

SOLUTIONS FOR ELECTROMAGNETIC PULSE (EMP)



EMP PROTECTION THAT DEFIES.™

 **ETS·LINDGREN**[®]
An ESCO Technologies Company



BECAUSE PASSIVE RESISTANCE ISN'T ENOUGH.

ETS-LINDGREN DEFIES THE ODDS

More than plot twists in the latest espionage thriller, the danger is real. The EMP threat to disable or destroy Critical Infrastructure Systems with High Altitude Electromagnetic Pulse (HEMP) or Intentional Electromagnetic Interference (IEMI; high power radio frequency weapons) is not fictitious. While you may not be able to prevent an EMP event, you can control the outcome.

Defy the threat. Choose *EMP Protection That Defies* with ETS-Lindgren Red Edge™ Certified Systems and Components.

Recognized the world over for our shielding and protection expertise, we've also been instrumental in the development of protection products and standards that have helped shape government policy. Our innovative new products and strategies defy the conventional, wait-and-see approach.



EMP Protection That Defies. It's a bold claim to be sure and one that we make with complete confidence. That's because only ETS-Lindgren provides an entire line of integrated EMP protection solutions that are backed by:

- **Proven Performance** – EMP protection that has been independently tested and certified by Little Mountain Test Facility at Hill Air Force Base in Ogden, Utah, the premier survivability and reliability High Altitude Electromagnetic Pulse (HEMP) testing center owned by the U.S. government and managed by Boeing.
- **Leading Expertise** – Undisputed leaders and innovators, including William A. Radasky, Ph.D., P.E., IEEE Life Fellow and chair of the International Electrotechnical Commission (IEC), internationally recognized for his knowledge of high-power electromagnetic effects to electrical equipment and the development of mitigation methods that protect facilities from these threats.
- **Unmatched Experience** – More than 30 years experience as an innovator of systems and components for the detection, measurement and management of electromagnetic, magnetic and acoustic energy.
- **Capabilities to Any Scale** – In-house certified Building Information Modeling (BIM) capabilities, critical to the planning, designing and constructing of buildings and infrastructures, along with cost-effective, well-managed project execution.
- **Global Reach** – Internationally recognized as the preeminent provider of integrated EMP solutions with manufacturing facilities and sales offices around the world.

ETS-LINDGREN DEFIES BOUNDARIES

Typical security protection measures are no longer enough to keep critical assets, infrastructures or systems safe from HEMP or IEMI. As ETS-Lindgren continues to set the standard for shielded protection, we are already working with clients in many of these Critical Infrastructure Sectors, as defined by the Department of Homeland Security, which include:

From nuclear devices detonated 18 miles or higher above the surface of the earth to small IEMI weapons, carried by an automobile or concealed in a backpack, destruction can be delivered with both close-range accuracy or wide-ranging impact.

- Energy (Electricity, Petroleum and Natural Gas)
- Defense Industrial Base
- Communications
- Healthcare and Public Health
- Emergency Services
- Water and Wastewater Systems
- Transportation Systems
- Food and Agriculture
- Information Technology
- Financial Services
- Nuclear Reactors, Materials and Waste
- Chemical
- Commercial Facilities
- Critical Manufacturing
- Dams
- Government Facilities





PRODUCTS AND SOLUTIONS

INTEGRATED EMP SOLUTIONS *THAT DEFY THE THREATS*

Whether you need to mitigate externally radiated pulses in free space, block conducted EMP from entering via wiring and cabling or ensure continuous operation, ETS-Lindgren's fully integrated EMP solutions provide protection for government and commercial applications.

MODULAR WALL PANEL SYSTEMS

Depending on your requirements, ETS-Lindgren offers a choice of shielded rooms crafted with welded steel construction, modular double layer steel clad wood panels or single layer steel pan-type shielding. Choose from various interior or exterior finishes.

SHIELDED EQUIPMENT ENCLOSURES

Our TEMPEST Information Processing Systems (TIPS) ensure shield protection for high-value, rack-mounted equipment.

SHIELDED DOORS

Select from several shielded door options that provide a fail-safe performance of up to 120 dB and continue to maintain shield integrity even after repeated use.

POINTS OF ENTRY

Every point of entry for air, water, fire suppression, signal or power lines offers the potential to degrade the integrity of a shielded room or chamber. ETS-Lindgren specially designed waveguides, pipe penetrations, fiber optic feedthroughs, and signal and data filters prevent the entry or escape of electromagnetic signals.

FILTERS

Available in either two or four individually filtered lines, with ratings of 277/480 VAC, 10 A to 1200 A, ETS-Lindgren's EMP/HEMP power line filters offer excellent multi-stage, over-voltage and EMI/RFI protection. (For service entry ampacity greater than 1200 A, filters can be wired in parallel.)

RED EDGE PULSE PROTECTION

Red Edge Pulse Protection is your first line of defense – delivering two levels of protection. Red Edge Level 1 protects equipment and potential points of entry with rock-solid impenetrable enclosures, doors, filters, ports, vents and piping. Red Edge Level 2 ensures continuous data operations with a fully independent and uninterrupted power and utility source – located inside your suite or outside the existing facility.

