

Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack
Established by Congress in FY2001 National Defense Authorization Act Title XIV
Continued FY2016 NDAA Section 1089
Dr. William R. Graham, Chairman

6 August 2017

Dr. John Holmes
Associate Director
National Academies
500 Fifth Street, NW
Washington, DC 20001

Dear Dr. Holmes:

I am Dr. William R. Graham, and was the Director of the Office of Science and Technology Policy and Science Advisor to President Reagan during his second term as President. I am writing as chairman of the Federal Statutory Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack (“EMP Commission”), a Commission Congress first established in 2001 and recently reestablished by the National Defense Authorization Act of 2016. The Congress has directed our Commission to assess man-made EMP and naturally-occurring (solar storm) EMP, often known as geomagnetic disturbances (GMDs), and other threats to the U.S. national power grids, and report to them and to the Administration.

We have reviewed a recent National Academies report entitled, *Enhancing the Resilience of the Nation's Electricity System*. I am contacting you to express my concern about the National Academies committee’s inaccurate characterization of the EMP that would be produced by a high-altitude nuclear explosion and related risks, and the Academies implicit advice on protection strategies. The report characterizes EMP risk “largely theoretical.” This is not an accurate characterization. Evidence to the contrary includes data from both U.S. and Russian exo-atmospheric nuclear tests and over 50 years of Department of Defense (DoD) investment in nuclear EMP analysis, simulation, system protection, and test programs.

With regard to influencing protection strategies to increase system resilience, the report dismisses electric power industry responsibility and deflects responsibility to the DoD. The Commission believes that this approach would be a major, serious error in national policy. Critical national infrastructure protection will require public-private cooperation and partnerships – that, in fact, the electric industry must in the future end their efforts to avoid, misrepresent, dismiss, and minimize EMP and its potential existential national consequences, and play a large role in EMP protection, as must several Departments of the government that have to date also avoided addressing EMP intelligently and effectively, including the Department of Homeland Security and the Department of Energy, and begin drawing on the knowledge and experience held within the Department of Defense and the EMP Commission.

I refer you to two unclassified reports published by the EMP Commission: *Volume I, Executive Report* (2004) and *Critical National Infrastructures* (2008). Both Reports are publicly available and can be found on-line at www.empcommission.org. These reports should be referenced in your report. Additional Commission reports will be issued soon.

An unclassified 2011 Defense Science Board report also addresses EMP: **Defense Science Board (DSB) Task Force on the Survivability of Systems and Assets to Electromagnetic Pulse (EMP) and other Nuclear Weapon Effects (NWE) Summary Report No. 1 Interim Report of the DSB Task Force**. Many unclassified papers on EMP can be found in academic and professional journals as well.

We would be pleased to brief you and your study participants on our recent findings and provide you with further information.

Sincerely,



William R. Graham, PhD
Chairman