

From: Batson, Steven <[sbatson@emd.sc.gov](mailto:sbatson@emd.sc.gov)>  
To: Danny Varat [DannyVarat@scstatehouse.gov](mailto:DannyVarat@scstatehouse.gov)  
CC: Catherine McNicoll [CatherineMcNicoll@scstatehouse.gov](mailto:CatherineMcNicoll@scstatehouse.gov)  
Stenson, Kim [Kstenson@emd.sc.gov](mailto:Kstenson@emd.sc.gov)  
Date: 10/10/2017 3:30:29 PM  
Subject: RE: Question

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Danny,

Good questions. We've been doing a lot of work in the area of widespread, long-term power outages. We are looking at 3 possible scenarios that could cause long-term loss of power:

1. Cyber Attack
2. Solar Flare / Solar Storms
3. Electromagnetic Pulse

Each of these have the ability to destroy our nation's capability to generate and transmit power. If we lose power, there are a lot of second and third order effects that would make life miserable and threaten lives. Lose power, then you could lose water, air conditioning/refrigeration, fuel distribution/transportation, food, medication and industrial production. Scary stuff. We experience short-term power outages with every natural disaster and we have been spending millions (as a state) to rebuild. Being in emergency management, we do not have a regulatory role with power providers so everything we do must be by consensus and coordination. As with all disasters, we organize the State's emergency management capabilities to leverage the information, resources and plans to shorten the time it takes to recover while trying to minimize the loss of life and property. We have begun to develop a plan to define the problem and identify the response priorities. At the same time, we are working with utility providers (both water and electrical) to ensure they are aware of the possibilities and ensure they are working to address system vulnerabilities. Many are, some are not. We have conducted a "black start" seminar, an electrical industry term used to describe how they begin to generate power after they have experienced an interruption. This was held in conjunction with local authorities (in York County) to ensure they are aware of how long the power could be off. Next, we are planning to conduct a 2-day full scale exercise next month with 20+ counties participating to explore the scenario of a cyber-induced long-term power outage. This is a national level exercise that will hopefully tap into a large pool of subject matter experts that can help to inform our planning and coordination efforts. The National Guard is also planning to conduct an EMP exercise sometime after our full scale exercise to address Guard capabilities that could be applied to shorten the recovery period. We also hope to learn a lot as Puerto Rico and the Virgin Islands rebuild after losing over 80% of their electrical transmission capability from recent hurricanes.

This is just the beginning of our efforts to address these "emerging" threats. As with many of our hazard response and recovery missions, we have to eat this elephant one bite at a time. SLED has the lead for prevention and protection while we focus on the consequences. We'd be happy to discuss this further with a more comprehensive presentation if you need more information. Let us know how we can assist you further.

Sincerely,

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**From:** Danny Varat [<mailto:DannyVarat@scstatehouse.gov>]  
**Sent:** Tuesday, October 10, 2017 1:20 PM  
**To:** Batson, Steven  
**Cc:** Catherine McNicoll  
**Subject:** Question

Steven, I hope all is well. We've received questions lately about the strength and security of the electrical grid in SC and if anything is in place to react to a widespread emergency, such as an EMP. Can you provide me some

information on that subject? I'd appreciate it.

Danny