Medium voltage service
Retrofit measures extending the product life cycle
Retrofitting is an optimal measure for subsequently upgrading older equipment in power transmission and distribution systems by integrating state-of-the-art components in order to achieve a clearly defined goal: Maintaining a high level of availability and assuring the necessary safety standards at a minimum of costs.

**Full-scale solutions from a single source**

We can offer our customers specialized expertise as a system provider for implementing optimized retrofit solutions for electrical substations. Thanks to our longstanding, global experience, ABB Service Power Technologies are known for their fast and competent implementation of retrofit projects.

Our services are also available for systems and devices which were originally provided by competitors, as well as for products whose manufacturers no longer exist. In addition, we can integrate a variety of supplementary services in order to create tailored full-scale solutions.

**Have you thought about the following aspects?**

- Is fast supply of spare parts assured for your plant/system?
- How high is the risk that there will be production stoppages due to unexpected maintenance activities?
- Are you in a position to assure maximum safety for your operating staff?
- How can you enhance the productivity of your plant/system?
What can retrofitting do for you?

Busbar compartment
- Retrofitting the arc-fault protection system UFES (Ultra Fast Earthing Switch)
- Retrofitting the busbar compartment – replacing parts of the insulating material
- Replacing asbestos sheets that pose health hazards by installing non-hazardous partition components

Cable connection compartment
- Retrofitting current transformers
- Replacing asbestos sheets that pose health hazards by installing non-hazardous partition components
- Retrofitting earthing switches
- Retrofitting the protection relay
- Preventive maintenance (preventive testing and maintenance of the protection relay)
- Retrofitting the control facilities

- Retrofitting the switchgear truck / circuit breaker
Benefits of retrofitting

Retrofit-solutions are advisable if:
- Long-range spare parts supply is at risk
- Present maintenance activities are too costly
- Personnel and operating safety shall be increased
- Ecological aspects (oil leakage, noise pollution) play a quite significant role
- Failure rates shall be minimized
- The plant/system is to be upgraded to match the current standards
- Installing a new plant/system is not feasible on account of the high capital investment involved or because of other costly infrastructure adaptations

If you wish to find out more about our services in the context of ‘Retrofitting’, e.g. diagnostic activities, system assessments or retrofits for open substations, our sales representatives will gladly provide you with the necessary information.

![Diagram showing benefits of retrofitting]

- Lower operating costs thanks to reduced maintenance activities
- Minimized downtimes by reducing the maintenance activities
- Increased personnel and operating safety
- Higher level of system availability
- Increased operator convenience thanks to state-of-the-art equipment
- Lifecycle extension

With retrofitting | Without retrofitting