REDEGE[™]
PULSE PROTECTION

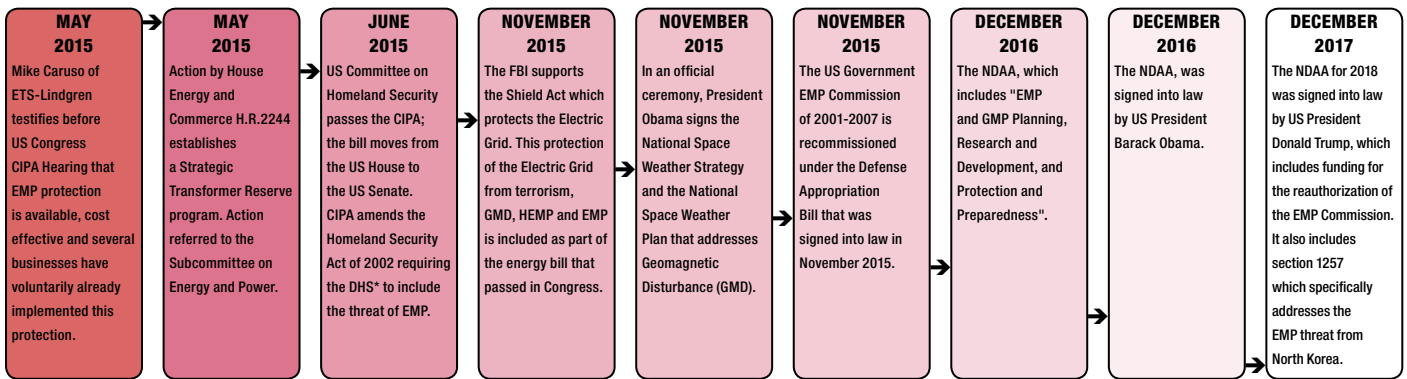
EMP LEGISLATION

ETS-Lindgren's reputation for expertise and innovation has been integral to the understanding of EMP and its risk to business, government and society. Our experts have been invited to share their knowledge with national government leaders in an effort to shape the standards vital to national defense and critical infrastructure.

We are proud of our role in educating lawmakers about this topic and in our ability to provide solutions that ensure the highest degree of protection as part of the Critical Infrastructure Protection Act (CIPA). The key wording included in the CIPA was later added to the 2017 National Defense Authorization Act resulting in a comprehensive document to address the threat of EMP. The 2018 National Defense Authorization Act (NDAA) was signed into law by U.S. President Donald Trump in December 2017.

GOVERNMENT REACTION TO POTENTIAL THREATS

Critical Infrastructure Protection Act (CIPA)/National Defense Authorization Act



* Department of Homeland Security





DEFY THE RISKS WITH ETS-LINDGREN EMP SOLUTIONS

Protecting the safety, security and availability of critical infrastructure and data assets is no longer an exercise in operational recovery during a once-a-year practice simulation. The threats are real, making on-going protection imperative.

With ETS-Lindgren, you gain *EMP Protection That Defies*.

For more than 30 years, we've continued to provide proven, comprehensive and scientifically sound solutions for protecting systems and data from the destructive effects of EMP events. In virtually every industry and sector, ETS-Lindgren is recognized for our leading expertise and innovation – in our solutions and in the products and people that make them possible.

We not only have the resources and experience to meet the 2018 National Defense Authorization Act, our people are frequently called upon to be advisors to the experts, lawmakers and others who are concerned about how to protect their critical assets and infrastructures in the face of this destructive and disruptive threat.

To find out more, contact ETS-Lindgren or visit us online at ets-lindgren.com.

Sales and Support Offices

UNITED STATES – TEXAS

Cedar Park, TX
+1.512.531.6400 Phone
+1.512.531.6500 Fax
info@ets-lindgren.com

UNITED STATES – ILLINOIS

Wood Dale, IL
+1.630.307.7200 Phone
+1.630.307.7571 Fax
info@ets-lindgren.com

UNITED STATES – WISCONSIN

Minocqua, WI
+1.715.356.2022 Phone
+1.715.356.2023 Fax
info@ets-lindgren.com

FINLAND

Eura
+358.2.8383.300 Phone
+358.2.8651.233 Fax
euinfo@ets-lindgren.com

UNITED ARAB EMIRATES

Dubai
+971.55.610.4055 Phone
uae@ets-lindgren.com

CHINA

Beijing
+86(10)8273.0877 Phone
+86(10)8273.0880 Fax
china@ets-lindgren.com

JAPAN

Tokyo
+81.3.3813.7100 Phone
+81.3.3813.8068 Fax
japan@ets-lindgren.com

INDIA

Bangalore
+91.80.4341.8600 Phone
+91.80.4341.8611 Fax
indiainfo@ets-lindgren.com

SINGAPORE

Singapore
+65.6391.0026 Phone
+65.6291.7311 Fax
singapore@ets-lindgren.com

TAIWAN

Taipei
+886.2.27023389 Phone
+886.2.27023055 Fax
taiwan@ets-lindgren.com

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