Opening Statement of Chairman Ron Johnson
"Protecting the Electric Grid from the Potential Threats of Solar Weather and Electromagnetic Pulse"
July 22, 2015

As prepared for delivery:

Good morning. Thank you all for joining us today. We will be looking at an issue that I believe is vital to national security—the extent to which the electric grid may be vulnerable to the threats of solar weather or a high-altitude electromagnetic pulse.

When it comes to critical infrastructure, there are several key sectors, often called the "lifelines," that essentially undergird and support all other sectors. The energy sector is one of these crucial lifelines. Without it, the other sectors would cease to function. Our economy, our livelihoods and our ability to defend ourselves would be crushed.

Protecting the electric grid is a monumental challenge, and the threats facing it are many and varied. The grid's physical infrastructure is necessarily spread throughout the nation and often cannot be protected from severe weather, sabotage or vandalism. Likewise, utilities themselves are encountering an enormous task in protecting their computer networks and fighting off cyberattacks.

We also know that the potential consequence of any attack or event on the grid is very high. In a real-life example, in 2003, a cascading failure across the grid in the Northeast left almost 50 million people without power, many for days. One federal study identified nine critical substations that could be disabled and potentially bring down the entire U.S. grid for more than 18 months.

The threats of solar weather and high-altitude electromagnetic pulse are unique in that they can affect a vast region of the country. They may damage assets on the grid that are expensive, difficult and time-consuming to replace.

It is my goal that this hearing enable us to define the problem––that is, to identify how significant these threats are to our electric grid and our nation. We need to understand how ready our nation is for these threats, and we need to evaluate potential opportunities to mitigate them.

Several reports over the last decade have highlighted just how bad these electromagnetic threats could be. While we want to avoid fear-mongering, we don't want to take these issues lightly.

One study estimated severe solar weather could leave as many as 130 million people without power for years. Similarly, the EMP Commission estimated that 90% of the U.S. population could die as a result of the consequences of a high-altitude electromagnetic pulse. The electromagnetic pulse of a nuclear blast 300 miles above the U.S. could potentially reach the entire country.

While these numbers may be worst-case projections, we need to be sure we are adequately studying these threats and prioritizing them against others. It is not enough to hope they never occur.

There are opportunities for protecting the electric grid from these threats, but they are costly. The EMP Commission, for example, projected that hardening the grid could cost $2 billion. Compared to the likely economic impact of one of these events, these costs may well be worth it.

That being said, this hearing is not one in which we are exploring ways we can place stronger regulations on industry. After 31 years in manufacturing before I came to the Senate, I understand that the level of regulation on businesses already is burdensome and has serious negative unintended consequences. I hope to see industry and government working together to meet the common challenges facing critical infrastructure.

Our witness panel is well equipped to handle these questions today, bringing vast experience and study of these issues to bear. Thank you all for joining us, and I look forward to your testimony.