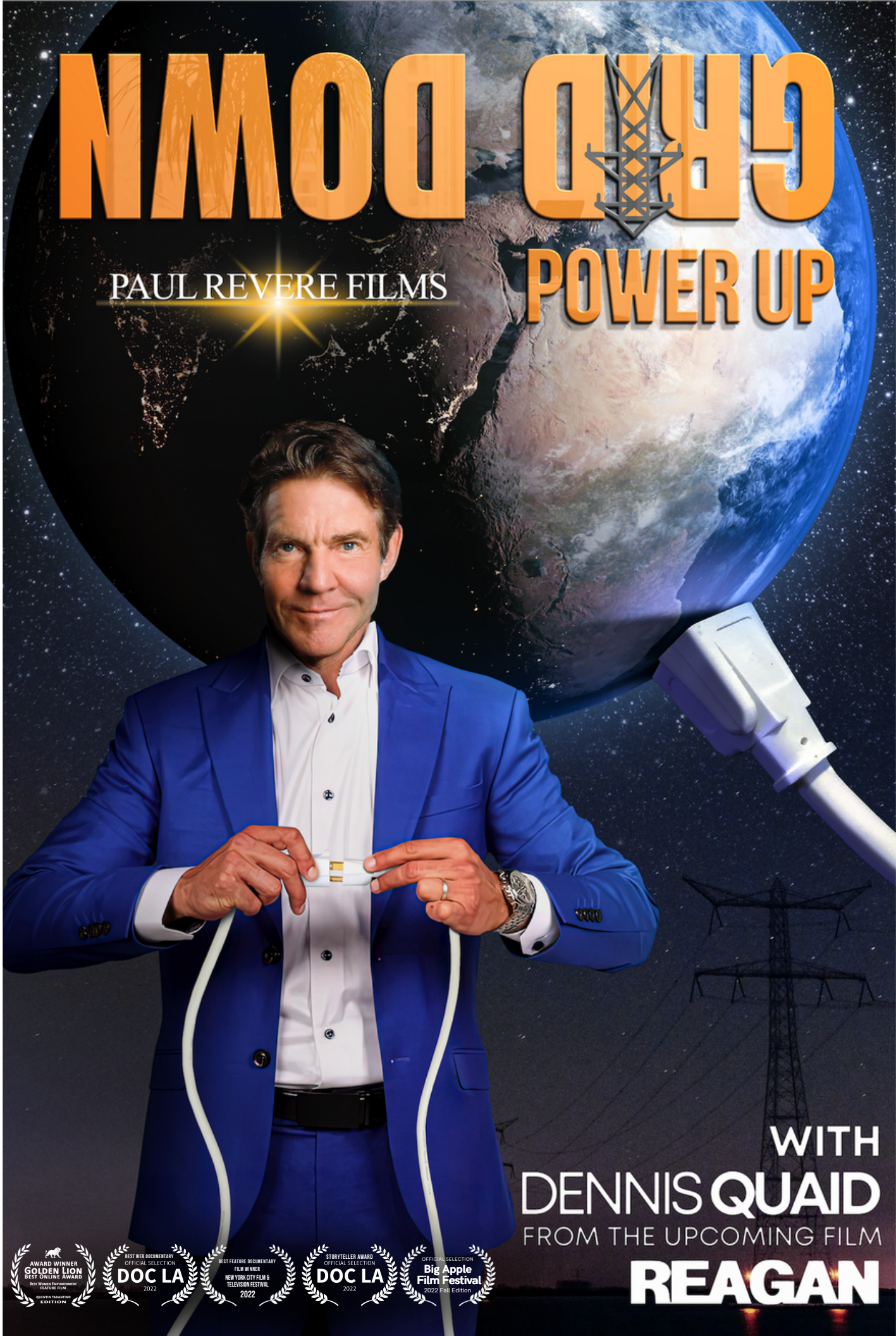
MEDIA KIT/FAQ SHEET



FREQUENTLY ASKED QUESTIONS

GRID DOWN

POWER UP

PAUL REVERE FILMS

QUESTIONS:	ANSWERS:
WHAT IS THE '*GRID*'?	The US grid is a complex network of more than 7,300 power plants and transformers connected by more than 160,000 miles of high-voltage transmission lines and serves 145 million customers. In most countries, they are state owned but in the US, the grid is nearly all privately owned.
WHO HAS THE *LARGEST* GRID?	As of 2021, the largest power generating facility ever built is the Three Gorges Dam in China.
WHERE ARE THE 3 POWER GRIDS LOCATED IN THE U.S.?	The US power grid is actually divided into three major regions, forming America's energy system – the Western interconnection, covering the Pacific Ocean to the Rocky Mountains; the Eastern interconnection, operating East of the Rocky Mountains; and Texas.
WHO *CONTROLS* THE POWER GRID?	The Federal Energy Regulatory Commission (FERC).
HOW IS ELECTRICITY *REGULATED*?	The Federal government, through the Federal Energy Regulatory Commission, regulates interstate power sales and service. State governments, through their public utility commissions or equivalent, regulate retail electric service as well as facility planning and siting.
WHY IS TEXAS ON IT'S *OWN* GRID?	After the rules went into effect, a lot of power companies tried to keep their energy sales within state boundaries. But other states weren't able to produce enough electricity to sustain that effort and serve their residents reliably. Texas became the only state in the continental U.S. with its own grid.
WHAT IS THE *MAJOR* PROBLEM WITH THE POWER GRID?	The power grid in the U.S. is aging and already struggling to meet current demand. It faces a future with more people — people who drive more electric cars and heat homes with more electric furnaces. Alice Hill says that's not even the biggest problem the country's electricity infrastructure faces.

WHY IS THE U.S. POWER GRID *FAILING*?

