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IEEE Foundations for Smart Grid Quick Facts

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Smart grid related standards, including:

- 69 active standards
- 8 active current drafts
- 61 archival editions of active standards
- 66 archival drafts

20+ standards named in the NIST Framework and Roadmap for Smart Grid Interoperability Standards

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IEEE Foundations for Smart Grid is available as a stand-alone package or as part of an all-inclusive standards package.

Critical standards activities for smart grid technology

This unique collection includes important standards from multiple disciplines, vital information for smart grid development:

IEEE 802® LAN/MAN

Standard for Information Technology: Telecommunications and Information Exchange Between Systems

- IEEE Std 802.11™-2007: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications
- IEEE Std 802.15.1™-2005: Specifications for Wireless Personal Area Networks (WPAN)
- IEEE Std 802.15.4™-2006: Specifications for Low Rate Wireless Personal Area Networks (WPANs)
- IEEE Std 802.16™-2009: Air Interface for Broadband Wireless Access Systems
- IEEE Std 802.20™-2008: Air Interface for Mobile Broadband Wireless Access Systems Supporting Vehicular Mobility—Physical and Media Access Control Layer Specification

IEEE Std 1547™

Interconnection Standards

- IEEE Std 1547™-2003: Standard for Interconnecting Distributed Resources with Electric Power Systems
- IEEE Std 1547.1™-2005: Application Guide for IEEE Standard 1547, Interconnecting Distributed Resources with Electric Power Systems
- IEEE Std 1547.3™-2007: Guide for Monitoring, Information Exchange, and Control of Distributed Resources Interconnected with Electric Power Systems
- IEEE Std 1547.4™-2011: Guide for Design, Operation, and Integration of Distributed Resource Island Systems with Electric Power Systems

IEEE Std 1159.3™-2003

Standard for Monitoring Electric Power Quality

IEC 61588 Ed.2 (2009-02) (IEEE Std 1588-2008)

Precision Clock Synchronization Protocol for Networked Measurement and Control Systems

IEEE Std 1675™-2008

Standard for Broadband over Power Line Hardware

IEEE Std 1138™-2009

Standard for Testing and Performance for Optical Ground Wire (OPGW) for use on Electric Utility Power Lines

IEEE Std 1686™-2007

Standard for Substation Intelligent Electronic Devices (IEDs) Cyber Security Capabilities

IEEE Std 487™-2007

Recommended Practice for the Protection of Wire-Line Communication Facilities Serving Electric Supply Stations

IEEE Std 1590™-2009

Recommended Practice for the Electrical Protection of Communication Facilities Serving Electric Supply Locations Using Optical Fiber Systems

IEEE 2030™ and IEEE 2030.1™

IEEE Guide for Smart Grid Interoperability of Energy Technology and Information Technology Operation with the Electric Power System (EPS), and End-Use Applications and Loads

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