



LA-UR-16-28380

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EMP/GMD Phase 0 Report A Review of EMP Hazard Environments and Impacts

October 24, 2016

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INL/EXT-15-35582



Strategies, Protections, and Mitigations for the Electric Grid from Electromagnetic Pulse Effects

January 2016

Prepared for the
U.S. Department of Energy
Office of Electricity Delivery and Energy Reliability
Under DOE Idaho Operations Office
Contract DE-AC07-05ID14517

Figure 1. HEMP Pulseⁱ

ⁱ <http://www.gurevich-publications.com/conspectus/theory.html>



**Comments on
Draft Outline for the Proposed Joint
U.S.-Canadian Electric Grid Strategy**

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August 10, 2016

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³ Some components of protective equipment in neutral blockers for solar storms will require EMP hardening against ultrafast E1 pulses if that equipment is intended to protect against both solar storms and man-made EMP. See e.g. Vladimir Gurevich, "Impacts of Magnetohydrodynamic Effect of HEMP on Power Equipment: Problems and Solutions," *Int'l J. Applied Sci. Engr.* (2016) 14: 49-58, esp. pp. 55-56. The specific sub-components cited by Dr. Gurevich as vulnerable to E1 pulses are, according to Emprimus, already hardened to protect against E1 pulses. Independent third-party testing of protective equipment should be a component of any grid protection strategy.

ביטחון מערכת החשמל בישראל הצעה לאסטרטגיה רבתי

דן וינשטוק ומאיר אלרן



המכון למחקרי ביטחון לאומי

THE INSTITUTE FOR NATIONAL SECURITY STUDIES

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מזכר
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Securing the Electrical System in Israel Proposing a Grand Strategy

Dan Weinstock and Meir Elran

15 דוגמה יוצאת דופן היא ספר שיצא לאחרונה, שמחברו כתב כמה מאמרים מעניינים בנושא הנדון:
V. Gurevich, *Cyber and Electromagnetic Threats in Modern Relay Protection*, (CRC Press, 2014).

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Simulation of Voltage Collapse Caused by GMDs – Problems and Solutions

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January 18, 2018

INFRASTRUCTURE

Grid Resiliency From Electromagnetic Threats; the Infrastructure Plan Provides an Opportunity for Substantial Investment



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