Cyber-attacks in Ukraine show vulnerability of traditional power grids

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On December 23, 2015, a well-planned, perfectly-synchronized, brilliantly executed cyber-attack caused a six-hour black-out for hundreds of thousands of customers in and around Ukraine's capital city of Kiev. It was the first documented case of cyber-intruders bringing down a power grid. While there are no known cases of cyber-terrorism causing power outages in other countries, experts agree that absolute cyber-security is unattainable. The attack methodology, tactics, techniques, and procedures that were successfully deployed in Ukraine could be deployed against infrastructures in the US and around the world. The presentation analyzes policy changes to increase the resiliency of electric power grids and mitigate the potential consequences of cyber-attacks. Small power production resources originally designed to lower the costs of energy and reduce greenhouse gas emissions also could improve public access to power during cyber-attacks or other emergencies. The resilience and security of supply implications have become increasingly relevant in evaluating the costs and benefits of distributed energy resources and micro grids.

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