified transformer service solutions as per customer needs and life cycle stage of power transformers.

We can also provide innovative, non standard solutions based on your needs and does not necessarily have to be one present.
Transformer Services

Resources
- Vapour phase dry out
- 200 tonnes crane
- HV testing
- Tap changer repairs and retrofit facility
- Oil treatment plants (2,000 to 10,000 Lt/hr)
- High capacity two and three stage vacuum plants
- Field dry-out plant (190 kW oil heater and 8,500 Lt/hr)
- High capacity particle filter (1 micron and 100,000 Lt/hr)
- Dedicated insulating oil storage tanks (up to 60,000Lt)
- Dry-air generators (-70°C dew point)
- Radiator repairs and retrofits
- Field service team centre with tools and logistics support
- Engineering support team

Global support
Transformer service is globally supported with:
- Service centres in 25 countries
- More than 800 skilled technicians
- Fleet management systems
- Protection upgrade support
- TrafoSiteRepair™
- On site transformer testing equipment and engineering
- New services development

Global experience – local solutions
Whatever your expectations, your installed power and the size of your network, ABB has a full portfolio of services providing solutions to your every need.

Each and every job, on or off site is the result of a fair and accurate assessment utilising highly developed skills and technical tools. Our solutions take all factors such as technical, financial, environmental and safety aspects into account. The result is a reliable and long lasting solution, the way you wanted it.
ABB’s Power Services support the entire portfolio of switchgear products that include indoor and outdoor circuit breakers, indoor switchgear cubicles, gas insulated switchgear, generator circuit breakers, disconnectors, instrument transformers and surge arrestors.

We also support the phased out switchgear products of our legacy brands. Many of these products are installed in your plant and have been operating for years. To obtain continuous trouble free operations the old installations may need an expert checking and support which we can provide at a time suitable to you.

Our portfolio of switchgear services include:

- **Installation and commissioning** of new equipment at site as per our recommended procedures which ensures perfect performance of your switchgear. Our technicians are fully trained and certified to carry out the installation and commissioning work. The service includes required tests as per our standard checks. We also offer services for decommissioning of old switchgear.

For any ABB products we always recommend to use our supervision to ensure proper installation of the equipment if the installation is done by other service providers for the complete plant.

**Corrective services**
The portfolio of corrective services includes emergency site call-outs, site repairs, work shop repairs and spare parts support. We can provide emergency repairs for switchgear on site or at one of our factories closest to your site. We provide special solutions for servicing of generator circuit breakers. We have a comprehensive range of spare parts for current and legacy brands, and also carry stock of emergency spares.

**Value added services**
The portfolio of value added services includes engineering and consulting solutions for old switchgear protection upgrades, breaker refurbishment and safety upgrade solutions.

**Preventive services**
The portfolio of preventive services includes routine planned maintenance, breaker diagnostics and condition assessment of switchgear. We provide complete solutions for inspection, maintenance, overhaul including remote services for Gas Insulated Switchgear (GIS). We provide service contracts for annual maintenance as well as emergency 24/7 support.

**Life extension and switching device upgrades**
We provide a large number of retrofit solutions of various makes and models of circuit breakers. We have retrofitted old minimum and bulk oil circuit breakers with modern SF6 and vacuum breakers. We also provide solutions for life extension of switchgear which include:

- Circuit breaker mechanism exchange
- Retrofit from oil breakers to vacuum or SF6 breakers
- Retrofit from double pressure to self blast technology
- Replacement of disconnecter and breaker by disconnecting breaker
- Replacement of old gap arrestor by modern MO arrestor
ABB’s Power Services provides support for the Power Systems division which undertakes turnkey projects for various industries and utilities that include greenfield substations, substation expansion, SCADA and network controls.

Our portfolio of systems services include the following:

**Installation, testing and commissioning of complete high voltage substations**
We undertake projects of installation, testing and commissioning of high voltage substations up to 500 kV. The project covers the entire substation or plant including power and distribution transformers, high and medium voltage switchgear, gas insulated switchgear. We provide the services for both outdoor switchyard and indoor installations. We have done installation, testing and commissioning for various types of substations including HVDC and special mining sites.

**Testing of switchyard**
We offer complete testing of switchyard equipment including CT, VT, isolator, earth switch, and breakers for HV and EHV.

**Testing of protection and substation automation**
We offer complete testing of protection systems and sub-station automation systems. The testing includes:
- Engineering, testing and commissioning of substation control system
- Up loading and checking of protection and control logics
- Configuration and parameterisation of all ABB numerical terminals and latest IEDs with IEC 61850 substation automation protocol
- Installation, testing, commissioning, routine maintenance and troubleshooting of variable speed drives

**Protection upgrades and retrofits**
The electro mechanical and static protection systems are quite complex and do not offer communication facilities with latest SCADA and other control systems of the plant. It may not be necessary to change the whole existing system to match it with latest technologies. Instead we offer solutions to upgrade the existing protection systems from old technology to new numerical protection relays. We also provide retrofit solutions to replace old relays with new ones with minimum wiring changes.
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