

# WebMemo



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## Time for an EMP Recognition Day

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On March 23, 1983, President Ronald Reagan gave a famous speech where he outlined his plans for the Strategic Defense Initiative (SDI), aimed at protecting America from a nuclear missile attack using land- and sea-based missile defense systems. On the anniversary of this famous oratory, however, America faces another threat, one that requires Congress's immediate attention: an electromagnetic pulse (EMP) attack.

An EMP attack can begin with the explosion of a nuclear weapon high in the atmosphere. This explosion interacts with the planet's magnetic fields, creating a pulse, which in turn causes extensive damage to electronic systems. The EMP resulting from the blast would cause widespread damage, devastating the economy and resulting in the deaths of millions of Americans. Despite repeated warnings, Congress has taken virtually no action to prepare or protect against an EMP attack. In order to facilitate a national discussion regarding the EMP threat, Congress should establish March 23 as EMP Recognition Day.

**Explored by America's Adversaries.** The likelihood of an EMP attack is disconcerting. Nearly 30 countries currently possess ballistic missile capabilities. Indeed, some have extensive knowledge of EMP and its effects. North Korea currently possesses a large arsenal of missiles and has been publicly testing its ballistic weapons. It has also been reported that Russian scientists have worked with North Korea on developing an EMP weapon. Countries and non-state actors are also exploring improvised or non-nuclear EMPs as a means of harnessing the

destructive power of EMP without the need for missile capabilities. EMP has even been seen to occur naturally during a solar flare event (the last of which happened in the late 1800s).

Despite such concerns and repeated warnings from the congressionally mandated EMP Commission, the President's budget does not place a great enough emphasis on missile defense, let alone the EMP threat. For instance, the President's Fiscal Year (FY) 2011 budget requested \$9.9 billion for missile defense, a \$600 million *decrease* from FY 2009 (although a \$900 million increase over FY 2010). Neither Congress nor the White House has looked extensively at hardening critical infrastructure against EMP or revising recovery plans or disaster planning scenarios to be reflective of this unique threat.

**Time for an EMP Recognition Day.** Given the increased likelihood that the U.S. could suffer an EMP attack in the near future, the time has come for Congress to recognize the danger that EMP poses and act to address this threat. If, just for one day, Congress simulated even a fraction of the impact such an attack would have, the scope of the danger would be clear. To do so, Congress should establish an EMP Recognition Day. For instance, Congress could:

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1. *Close all cafeterias.* After an EMP attack, transportation networks would grind to a halt and no food would be delivered.
2. *Walk to work.* Traffic lights would no longer function, so all roads would be gridlocked. The computer systems operating mass transit would be inoperative.
3. *Turn off Members' Blackberries.* Satellites in low-earth and many of the communication support systems would be disabled. Devices such as Blackberries and GPS would not work.
4. *Shut off the lights.* Critical computers that direct the national electrical grid would be inoperative.

If Congress took these four steps for one day, all Members would understand the magnitude of the dangers posed by an EMP attack. Perhaps doing so would help Congress better understand the need for the following actions:

- *Produce a national intelligence estimate (NIE) on which countries are capable of launching an EMP strike.* Such an NIE should review weapons systems, delivery systems, and platforms capable of carrying the weapons as well as an “assessment of how EMP-capable countries are incorporating those weapons into their broader military strategies.” As Heritage Foundation Research Fellow Baker Spring points out, “such planning is an essential part of providing an effective defense against these threats.”<sup>1</sup> Coupled with this NIE should be research on the aftereffects of EMP. Cost-effective tools to counter EMP cannot be successfully implemented without continued research on the threat.
- *Demand the Administration develop a national recovery plan.* In order to minimize lives lost and property destroyed, the U.S. needs a plan that will address its ability to recover quickly after an attack. The EMP Commission emphasized that America must first improve the infrastructure on which all other sectors are dependent, specifically citing electric power and telecommunica-

tions. This risk-based approach recognizes that certain infrastructure is key to post-EMP attack recovery. EMP should also be added to the list of 15 disaster scenarios.

- *Fund comprehensive missile defense.* Building a comprehensive missile defense system would allow the nation to intercept and destroy a missile bound for the U.S. regardless of the launch point or whether the attack is aimed at destroying a city or engaging in an EMP attack.
- *Prepare and protect the nation's cyber infrastructure against the effects of EMP.* Cyber infrastructure is dependent on the power grid—which makes it a unique challenge in an EMP scenario. Thus, contingency planning should explore ways to keep the cyber system functioning without primary power. As such, Congress should direct the Department of Defense and the Department of Homeland Security to review its cyber system, incorporating the recommendations of the EMP Commission, including identification of the most critical elements of the cyber system that must survive an EMP attack. The commission also recommends that preparedness planning account for the interdependency between the nation's cyber infrastructure and other elements of the broader infrastructure. Overall, the key to countering the effects of EMP is to put barriers in place to prevent cascading failures in the nation's infrastructure.<sup>2</sup>
- *Require the Navy to develop a test program for sea-based interceptors with the capability to intercept and destroy ballistic missiles carrying EMP weapons prior to detonation.* It is clear that ballistic missiles offer an ideal delivery system for an EMP weapon. For instance, an enemy of America could launch a short-range missile carrying an EMP weapon from a cargo ship off the U.S. coast. Clearly, the terminal-phase ballistic missile defense systems currently in the field or entering the field, such as the Patriot system and the Terminal High Altitude Area Defense system,

1. Baker Spring, “Electromagnetic Pulse Weapons: Congress Must Understand the Risk,” Heritage Foundation *WebMemo* No. 2822, March 3, 2010, at <http://www.heritage.org/Research/Reports/2010/03/Electromagnetic-Pulse-Weapons-Congress-Must-Understand-the-Risk>.

2. *Ibid.*

would not reliably intercept such ballistic missiles prior to the detonation of an EMP warhead. The Standard Missile-3 Block IA (SM-3), as a midcourse defense system, may be able to do so.<sup>3</sup>

What the U.S. really needs to address this threat, however, is a version of the SM-3 that would intercept these kinds of missiles in the boost or ascent phase of flight. The Independent Working Group has recommended developing and fielding what it calls an “East Coast Missile Defense” to address this emerging threat.

Accordingly, Congress should require the Navy to demonstrate the capability to produce new versions of the SM-3 interceptor that are capable of destroying a short-range missile in the boost or ascent phase of flight, prior to its reaching the preferred detonation points for an EMP warhead. This would require that Congress also provide the Navy with the funds necessary to undertake this test pro-

gram. Congress could also direct the Air Force to undertake a companion program that would permit operational use of the Airborne Laser system to defend against an attack from a short-range missile.

**The Time Is Now.** March 23 should be designated as EMP Recognition Day on the Hill. The anniversary of President Reagan’s SDI speech can serve as a reminder of the need to take such threats seriously and counter them with robust preparedness and recovery efforts, quality research, and a comprehensive missile defense system.

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3. *Ibid.*