



# The Electric Power Industry's Commitment To Protecting Its Critical Infrastructure

Providing safe, reliable electricity is the electric power industry's top priority. Not only is the industry subject to mandatory reliability standards enforced by the Federal Energy Regulatory Commission (FERC), but electric companies also work to maintain both the cybersecurity and physical security of the substations, transformers, and other assets that help companies deliver a reliable supply of electricity across the country.

The industry takes its role as a critical infrastructure provider very seriously and continuously strives to improve on its history of protecting its assets from physical security threats. Key to reliability efforts are the crisis management and site-specific security plans developed by electric companies to ensure operations and infrastructure systems are properly supported; in addition, a number of redundancies are built into the system. Electric companies also partner with federal, state, and local government and law enforcement agencies to ensure that they can respond effectively to any event that may impact their operations.

## A Closer Look at the Physical Protection of Critical Infrastructure

The electric power grid is a complex, interconnected network of generating plants, transmission lines, and distribution facilities, which can be damaged by natural events, such as severe storms, as well as by malicious events designed to harm electric infrastructure. The electric power industry employs threat mitigation known as "defense-in-depth" that focuses on preparation, prevention, response, and recovery. The goal of every electric company and the industry is to manage risk properly. Still, there are tens of thousands of diverse facilities around the country that cannot be 100-percent protected from all threats.

Specific actions the industry is taking include:

- **Preparation Activities:** Electric companies continuously drill and prepare for extraordinary scenarios. For example, in November 2013, more than 200 industry and government organizations participated in GridEx II—a two-day, grid-wide, international exercise. There was also an executive tabletop exercise that brought together senior Administration officials and senior utility executives to address the roles and responsibilities of both government and industry in the event of a major power disruption due to a national security threat.
- **Prevention Strategies:** Electric companies employ a number of physical security measures at their generating plants and substations to prevent malicious attacks. (Substations are facilities that "step-up" the voltage of electricity when it leaves a power plant and "step-down" the voltage before it is delivered to homes and businesses.) These measures are continuously evaluated and enhanced. For example, electric companies work closely with law enforcement personnel and first responders on site-specific security plans and security drills. In addition, the industry is making significant investments to protect the most critical assets. These investments focus on improving protection, detection, and security perimeters at the most critical locations.

- **Resiliency Efforts:** The industry also implements resiliency efforts to ensure there is sufficient spare equipment available in the event of an incident. The industry created the Spare Transformer Equipment Program (STEP) in 2006 to strengthen its ability to restore the nation's transmission system more quickly in the event of an attack on physical assets. STEP facilitates the sharing of hard-to-replace equipment, like transformers, which are located in substations near an electric generating plant and step up the voltage of electricity before it enters the transmission system.

Under the STEP program, each participating electric company is required to maintain and, if necessary, acquire a specific number of transformers. Participating companies are required to sell spare transformers to any other participating company that suffers a "triggering event," defined as an act of terrorism that destroys or disables one or more substations and results in the President declaring a state of emergency.

- **Government Partnerships:** In addition to close collaboration among electric companies, the industry is working directly with government partners to more thoroughly understand potential threats and to better protect its systems. Electric companies work closely with the North American Electric Reliability Corporation (NERC) and federal agencies to enhance the security of the bulk power system. This includes coordination with FERC, the Department of Homeland Security (DHS), and the Department of Energy (DOE), as well as receiving assistance from federal intelligence and law enforcement agencies. For example, the industry is working closely with FERC to enhance security measures at critical substations throughout the country.

In addition, the industry is partnering with DOE and DHS on a series of briefings around the United States and in Canada to bring together utility operators with local law enforcement. These meetings have allowed government officials to provide information on the current threat environment, to discuss mitigation strategies, and to allow participants to further develop relationships between local first responders and the industry. These partnerships must continue to grow, creating a closer collaboration between the public and private sectors.

- **Response and Recovery:** The electric utility industry is particularly proud of its mutual assistance network, which is a voluntary partnership of electric companies from across the country that work together to help speed restoration following significant damage to the electric grid. Whether a severe weather event, or national security incident, the industry comes together to protect and restore its shared infrastructure.

To help maintain operational security, the electric power industry is careful not to publicize clearly sensitive information about critical infrastructure that might provoke new threats or endanger the safety and well-being of the American public or the integrity of the electric power grid. The industry takes very seriously its responsibility to provide a reliable electricity supply and will continue to work with federal agencies to enhance the physical security of its critical infrastructure.

February 2014