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●米国標準技術院（NIST）、スマートグリッド・フレームワークのリリース 3.0 を発行

【NIST, 2014/10/01】

　米国標準技術院（NIST）は、最新のスマートグリッド技術を反映させた「NIST Framework and Roadmap for Smart Grid Interoperability Standards Release 3.0」を発行。同時に、スマートグリッドのサイバーセキュリティ・ガイドライン「Guidelines for Smart Grid Cybersecurity(NISTIR 7628)」の修正版もリリースした。

　リリース 3.0 フレームワークは、米国の電力網を相互運用可能なスマートグリッドに移行する計画をアップデートするもの。スマートメーターの普及、スマートグリッド関連の新たな規格、欧州で策定が進む同種モデルとの連携が取られたリファレンス・アーキテクチャモデルの大幅なアップデートに対応している。

　2.0 フレームワークからは、7 つの規格が追加され、合わせて 74 の規格・プロトコルを網羅している。また、今回のフレームワークでは、スマートグリッドのグリッドのサイバーセキュリティが他の重要インフラのそれと関連付ける形で説明されている。

　サイバーセキュリティ・ガイドラインの修正では、スマートグリッドのサイバーセキュリティと NIST のサイバーセキュリティ・フレームワーク、サイバー/物理的攻撃、サイバーセキュリティ・テスト/認定との関連を説明する項目が新たに設けられ、プライバシーに関する規制面での変更についても対応している。

（参考）本件報道記事
NIST Releases Final Version of Smart Grid Framework, Update 3.0
From NIST Tech Beat: October 1, 2014

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The National Institute of Standards and Technology (NIST) has published its NIST Framework and Roadmap for Smart Grid Interoperability Standards, Release 3.0, a document that reflects advances in smart grid technologies and developments from NIST's collaborative work with industry stakeholders.

Revisions to its guidelines for smart grid cybersecurity are available as well.
power lines
credit: ©chalermchai k/Fotolia

The 3.0 framework updates the plan for transforming the nation's aging electric power system into an interoperable smart grid—a network that will integrate information and communication technologies with the power-delivery infrastructure, enabling two-way flows of energy and communications. The Energy Independence and Security Act of 2007 established a goal to modernize the nation's electricity system and assigned to NIST the primary responsibility to coordinate development of a framework to achieve interoperability of smart grid devices and systems.

The document first appeared in January 2010 and was last updated in February 2012 to its 2.0 version. The 3.0 version was needed in part because of recent progress in grid modernization, including the following developments:

In the past few years, the nation has seen wide deployment of smart electric meters as well as devices called phasor measurement units. These devices, also called synchrophasors, help engineers monitor the flow of electricity at various points in the grid to better maintain grid stability and increase grid efficiency. The 3.0 framework addresses these deployments.

NIST has identified new standards that support interoperability of the smart grid. This list now includes 74 standards and protocols, including seven standards not listed in the 2.0 framework.

Significant updates have been made to the reference architecture model of the smart grid. This model, which offers a broad picture of how the fundamental elements of the smart grid connect and communicate, has now been harmonized with a similar model being developed by the European Community. The updated model reflects the growing importance of "distributed energy resources," which include nontraditional sources such as customer-owned solar and wind power systems.

New developments and publications in smart grid cybersecurity are documented in the 3.0 framework. In particular, the role of smart grid cybersecurity is discussed in the context of cybersecurity of other critical infrastructures.

Testing and certification is taking on increased urgency as industry reaches

consensus on the underlying standards for the smart grid, and the 3.0 framework includes an expanded discussion of this topic. Version 2 of the "Interoperability Process Reference Manual" provides a guide for those setting up new test programs or improving existing ones.

The document incorporates public responses to the 3.0 framework's draft version, collected during the official comment period earlier this year. The framework 3.0 document is available at www.nist.gov/smartgrid/upload/NIST-SP-1108r3.pdf.

NIST also has published a revision to its Guidelines for Smart Grid Cybersecurity (NISTIR 7628), the original version of which appeared in 2010. NISTIR 7628 Rev. 1 updates include new sections describing the relationship of smart grid cybersecurity to the NIST Cybersecurity Framework, cyber-physical attacks, cybersecurity testing and certification, and address regulatory changes involving privacy. NISTIR 7628 Rev. 1 is available at www.nist.gov/manuscript-publication-search.cfm?pub_id=916068.

Source: http://www.nist.gov/el/smartgrid-100114.cfm

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