



Choose certainty.  
Add value.

## Smart Grid integration consulting

Ensure interoperability and security with the global thought-leader in Smart Grid integration.

### What is Smart Grid integration?

Offering clean eco-friendly energy with efficiency and flexibility, Smart Grids are the backbone of future electricity supply. Instead of purchasing power from a handful of centralised suppliers, consumers can feed energy from solar power units or cogeneration units into the electric power grid. To reliably match energy supply and demand, all components and participants in a Smart Grid need to be perfectly coordinated. There are many standards such as IEC 61850, IEC 61970, IEC 61968 and IEC 62351 that establish appropriate standardisation requirements for Smart Grids. Embedded Systems supports customers with competent consultancy and advice to ensure facilities integrate seamlessly within the Smart Grid.

### What are some of the main challenges?

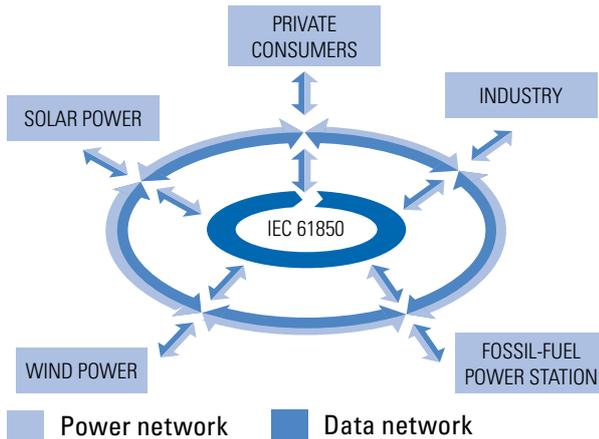
The development of a Smart Grid is a complex process and there are many standardisation guidelines to observe. The integration of interchangeable network components from a variety of different providers worldwide presents a major challenge to producers and consumers.

Although mature standards and best practices for Smart Grid deployment exist, there is insufficient awareness of these standards, especially in small and medium-sized companies.

### How can we help you?

As a one-stop provider of Smart Grid integration consulting services, TÜV SÜD's experts can guide you through the whole process of integration of infrastructures into a Smart Grid.

## Stable power management through IEC 61850 recognition?



### Our services

TÜV SÜD provides assessment of existing devices and systems for their compatibility with each another. We support producers and customers to develop an overall concept and ensure interoperability of systems through component analysis. Our experts also undertake individual cost-benefit analyses, identification of the relevant infrastructure data, monitoring of compliance with grid requirements and grid codes, support during implementation of Smart Grid-enabled systems, long-term support and professional training.

#### Smart Grid consulting for producers

TÜV SÜD partners with renewable energy producers to help them achieve more attractive feed-in terms and conditions, comply with feed-in requirements, protect systems against technical defects, make more efficient use of storage systems, prevent load shedding and respond faster to challenges.

#### Smart Grid consulting for consumers

We assist consumers in achieving improved fail-safety and load distribution, enhanced management and protection of their system, and maintenance and improvement of the quality of electricity supply.

### Your business benefits

- **Save time and money** – by achieving faster integration at every stage with TÜV SÜD's one-stop solution. In addition to our Embedded Systems expertise, we draw upon other departments such as Renewables, Industrial IT Security and Functional Safety to provide a complete suite of services all under one roof.

- **Build up in-house expertise** – by leveraging on our industry-leading knowledge.
- **Minimise risk** – with our lab tests and IEC 61850 conformance testing, which ensure all compliances are met and validated.
- **Gain a competitive edge** – by demonstrating the credibility of your components with testing by TÜV SÜD, an accredited Level A Independent Test Lab.

### Why choose TÜV SÜD?

TÜV SÜD is a thought-leader in Smart Grid integration, with experts who actively participate in international committees to exchange knowledge with their peers. This gives our experts a broad understanding of the issues involved.

We are a Competence Centre for Smart Grid integration. In addition to providing Smart Grid consulting, we combine this service with our own test lab where we test devices for standard compliance. Our portfolio also includes training and workshops.

### Choose certainty. Add value.

TÜV SÜD is a premium quality, safety and sustainability solutions provider that specialises in testing, inspection, auditing, certification, training and knowledge services. Represented in over 800 locations worldwide, we hold accreditations in Europe, the Americas, the Middle East, Asia and Africa. By delivering objective solutions to our customers, we add tangible value to businesses, consumers and the environment.

### Related services

TÜV SÜD provides the following related services:

- IEC 61850 Conformance testing
- Interoperability testing of devices
- Smart Grid compatibility testing for e-power producers
- Training and workshops regarding IEC 61850 and Smart Grid integration