

How Standards for Interoperability can Enable Smart Grid Information Integration

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The smart grid involves a communication infrastructure for monitoring and control of the electric power system that is extended all the way from central generation systems to the end use customer. Taking advantage of this communication infrastructure to optimize the grid performance, integrate distributed resources, improve reliability, and enable customer energy efficiency requires the integration of many applications and systems. Standards for information sharing across these applications is required to facilitate ongoing innovation and integration of new applications with legacy systems. The National Institute of Standards and Technology (NIST) has developed a framework and roadmap for these standards. Existing standards for interoperability already provide a foundation for this information integration and important smart grid demonstration projects are showing how these standards can be applied in real world applications while also defining the needs for ongoing development.