To ensure the reliable activity and interoperability of intelligent electronic devices, TÜV Rheinland can support you in complying with the global IEC 61850 standard for power utility automation.

One Step Closer to Intelligent Energy Networks

For years, intelligent electronic devices (IED) have been in use for the management and control of distribution and power generation systems. The IEC 61850 standard for IEDs has become increasingly important, as conformance with this standard ensures smooth and reliable activity and interoperability of these devices within both modernized and new power stations and their substation networks.

IEC 61850 ("Communication Networks and Systems in Substations") describes the communication protocol and data model structure used between substation intelligent devices.

Given the growing popularity of this standard, owners and operators of power stations and distribution systems are requiring IED compliance with IEC 61850 thereby forcing manufacturers to produce devices accordingly.

In order to support device and software developers and IED manufacturers in complying with the IEC 61850 standard, TÜV Rheinland offers extensive certification and testing services. We provide a wide range of services making IEDs and substations suitable for the challenges of the new smart grid technology of this century.

Conformance with the IEC 61850 standard ensures interoperability.
Our services for the IEC 61850 standard include:

- Consulting services for the implementation of IEC 61850.
- Conformance testing according to IEC 61850.
- Interoperability testing.
- Technical expertise in the field of intelligent power networks / devices (smart grid).
- Continuous evolution of our laboratory equipment implementing high-end IEDs and test devices for the simulation of substation communication and events.

Thanks to our IEC 61850 conformance testing services you can be sure that your devices are suitable for integration into the smart grid. In addition, testing for interoperability makes the exchange of data between differently manufactured systems possible.

Advantages of IEC 61850 and intelligent IEDs for our clients:

- No need for different field bus protocol gateways, which means reduced costs and a more simple system design.
- Simple and flexible substation communication architecture.
- The standard uses object oriented data model.
- No differences between IEDs provided by various vendors thanks to the interoperability feature.
- More data can be received or transmitted from the substation, which means more control and flexible response to external events.
- Standardized naming convention and engineering process.

TÜV Rheinland is a global leader in independent inspection services, founded more than 140 years ago. The independent experts stand for quality and safety for people, the environment, and technology in nearly all aspects of life.

Always a good sign.

This mark stands for all the information about products, services and systems that are tested, certified or inspected by TÜV Rheinland. Transparent, available anytime worldwide – powerful and unique. The TÜV Rheinland test mark.