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Think Tank Estimates Five Dollars per American for Nuclear Deterrent against North Korea

Nashua, NH—September 5, 2017—With North Korea threatening high-altitude electromagnetic pulse (EMP) attack against the U.S. electric grid, experts at the [Foundation for Resilient Societies](#) estimate that a nuclear deterrent can be quickly established for a cost of about \$5 per American. Protecting critical transformers with EMP blocking devices will add to North Korea's uncertainty on whether an EMP attack will succeed or not. This quick and realizable step can buy time for more comprehensive protection of the U.S. electric grid.

Extra high voltage transformers are the most critical and hardest-to-replace component of modern electric grids. The "E3" pulse from an EMP attack would induce high currents in these transformers, resulting in explosions and fires. A commercially-available and inexpensive protective device—a so-called "neutral ground blocker"—can protect transformers from harmful EMP surges.

Neutral ground blockers were successfully tested by the U.S. Government at Idaho National Laboratory in 2012. Since 2015, a neutral ground blocking device has been under operational use by American Transmission Company in Wisconsin. Neutral ground blockers are commercially available but have yet to be installed in large numbers.

Neutral ground blocking devices cost approximately \$500,000 for E3 protection and \$600,000 with added E1 protection. About 2,500 extra high voltage transformers in the U.S. electric grid would need initial protection. Simple math reveals the equipment cost to protect the American population of 323 million would be approximately \$5 per person.

"Protection of the U.S. electric grid against nuclear electromagnetic pulse attack will be both affordable and feasible," says Thomas Popik, president of Resilient Societies. This non-profit think tank currently has a funded study to propose a series of steps and funding mechanisms for full grid protection against nuclear EMP.

"Even a low-yield nuclear device can produce EMP effects that cause widespread damage to the electric grid," stated Dr. George Baker, professor emeritus at James Madison University and principal investigator at Resilient Societies. "E3 protection is a vital first step, but technologies developed by the U.S. Department of Defense can provide more complete protection against the high amplitude E1 pulse. Designing EMP protection into new equipment will dramatically reduce protection costs."

The [Foundation for Resilient Societies](#) is a Nashua, New Hampshire-based non-profit group that advocates for EMP protection of critical infrastructure. For more information, contact Melissa Hancock at media@resilientsocieties.org or 855-688-2430, extension 2.