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# Smart Grid Cyber Security

**Risk Management, Equipment Protection, Monitoring and Incidence Response, Policy/Planning, and Access/Audit**



As utilities around the world have initiated major smart grid infrastructure upgrades over the past several years, cyber security has become a critical priority. Security measures are designed to protect the electrical grid from attacks by terrorists and hackers, as well as strengthening its resilience against natural disasters and inadvertent threats such as equipment failures and user errors. The focus on cyber security has increased in recent months, spurred in large part by the U.S. Department of Energy's smart grid stimulus programs, the standards initiatives of the National Institute of Standards and Technology (NIST), and key priorities promoted by the Federal Energy Regulatory Commission (FERC).

However, despite the increased emphasis, the lack of interoperable cyber security standards continues to be a major issue. Pike Research's analysis indicates that many utilities are highly focused on finding end-to-end cyber security solutions across a variety of smart grid application areas and geographies, as cyber security is viewed as a cross-cutting feature of smart grid deployments. This need for end-to-end solutions has opened new market opportunities for systems integrators and framework developers to collaborate with traditional utility industry players, including metering and transmission and distribution (T&D) infrastructure vendors. This intense focus is stimulating the development of a robust new smart grid cyber security sector, which Pike Research forecasts will increase from \$1.2 billion in 2009 to \$3.7 billion by 2015. Over the next five years, we anticipate that approximately \$21 billion will be invested in global smart grid cyber security deployments.

This Pike Research report analyzes smart grid cyber security market trends in terms of business drivers, technologies, standards, objectives, and business requirements. The report segments the cyber security market by five major smart grid application areas: transmission upgrades, substation automation, distribution automation, electric vehicle management systems, and advanced metering infrastructure (AMI). It also covers five key cyber security categories: policy/planning/awareness, equipment protection and configuration management, monitoring and incidence response, access/audit/integrity, and risk management. The report includes profiles of key industry players and detailed market forecasts for world regions, segmented by application, through 2015.

#### **Key questions addressed:**

- What is the impact of cyber security in utility smart grid deployments?
- What are the cyber security objectives and requirements in the key smart grid application areas?
- How will cyber security markets grow in various smart grid applications and global regions?
- How, when, and which cyber security technologies be deployed in smart grids?
- What are the key policy, technology, and standards impacting the Smart grid cyber security market evolution?

#### **Who needs this report?**

- Electric utilities implementing smart grids
- Transmission and distribution vendors
- Advanced Metering Infrastructure hardware and software vendors
- Traditional networking and telecommunications vendors
- In-home energy management and automation vendors
- Meter and communications components suppliers
- Clean technology and communications investors
- Government and energy policy makers
- Standards development organizations
- Investor community

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