EnerNex’s Smart Grid Labs (SGL) is the premier Smart Grid concept design, test and evaluation facility.

SGL provides our clients multi-faceted assessment services for communications, security, standards compliance, technology/vendor maturity, and implementation assistance across many Smart Grid domains. We offer vendors, utilities and regulatory elements a place to evaluate and understand technology readiness for Smart Grid in ongoing and emerging technology efforts.

We staff experts in each of the key Smart Grid technology domains, their device markets, and components offering, ready to bring best practice in design, test and evaluation to bear on your project. SGL has committed to innovation and ongoing investment in its test infrastructure. EnerNex maintains strategic mutual relationships with other Smart Grid testing facilities, some located at vendor and client sites, across North America, positioning us to deliver solutions to your problem.

We provide our clients outstanding, reliable technology services. Let us help you design and implement a Smart Grid technology evaluation strategy, process, and specific product requirements based on testable fact rather than assumption. Let us mitigate your risk of immature and non-interoperable technology adoption.

- We evaluate Smart Grid technology, products, performance, and vendors.
- We test equipment for compatibility with specific standards.
- We will help you develop a Smart Grid technology plan.
- We offer device / hardware penetration testing.
- We have a crystal ball for the future of Smart Grid technology.
- We use the best experts, fixtures, and methodologies available to the client.

EnerNex Experts

Building on expertise provided by EnerNex’s core team, the Smart Grid Labs has selected the elite of scientists, technologists, engineers, and technicians on staff to translate the diverse set of Smart Grid domains into test operations.

Smart Grid Labs personnel participate and have leadership roles in most major Smart Grid related organizations and related standards bodies. These include the working groups and task forces of the UCA International Users Group, IEC TC 57, the IEEE Power and Energy Society, the IETF, and many more. Most SGL staff involved have helped develop or influence core smart grid standards development.

Why the Need for Smart Grid Labs

Understand what interoperability means for your specific technologies
Minimize the potential for technology obsolescence and stranded assets
Verify vendor claims
Understand which emerging technical requirements are the right ones
Ensure that the technology you choose is secure and meets relevant standards
Peace of mind
See your Smart Grid concept or technology in action sooner rather than later

Contact Us
620 Mabry Hood Road, Suite 101
Knoxville, TN 37932
865.218.4600
www.smartgridlabs.com
Follow us on Twitter, www.twitter.com/enernex
Testing and Evaluation Services Include:

**Pre-Conformance/Pre-Certification Testing**
- Perform ‘pre-conformance’ and ‘pre-certification’ testing/evaluation (including review of firmware/apps) and recommendations for improvements
- Interoperability testing for vendors and utilities between all products
- Evaluation services to utilities for RFPs
- UCAIug testing guidelines

**Communications**
- Evaluations/assessments
- HAN interoperability testing
- 61850/DNP testing
- Wireless and low voltage PLC testing
- Specialized testing
- Generalized communication/interoperability evaluation/testing
- Testing on all equipment for distribution & mobile workforce issues

**Security**
- Audits
- Penetration testing
- Vulnerability assessments
- Security interoperability / LEMNOS
- Low-level / Hardware security impact assessment

**Metering**
- AMI Functional Testing
- AMI Acceptance Testing
- AMI Test Practice Design
- AEIC and C12 Metering Guidance

**Other Laboratory and Testing Capabilities**
- Develop in-house high-level testing capability
- Client implementation support
- Provide education/training to vendors/utilities/regulators
- Provide ‘public service’ education/training
- Perform webinars/training videos of key testing issues/FAQs/reference designs
- SGL can review actual source code and perform intrusive testing

*SGL provides our clients multi-faceted assessment services for communications, security, standards compliance, technology/vendor maturity, and implementation assistance across many Smart Grid domains.*

Learn More
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Knoxville, TN 37932