Vision: South Carolina Leadership in Assuring
A Viable Electric Grid

By
Ambassador Henry F. Cooper
Chairman, High Frontier

See www.highfrontier.org for more information.

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For more information on the threat and how to get involved to protect your family and friends, see www.highfrontier.org and its links to others who are already engaged in this important fight.
Electric Power Grid Vulnerabilities & Needed Countermeasures

• An Existential Threat
  – Electricity is Essential
  – Manmade & Natural Threats
  – Lethargy in Washington

• What can/should be done
  – Protect the Electric Grid
  – Missile & Cyber Defense
  – Physical Protection

• Significant State and Local roles
  – Potential National Guard leading role
  – Pilots to Harden Nuclear Power Plants
  – South Carolina opportunity to lead

While there are hopeful signs that Washington is waking up to this threat, it is still essential that State and Local authorities—especially in South Carolina—get involved to assuring the combined threat is addressed in a timely way!
Optimism for Future Solutions, BUT . . .

• Ted Koppel is waking up folks across the nation to the existential threat!
  – Emphasis on Cyber, BUT physical and EMP threats also acknowledged & must be addressed!

• Some Washington help, BUT much more is needed, for example:
  – DoD—investing at least $700 million to harden Cheyenne Mountain, BUT still not addressing Homeland Defense needs—not their job?? Really????
  – Congress re-established EMP Commission with expanded charter, BUT little funding & Senate action on House-passed CIPA/SHIELD Acts still in question

• Growing state, local & power industry interest
  – ME & VA legislation and Dominion Electric actions
  – Key initiatives in several states—e.g., FL, TX, OK, AZ, CO, IN, LA, NV, NC, SC . . . NY?

• Some Priority Efforts
  – Restart EMP Commission
  – National Architecture
  – Encourage Industry Pilots
  – Enhance State Initiatives
  – DC Legislative Follow-up
  – Involve National Guard
  – Missile Defense Initiative
  – University EE Initiatives

No initiative is more important than ending our vulnerability to missile attack and concurrently hardening our nuclear reactors!
We are currently threatened by EMP attack “from the South” . . . to which Washington seems oblivious and is not addressing!

- North Korea & Iran launch Satellites to the South — could carry nukes to attack the US
- **Near Term Counters:**
  - Aegis BMD SM-2 boost phase intercept if ships can get near launch sites
  - Deploy forward sensor for cueing (e.g., TPY-2 radar in the Philippines); Aegis BMD SM-3 midcourse intercept (as demonstrated in 2008)
  - Crews must have the mission, train and be prepared—systems are already capable!

- June 2013 Wake Up Call: Intercepted North Korean ship carrying from Cuba to & through the Panama Canal nuclear capable SA-2s and other technology, illustrating the “Cacophony of Proliferation”
- Vulnerable to Iranian (or terrorist) missiles from ships off our coasts, especially in the Gulf of Mexico or from Latin America, e.g., Venezuela
- Deploy Aegis Ashore BMD sites on 3-4 military bases around the Gulf of Mexico, like in Romania (operational) and Poland (in 2018)

No R&D is required for these relatively inexpensive needed defenses!
The South Carolina National Guard has an Important National Role—Including the 263<sup>rd</sup> Army Air and Missile Defense Command (AAMDC)

- In Anderson, SC, manned and led by SC National Guard personnel—a direct report to SC Adjutant General, under the SC Governor
- Already linked to critically important elements of our Homeland Defense via:
  - Commander First Air Force at Tyndall AFB, FL
  - Commander Fifth Army (Army North) at Ft. Sam Houston, TX
  - Commander Northern Command in Colorado Springs, CO
- TBD Role with respect to potential Aegis Ashore deployments

I expect to help the SC Adjutant General’s office support National Guard “tabletop” exercises that include EMP and lead to a future Vigilant Guard exercise to involve other states, NORTHCOM and national command authorities.
Nuclear Power Reactors may be a hazard, but can be a critically important part of the solution!

- Reactors produce about 20% of US electricity—about 60% of SC electricity
- If they lose the grid, they will shut down, possibly leading to multiple meltdowns
- Result could be up to 100 Fukushima, with radiation carried by wind across the US
- However, if engineers can figure out how to make them viable in such a shutdown, they would be important in reestablishing the national grid.

Top priority: Assure nuclear reactors can be restarted after a grid shutdown and become a source for restoring electricity to all Americans—SC can lead such an initiative!
Notional Plan to assure SC Citizens of Viable Post-EMP Event Sources of Electric Power

- Natural Gas fired plants likely depend on vulnerable SCADAs—So stockpile replacements!
- Grid shutdown causes reactors to shut down to protect themselves
- Assure Hydroelectric and/or Coal power sources survive with hardened pathways to restart reactors—as part of a hardened “island” source region!
- Reactors produce over 50% of SC electricity, coal about 20%
- Prepare National Guard and local first responders!

Top priority: Assure nuclear reactors can be restarted after a grid shutdown and become a source for restoring electricity to all Americans—SC has an important role!
Supporting Key Duke Energy pilot study to assure Nuclear Reactors remain viable to support reviving the electric grid after a major shutdown!

- Engineers at Duke Energy, the largest US electric power company, are on board!
- Involving national level experts in this planning—as well as other power companies and the Electrical Engineering Departments of several universities.
- Planning Lake Wylie Pilot Study, with nuclear, hydroelectric & coal power plants
- Anticipate involvement of state and local authorities, in SC, NC & other states
- Rep. Mick Mulvaney (R-SC), whose district includes Lake Wylie, is on board—as are Rep. Joe Wilson (R-SC) (Chairman of the HASC Emerging Threats Subcommittee) and my Representative Jeff Duncan (R-SC).

Anticipate SC Adjutant General’s support of this important initiative, eventually including exercises involving federal and multiple state/local authorities, aimed ultimately at producing a viable electric grid!
**Bottom Lines**

- **Credible Threats to the Nation’s Unprotected Electric Grid**
  - Manmade threats can/probably would be orchestrated in planned combined attack packages . . . Physical, Cyber, EMP
  - Natural threat will occur—only the time is uncertain

- **Both pose an Existential National Threat**
  - Most Americans could die from thirst, hunger, disease, and societal collapse within a year

- **We know how to counter this threat—have known for half a century!**

- **Need to get on with affordable solutions**
  - Defenses and Hardening
  - Recommend that we start with Nuclear Reactor Pilot Studies
  - Get the bureaucracy out of the way!

Get involved today—inform yourself and act! For more information on the threat and how to get involved to protect your family and friends, see [www.highfrontier.org](http://www.highfrontier.org)
Ambassador Henry F. Cooper  
Chairman, High Frontier  
500 N. Washington St.  
Alexandria, VA 22314  
hcooper@highfrontier.org  
(703) 535-8776

Check out our webpage at  
www.highfrontier.org

At High Frontier, we dedicate ourselves to passing to future generations the blessings passed to us by the Founders and Forefathers.  

May God bless America!