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**FEATURES**

## **Grid Assurance CEO Michael Deggendorf on threats to the US power network**

By Amy Smithers

**Energy networks are increasingly at risk from hackers, gunmen and extreme weather. We talk to Michael Deggendorf, CEO of Grid Assurance, about the 24/7 fight to protect the US grid from multiple threats.**

Hackers are increasingly focusing cyber attacks on energy networks in a bid to cause chaos by disrupting critical electricity supplies.

Foreign hackers, possibly from Russia, [breached computer systems](#) at 12 US power stations, including one nuclear facility, in July.

[Grid Assurance](#) provides a restoration solution for transmission owners in the US when disastrous events impact the US electric grid.



Grid Assurance can deliver critical power equipment to remote areas in the US. © Grid Assurance

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“These include cyber, physical and electromagnetic pulse (EMP) attacks, and catastrophic weather events such as earthquakes and superstorms,” says CEO Michael Deggendorf.

“The staples of modern life are food, water and electricity. Most of us can’t imagine living without power for more than a couple of days. What we worry about most is a long power outage. If you’re talking about weeks and months then the economic and social impact could be catastrophic.”

## Cyber attacks on the grid

The US attack came in the same month as a coordinated [‘spear phishing’ attack](#) on the Irish Electricity Supply Board (ESB). A [report](#) claims a group linked to Russia’s GRU intelligence agency may have been behind the attack.

“Cyber attacks are an emerging risk,” confirms Deggendorf. “The US power industry and the Federal Government are taking this very seriously. As such, the government has allocated a lot of resources to making sure that there is interaction between the outside threats and the internal networks.

“At Grid Assurance, we model for numerous catastrophic events. The goal is always to restore the grid to normality as soon as possible even if that threat is cyber related.”

## The physical threat

The threat of physical – or kinetic – attacks on US power stations is very real. Consequently, in 2013, unidentified gunmen attacked PG&E Corp’s Metcalf Transmission Substation near San Jose, California, knocking out fibre-optic cables and cell phone services.

In addition, the snipers opened fire on 17 electrical transformers, causing \$15 million worth of damage. As a result, power plants in Silicon Valley had to pick up the slack to avoid a blackout.

As such, Grid Assurance stores equipment at secure warehouses across the US. Moreover, in the event of a power emergency, it also provides logistics support to deliver critical parts rapidly to transmission sites.

“We have an inventory of long-lead-time equipment like transformers and breakers,” says Deggendorf. “As a result, if there is a significant outage, we have an inventory of equipment that we can transport quickly.”

### Climate change and extreme weather

“One of the risks we see increasing is the exposure and frequency of catastrophic weather,” says Deggendorf. “Regional electricity providers own back-up transformers, but they are shared within the region and can be taken out.

“So, again the key issue is how do you access more equipment and can it be quickly deployed.”

“We get asked what are the cost benefits of protecting against a low-possibility, huge impact event,” he concludes. “It’s different to calculate the costs because it would be in the billions of dollars.”