

What information is included for each entry in the Catalog of Standards?

The Catalog characterizes Smart Grid standards according to a set of attributes including:

- Development organization and process
- Support, conformance, certification, and testing
- Application domains targeted by the standard
- Interoperability categories covered by the standard (organizational, informational, technical layers)
- Cybersecurity and privacy aspects

What are the criteria for a standard being listed in the Catalog of Standards?

- Relevant to advancing interoperability of Smart Grid devices and systems
- Accepted by the community
- Suitable for deployment
- Focused on the interface to facilitate integration and promote implementation flexibility
- Documented and maintained by multi-member organization

How is the Catalog put together?

Reviewed and voted on by SGIP membership, the consensus process is open, objective, and neutral. It includes:

- Identify standard for consideration (any entity can propose a standard)
- SGIP reviews of standard performed
- Governing Board recommends inclusion
- SGIP plenary votes on inclusion.



Does the SGIP endorse or recommend Catalog entries?

No, it strives for an objective assessment against stated criteria.

Does the Catalog choose “best of breed?”

No, the purpose is not to choose winners and losers. As approaches and technology change, popularity of each standard evolves.

Can the Catalog include multiple standards that address the same capabilities?

Absolutely, that is the nature of our complex world.



Must Smart Grid implementers be limited to Catalog entries?

No, implementers may have good reasons to choose something not listed. However, using an entry in the catalog may help explain choices to others.

Does an entry need to come from an accredited standards development organization?

No, the criterion is for support by a multi-member organization, but the other criteria must be satisfied.

How is the Catalog kept up to date?

- Adding or removing an entry can be invoked at any time.
- Reaffirmation required after 7 years.

Do federal or state agencies endorse or mandate Catalog entries?

While informative for decision- and policy-makers, entries are not endorsements or recommendations.

How does this relate to the standards list in the NIST framework?

The NIST framework standards list has not gone through the SGIP review process. NIST will determine how they address future versions of the framework.

Smart Grid Interoperability Panel (SGIP) and the Catalog of Standards

YOUR AUTHORITATIVE TRAVEL GUIDE TO THE WORLD OF SMART GRID INTEROPERABILITY



In the near future, you will be travelling to a new world—the world of Smart Grid. Many of you will be travelling there “on business,” as representatives of an organization that provides or uses Smart Grid products and services. And most of you will also be travelling there “on pleasure,” as an individual consumer who uses electricity in almost every aspect of your daily life.



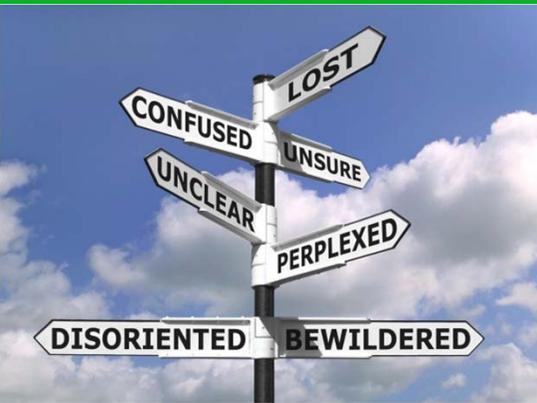
As you and your organization get ready for this trip, you will no doubt experience a range of emotions and concerns. You’ll look forward to new experiences and be awed by the glowing stories told by previous travelers. However, you’ll also be concerned about costs, safety, and everything interoperating as promised.

Travelling to the world of Smart Grid is going to be very similar to travelling to a foreign country for the first time. It will be a rich experience—challenging, exhilarating, confusing, and rewarding. And like international travel, you’ll encounter differences everywhere—from language to laws to landscapes, and from customs to climate to currency.

What are the unique, “must-see” sights? Which hotels provide the amenities you want? Which restaurants serve the cuisine you crave? What are the things you’ll need to pack because you cannot get them there? What transportation options exist to meet your specific needs? Which credit cards are accepted? What papers are required at the border crossings? Where is it unsafe for tourists? Will your electric devices work with the different currents and outlet types in each country?

If you’d like to learn more, you may find the following website helpful, “Smart Grid Standards: An Introduction” at www.nist.gov/smartgrid.

The Catalog of Standards is free and available online at collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/SGIPCatalogOfStandards.



Confused and exhausted before you even begin your trip?

What you need is an authoritative travel guide—one that's thorough, objective, assembled by knowledgeable experts, up-to-date, and written in a language you can understand.

You need a guide that you can carry with you as a reference, allowing you to design a trip that meets your needs and interests. It must provide detailed information of options that you can adjust as you travel—flexibility is one key to a successful journey. (You don't want a packaged tour that provides you with no choice on hotels, restaurants, or sights.)