That's because extreme weather and the early retirement of fossil fuel plants has accelerated the destabilization of the grid — a fragile collection of transfer stations and transmission lines already challenged by a lack of investment.

HOW *EFFICIENT* IS THE U.S. POWER GRID?

The overall efficiency from primary energy to delivered work is about 33% for energy in the US.

HOW MUCH OF THE US POWER GRID IS *RENEWABLE*?

Renewable energy sources contribute to about 17 percent of U.S. electricity production at utility-scale facilities. Of this share, 7.3 percent came from wind and 6.6 percent from hydropower.

WHY IS IT SO IMPORTANT TO FIX OUR ENERGY INFRASTRUCTURE, AND WHO/ WHICH COMPANIES ARE CURRENTLY HELPING TO REMEDY THE SITUATION?

Clearly, updating our energy infrastructure is a pressing need, and many investors are charged up about the companies helping to bring our grid into the 21st century:

WHICH 501©(3)'S WILL BE RECEIVING *PROCEEDS* FROM 'GRID DOWN POWER UP'?

We will contribute 25% of our net profits to fund several 501©(3) organizations to execute action plans working with legislators & agencies to help ensure we're successful in protecting our power grid. These organizations have experienced on-the-ground experts and activists fighting for this mission and they'll ensure follow-up with our elected officials and the American public.

WHAT ARE THE *FOUR MAIN THREATS* TO THE POWER GRID?

An orchestrated physical attack, electromagnetic pulse attack (EMP), a cyber-attack, or geomagnetic disturbance (GMD).

WHAT WOULD HAPPEN IF AN *ATTACK OR DISTURBANCE* OF THE GRID OCCURRED?

Any of the four above mentioned issues were to transpire; it could shut down our electric grid for one calendar year or potentially much longer.

WHICH U.S. GOVERNMENT DEPARTMENTS/ AGENCIES *SHOULD* BE IN FUNDING AND FORTIFYING OUR GRID?

Department of Homeland Security (DHS), Department of Energy (DOE), Department of Defense DOD) , Cybersecurity and Infrastructure Security Agency.

HOW CAN *CITIZENS* MAKE A DIFFERENCE AND EFFECT CHANGE TO UPGRADE OUR GRID?

