EMP Randy White. Co-sponsored by: Ken Oexle Who’s afraid of the big bad pulse? This question will opened the IEEE conference Monday, November 6th. Terry Murch of Technical Sales Solutions, LLC (TSS) will lead-off the session panel, which included EMP/HEMP/IEMI experts Paul Currie (MPE-USA), Bruce Benwell (Directed Energy Technologies), and Randy White (Jaxon Engineering and Maintenance). Their presentation, “The Threat to the United States Critical Infrastructure from Electromagnetic Pulse (EMP)”, will provide an overview of EMP/HEMP and IEMI as very real threat, placing an emphasis on practical, scalable solutions to defend against potential attacks Hollywood has featured exaggerated EMP/HEMP and IEMI attacks in more than one blockbuster film, but that doesn’t make them any less of a danger in reality. All it takes is one civilian or group with nefarious intentions and/or something to prove to obtain a magnetron and turn it into a Directed Energy (DE) device capable of causing significant disruption to local energy operations. A homemade DE device of sufficient power can freeze security systems, destroy equipment, and cause widespread outages and blackouts. The importance of hardening installations before “BOOM” cannot be overstated enough, since, in the case of a large-scale, high-power attack, “too late really is too late.” EMP/HEMP/IEMI protection is available and scalable. Mil-Std-188-125 compliant installations offer the highest level of protection and are appropriate for some mission critical assets. However, hardening a facility to this extent requires a large budget, and can run into the millions of dollars. A more cost-effective solution for critical infrastructure, like power stations, utilizes a combination of smaller filters along with new and existing architecture of the facility to create a hardening scheme at significantly less money that attenuates pulses up to required level. For facilities with severe budgetary constraints that have few or no critical assets, hardening solutions that can be scaled down to become even more cost-effective and offer attenuation that is sufficient to protect their operations. Speaker(s): Terry Murch, Randy White Agenda: The seminar fee includes lunch, refreshments and handouts. Non-members joining IEEE within 30 days of the seminar will be rebated 50% of the IEEE registration charge. Four hours of instruction will be provided. If desired, IEEE Continuing Education Units (0.4 CEUs) will be offered for this course – a small fee of $45 will be required for processing. Please pay attention to the “Registration Fee” and choose the appropriate choice either with or without CEUs. Location: Room: Auditorium Bldg: PSE&G – Hadley Road Facility 4000 Hadley Road South Plainfield, New Jersey 07080

**The EMP Vulnerability of and Protection of the Electrically Powered Infrastructure**

**October 27, 2017 @ 1:00 pm - 6:00 pm**

Co-sponsored by: Ken Oexle

The EMP Vulnerability of and Protection of the Electrically Powered Infrastructure

* Overview, EMP vulnerability of the electric grid and dependent critical infrastructures
* Space Weather (Solar Storm) induced current surges
* EHV transformer failure modes and mechanisms
* High Altitude Nuclear Detonation and the resulting EMP
* Portable weaponized EMP generators
* SCADA and other electronics vulnerability
* How to prevent (or at least reduce) EMP damage
* Government initiatives regarding an EMP
* The roles of NERC and FERC

Speaker(s): Melvin Lewis ,