If the new country you plan to visit is named Smart Grid, and your interest is interoperability, the authoritative travel guide you'll want is the SGIP's Catalog of Standards.



The Smart Grid world is made up of seven different "countries" or "domains." And like seven countries, the Smart Grid domains feature a wide variety of languages, customs, regulations, and safety issues.

Historically, the "residents" of the transmission and distribution domains place high value on reliability and safety. In the service provider domain, key values include innovation, understanding customers, and flexibility. In the customer domain, cost, choice, reliability are prized.

To immerse yourself in the land of Smart Grid, you'll want a guide that:

- helps you move between domains, speak the main languages, respect the domains' values, keep down your cost, and stay safe and secure.
- provides several good options, flexibility, and plenty of information, enabling you to plan a trip that meets your specific needs.



The resource that meets these criteria is the SGIP's Catalog of Standards. It is the Smart Grid guide that can provide you with expert options, information, and flexibility to meet your standards requirements. It is a helpful tool to ensure a successful trip to the world of Smart Grid interoperability.

You may find it helpful to remember the analogy of a travel guide as you learn more about the Catalog of Standards. However, analogies are, at best, approximations. The vocabulary that most accurately describes the Catalog of Standards—its purpose, its contents, and its development process—comes from the world of engineering and technical standards. The rest of this brochure uses that vocabulary.

If you'd like to learn more, we also suggest, "Smart Grid Standards: An Introduction" at www.nist.gov/smartgrid

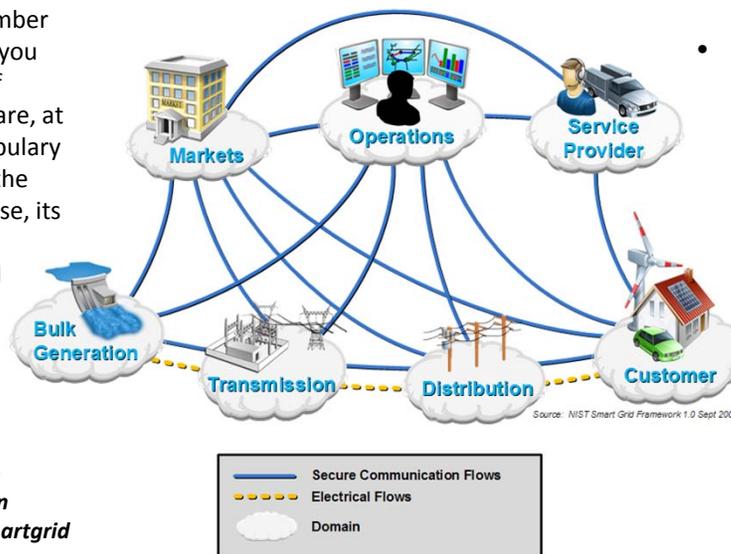


What are "interoperable standards?" What is "interoperability?"

In the world of technology and engineering, and the design of complex systems, the building blocks of success and value are "interoperable standards." The Framework, developed by the National Institute of Standards and Technology (NIST), defines "interoperability" as "the capability of two or more networks, systems, devices, applications, or components to exchange and readily use information—securely, effectively, and with little or no inconvenience to the user.

The Smart Grid will be a system of interoperable systems and these different systems must be able to exchange meaningful, actionable information. The systems will share a common meaning of the exchanged information, and the reliability, fidelity, and security of information exchanges between and among Smart Grid systems must achieve requisite performance levels."

Conceptual Model



What is the purpose of the Catalog of Standards?

The Catalog serves as a compendium of standards, practices, and guidelines considered relevant for the development and deployment of a robust and interoperable Smart Grid. The Catalog will eventually contain hundreds of these consensus documents.

The Catalog provides a key—but not exclusive—source of input to the NIST process for coordinating the development of a framework of protocols and model standards for an interoperable Smart Grid. The extensive information included for each entry will also be a useful resource for utilities, manufacturers, regulators, consumers, and other Smart Grid stakeholders. The SGIP is assembling this set of documents as a reference to the Smart Grid community, and the SGIP does not anticipate that the standards will be made mandatory.

Why develop such a catalog?

- Informs stakeholders of relevant standards that advance interoperability for Smart Grid applications, striving for objectivity
- Helps to reveal gaps or judge proposals to improve interoperability



Who is the audience?

Utilities, manufacturers, regulators, consumers, and other Smart Grid stakeholders. Utilities, for example, can use it to review substation automation standards and see which ones have tests for product interoperability.