

SHIELD Act to protect from solar catastrophes, electromagnetic pulses

By Jeremy A. Kaplan / Published June 18, 2013 / FoxNews.com



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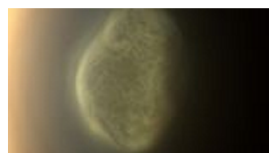
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It's among the greatest threats facing America today, U.S. Congressman Trent Franks states bluntly: a tremendous electromagnetic pulse, either naturally occurring or from a small nuclear device detonated outside the atmosphere.

A large enough pulse (EMP) could destroy the electric grid, notably the rare and very expensive transformers that form the grid's backbone. Without them and the power they deliver, a vast swath of American technology and every system that relies upon it would go dark for months or even years, some fear -- essentially sending the country back to the stone age.

And we're utterly unprepared for this potentially catastrophic threat, said Frank Gaffney, president of the Center for Security Policy and former assistant secretary of defense under Ronald Reagan.

"A pre-industrial society, which is what we would be reduced to, would not have the ability to sustain itself as we do today," he told FoxNews.com.

A 2004 panel bluntly described the effects of a "Carrington Event," named for the largest solar storm in history, an 1859 solar blast

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that shook the planet. Bill Graham, chairman of the panel, said as many as 9 out of 10 of could be killed in the aftermath, Gaffney said.

"Think of people in cities with no access to food or water, no sewage, no access to transport to get out of there ... those become dead zones in a matter of weeks or at most months. And the population living off the land elsewhere may be able to sustain itself, but nowhere like what we have at the moment," Gaffney said.

"It's really grim," he told FoxNews.com.

To address this threat, Congressman Trent Franks and former House Speaker Newt Gingrich introduced a bill Tuesday to protect the grid. [Called the SHIELD Act](#), or the Secure High-voltage Infrastructure for Electricity from Lethal Damage, the bill would push the federal government to install grid-saving devices, surge protectors that could save the transformers and power system from EMPs.



Rep. Doug Lamborn


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At the Electromagnetic Pulse caucus today with Speaker Newt Gingrich. I reintroduced the Shield Act... [instagram.com/p/atc8TpqJvS/](https://www.instagram.com/p/atc8TpqJvS/)

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The main source of these wicked pulses are storms on the surface of the sun -- giant, rope-like strands of plasma hundreds of thousands of miles long that have been rolling off the surface of that boiling star overhead in increasing numbers. The sun hurls these gas and magnetic fields millions of miles across space, disrupting satellite communications, navigation and power, explained NASA head Charlie Bolden at a conference on space weather June 4.

"Space weather impacts can be seen throughout the solar system," Bolden said. "Given the growing importance of space to our Nation's economic well-being and security, it is of increasing

importance ... to understand and predict space weather events.”

In other words, the sun sneezes and the economy shatters, as one article recently put it.

It's no idle threat, either: in March 1989, the power grid in Quebec went from normal to shutdown in 92 seconds during a huge magnetic storm, [according to a recent report](#) by insurance giant Lloyds of London. It took 9 hours to restore normal operations, during which time five million people were without electricity. Total cost: about \$2 billion.

The bill centers on protecting modern high-voltage transformers, which can weigh up to 400 tons, cost millions of dollars, and are made in only a handful of facilities in the U.S. A June 2012 report [a June 2012 report by the Dept. of Energy](#) called them a key failure point in the grid, citing volatile raw-material pricing – copper and electrical steel – and a lead time for manufacturing that can stretch to 20 months.

"It's critical that we protect our major transformers from cascading destruction. The SHIELD Act encourages industry to develop standards necessary to protect our electric infrastructure against both natural and man-made EMP events," [Franks said](#), according to the Washington Examiner.

Franks has been pursuing the bill since early 2011, when he first introduced H.R. 668. At the time, he called it “the single greatest asymmetric capability that could fall into the hands of America's enemies.”

Gaffney agrees, noting that anyone aware of the system understands it's something we need to take action on.

“If we can at least insure that the backbone of the electric grid survives -- these transformers -- you have a basis upon which to rebuild the rest of the country. If you lose those, you're toast,” he told FoxNews.com.