We've created simple tools and templates for the film's viewers. Locate the "participate page" on our website https://griddownpowerup.com/participate/ to reach the people, entities, and organizations who can remedy this critical issue. Another way you can affect positive change is by "paying it forward." Donate now to spread awareness on this topic; and inform your friends and family! "GUPD" has also inspired the formation of "The Energy Security Council", a grassroots effort to secure our U.S. Power Grid. Engaged individuals like yourself are encouraged to become members, so we don't find ourselves in the dawn of a new dark age.

WHAT ARE POTENTIAL SOLUTIONS TO FIX OUR GRID?

Many solutions exist NOW to protect the grid against known threats and hazards, there must be consistent pressure by American citizens to require that utilities seek existing solutions and develop new ones to ensure that the grid never goes down. Below are just a few examples of steps that can be taken now to secure the existing grid and begin building new, more resilient microgrids.

WHAT MEASURES *CURRENTLY EXIST* TO FORTIFY OUR GRID, WHAT WOULD THE *PLAN OF ACTION* LOOK LIKE?

- **Prioritize Nuclear Plants & Spent Nuclear Fuel:** Nuclear plants are one of the safest, most effective methods of generating high volumes of clean, carbon-free electricity. However, the nuclear industry cannot handle prolonged regional or nationwide outages, in terms of safeguarding hazardous spent nuclear fuel. Requirements should be mandated to safeguard this crucial facet of our power supply even under an extended grid down scenario.

- **Protect Critical Substations:** We must rapidly evaluate the most critical substations that house transformers with the most complex replacement scenarios. The assessment should identify critical supply chain vulnerabilities (such as transformers or components that have been manufactured or imported from China) while implementing specific applications to protect against internal or external sabotage. Next, we must execute existing protective measures to properly defend against EMP/GMD threats and cybersecurity breaches.
- **Implement Existing EMP/GMD Protection Systems:** In 2007 the EMP Commission recommended that currently available solutions be implemented immediately to protect our precious power grid. Siemens and CenterPoint Energy now offer a "substation protection system" which is still available for purchase today! SEMPRE has designed an EMP-hardened 5G communications system which can be used for communication between utility companies with failures; or UC's in need of aid for grid restoration. These are only a two examples on a growing list of protective and preventative products that are currently ***and*** readily available for implementation.
- **Upgrade Federal and State Cybersecurity Standards:** Current security standards apply only to the "bulk power system" and are grossly inadequate. We must continue to push and encourage the federal government, state legislators and public service commissioners to mandate upgraded cybersecurity standards to protect our power grid.

- **Upgrade & Deploy All-Hazards Protected Communication Systems Locally & Federally:** Any disruption in this critical system becomes a significant obstacle in providing relief to the general public. A protected communication system is absolutely critical in the reconstitution of vital public services and "black starting" any local or regional power grid.
- **Leverage Military Standards:** The U.S. Department of Defense (DOD) has secured EMP protection as a standard for its critical systems. Public and private sectors must incorporate these same practices and standards to expand our protection beyond substations.
- **Establish Microgrids:** We should construct local all-hazards resilient microgrids to be established nationwide to protect spent nuclear fuel storage sites and municipal water systems so their power is never interrupted.
- **EMP Task Force Recommendations:** The Electromagnetic Defense Task Force created a report in 2018 that lists recommendations for our protection. Ask yourself, if the government believed a task force of this nature should be created...why are they not implementing the experts' advice?
- **EMP Commission Recommendations:** There exist six critical recommendations created by the EMP commission in a report published in 2017; but none of them have been implemented. We must contact government officials to ensure they carry out these procedures and heed the word of the experts in this field.

REGULATORY OVERHAUL:

- **A New Presidential Executive Order Must Be Issued:** Followed by a Department of Energy Emergency Order that mandates electric grid protection against all known threats managed by a single leader.
- **Federal Legislation Must Be Passed:** To mandate entities involved in the critical electric infrastructure take reasonable and prudent action to address: cybersecurity, physical security, protection from EMP/GMD, and hardening for severe weather events. This legislation should be similar to the **SARBANES-OXLEY ACT OF 2002** which holds key utility executives ACCOUNTABLE for reasonable and prudent grid protection with the penalty of criminal prosecution for non-compliance.