Services with experience that counts – for optimized power system operation

World-class products complemented by a full scope of services

In addition to its broad range of protection and control products and systems, ABB offers a comprehensive selection of services to help you understand and manage your power system behavior under diverse operational and disturbance situations.

With more than 100 years of experience in the protection and control of power systems worldwide, we can serve you with knowledge that enables you to reap the full benefits of your protection and control equipment investment. Our experts, with their approximately 20 years of field experience, will support you at every step you take: from optimized building and correct installation of your power system to its reliable operation.

Analyze your needs

Our Power System Studies aim to analyze the undisturbed and disturbed conditions of your power system; thus enabling you to take the correct actions in optimizing the design, function and operation of your protection and control system. The Power System Simulation services will help you study the possible disturbances and know their effects on your power system – even before they occur. Our Network Simulator is able to simulate all fault types, in order to analyze and verify the operation of your protection and control terminals under different conditions. Combined with Power System Studies, simulation systems can be fully adapted to represent your network characteristics. The advanced simulator for substation equipment, such as for on-load tap changers and power transformers, can be used for verifying control devices designed, for instance, for voltage control. As a result, you profit from a correct protection and control strategy and secure power system operations.

Optimize operation

The configuration and parameter setting of your protection and control terminals, including selectivity planning, will help you gain the best advantage from your investment. These services ensure that the terminal functionality meets the requirements of your network, and that the equipment operates correctly in all predictable fault situations.

A versatile package of services adapted to your needs

When a fault occurs, you can utilize our Disturbance analysis service to analyze your power system and its behavior in a fault situation, as well as the performance of your protection and control system. If required, our experienced specialists will suggest corrective actions to eliminate the weaknesses, to increase the security of your power system.

Versatile **standard courses** and **fully customized training programs** enable your engineers and operators to **fully utilize the protection and control system**. Our training courses include extensive hands-on sessions and well-documented exercises. As a result, your personnel will be well prepared to both handle the equipment in daily operation and meet any type of disturbance situation.

Combined strengths

You can **freely combine the different services** to create a service package that best meets your needs. By combining the skills of our **committed specialists** with **your own power system knowledge**, you take a decisive step towards **optimized power system operation**.

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The scope of services:

Power system studies
- Building of network model based on customer data with worldwide accepted tools for considering dynamic and static aspects
- Evaluation and optimization of existing fault clearance system
- Customer specific studies, for instance:
  - Analyzing the status of the protection system and proposing corrective measures
  - System grounding and fault clearance
  - System stability
  - Economical risk analysis

Real-time power system simulation
- Verifying protection and control equipment for specific applications
- Studying the interaction between the power system and the protection and control system (incl. expert analysis of protection function behavior)
- Determining the performance of protection and control equipment during an event with the help of customer's disturbance records
- Selecting the optimum protection scheme for your application
- Flexibility in topology, models and automatic test sequences

Parameter setting and configuration
- Adapting configuration and parameter setting of protection and control equipment to your fault clearance requirements
- Selectivity planning and parameter setting
- Configuration for adapting flexible products to your specific requirements

Disturbance analysis
- Complete analysis of power system behavior during different disturbances
- Evaluation and optimization of existing fault clearance system
- Disturbance cost evaluation

Product upgrading
- Increasing functionality of your protection and control equipment to keep up with the changes in your power system and to benefit from the latest developments of protection and control terminals
- Upgrading can be made on your site or at our factory

Commissioning
- Supervision and/or commissioning of relay protection and control systems

Training
- Theoretical and hands-on product training
- Power system protection philosophies
- Tailor-made training programs
- On-site training
- Training course programs available at www.abb.com/substationautomation

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